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The Biblical Flood Myth Revisited: Representations of Flood and Deluge in Climate Fiction

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Abstract

In this thesis, I demonstrate how the biblical flood myth is revisited in narrative framings of flood-related catastrophe in the climate novel. Despite the number of works that explore environmental concerns in relation to flooding, there has been a gap in research on the use of the biblical flood myth in climate novels that use floods as metaphorical and material indicators of climate change. I examine how the biblical flood myth is used in climate novels to explore existential questions around human ontology and ethics in a time of environmental uncertainty, and by doing so show how myth plays an important role in the way ecological calamity is imagined and experienced.

Myths, I argue, reflect historical processes and change over time as the cultures that maintain them change. Therefore, the first part of the thesis revisits reworkings of the biblical flood in novels that contribute to the development of climate fiction and form part of its prehistory, George Eliot's *The Mill on the Floss* (1860) in Chapter One, and D.H Lawrence's *The Rainbow* (1915) in Chapter Two. I explore the entangled historiographical and mythical elements of these novels from an ecocritical perspective.

The second part of the thesis explores the biblical flood myth in the climate novel. In Chapter Three, I discuss George Turner's *The Sea and Summer* (1987) as one of the first novels to address the potential future impacts of the historical trajectory of fossil fuelled industrialisation as critiqued by Eliot and Lawrence. I explore the ways in which it offers an apocalyptic vision of environmental collapse via deluge.

In Chapter Four, I examine how floods are used as a metaphor for ecological loss and grief in Barbara Kingsolver's *Flight Behaviour* (2012) and Mireille Juchau's *The World Without Us* (2015).

In Chapter Five, I explore environmental futurity in James Bradley's Clade (2015) and Lydia Millet's A Children's Bible (2020) through the metaphorical structure of rebirth and renewal acquired from the biblical flood narrative. Finally, the conclusion evaluates the ways in which the biblical flood myth contributes to environmentalist political imaginations.

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INTRODUCTION

> Let us picture to ourselves one of the many catastrophes, — namely, that which occurred once upon a time through the Deluge.
>
> Plato, *Laws*[1]

In April 2019, Parliament Square saw a riotous retelling of the biblical flood story as climate activists converged to protest political inaction on climate change. Intended as a piece of creative activism, *Mrs Noah*, written and directed by the dramatist Angela De Angelis, revisits the tale of rising waters, endangered animals and near human extinction as the 'original climate disaster warning'.[2] *Mrs Noah* is just one amongst many works of art to have reclaimed the biblical flood myth in response to the climate and environmental crisis. Numerous films, novels, documentaries and artworks variously use the familiar imagery of the biblical flood story to explore existential questions around human ontology and ethics in a time of environmental uncertainty, and by doing so show how myths play an important role in the way ecological calamity is imagined and experienced. In literature, the rise of climate fiction as a uniquely distinct genre of the early twenty-first century has seen a comparable rise in novels that draw on flood imagery. So much so, that Adam Trexler, in the first book-length study of climate fiction, writes that '[o]ver the last forty years, the dominant literary strategy for locating climate change has been the flood'.[3]

The question that frames this thesis is, why the flood? What is the imaginative appeal of the biblical flood myth for readers of climate fiction in the twenty-first century, and why has it endured for so long in retellings of environmental disaster unlike other mythic narratives lost to the mists of time and translation? In answer, I

[1]Plato, *Laws*, Book 3, 677a, trans, by. Benjamin Jowett (Champaign, III, 1999), in *Project Gutenberg* <https://www.gutenberg.org/files/1750/1750-h/1750-h.htm#link2H_4_0006> [accessed 11 September 2022].
[2] Arifa Akbar, *Mrs Noah fights back: 'It's about extinction. There is no bigger story'* (2019) <https://www.theguardian.com/stage/2019/apr/14/april-de-angelis-mrs-noah-parliament-square-london-climate-change-warning> [accessed 14 April 2019].
[3] Adam Trexler, *Anthropocene Fictions: The Novel in a Time of Climate Crisis* (London and Charlottesville: University of Virginia Press, 2015) p. 82.

aim to demonstrate how the biblical flood myth is revisited in narrative framings of flood-related catastrophe as a metaphor. By teasing out the narrative structure and familiar motifs of the biblical flood myth in the climate novel, I ask how novelistic floods work to create a particular understanding of ecological catastrophe in a time of climate crisis, and in doing so, emphasise the extent to which experiences and perceptions of so-called 'natural disaster' participate in well-worn cultural ontologies that are partially based on myth.[4]

In this introduction, I discuss how myth functions cognitively in a similar way to metaphor, as both are culturally mediated and play a crucial role in knowledge production and dissemination.[5] To help place in context and guide the reader through these chapters, I offer some thoughts on the historical conceptualisation of myth as metaphor, followed by my views on ecocritical readings of the bible flood myth in contemporary environmental humanities scholarship. In doing so, I provide an overview not only of the way myth works on a structural level in the seven novels I discuss in the following five chapters, but also of how historical constructions of myth influence the ways in which myths are understood and reinterpreted in the contemporary novel.

First, however, I want to return to my central question: why the flood? The long history of flood stories in myth and folklore demonstrates, as Jesse Oak Taylor notes, that 'ecological calamity is in fact one of our oldest and most persistent stories, recurring across genres and centuries'.[6] Indeed, it is estimated that there are over three hundred stories about flood and deluge across different cultures, suggesting that floods are one of the natural disasters most familiar to humans. Floods are historically the most common and widespread of natural disasters and continue to be a major concern

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[4] The term 'natural disaster' implies that calamitous effects of weather of geophysical extremes are chiefly the fault of nature that lies outside of human history and beyond intervention. Such an assumption diminishes the human, social and economic forces central to these phenomena. Moreover, as Ted Steinberg, Greg Bankoff, Nancy Tuana and many others in disaster studies and beyond have argued, the concept of natural disaster developed when those in power in disaster-stricken areas sought to normalize calamity in their quest to restore economic order and further legitimise control over rebellious nature, see Ted Steinberg, *Acts of God: the unnatural history of natural disaster in America* (Oxford: Oxford University Press, 2009); Nancy Tuana, 'Viscous Porosity: Witnessing Katrina', *Material Feminisms*, in *Material Feminisms,* ed by Stacy Alaimo and Susan Hekman (Bloomington: Indiana University Press, 2008), pp. 188-213; and, Greg Bankoff, 'Remaking the world in our own image: vulnerability, resilience and adaptation as historical discourses', *Disasters,* 43 (2019) 221–239.

[5] William Schultz, *Cassirer and Langer on myth: An introduction* (Garland Publishing, New York, 2000) p. 32.

[6] Jesse Oak Taylor, 'The Novel after Nature, Nature after the Novel: Richard Jefferies's Anthropocene Romance', *Studies in the Novel*, 50 (2018) 108–33, p. 112.

for many today as the climate crisis continues to worsen. In its most recent report, the UN Intergovernmental Panel on Climate Change (IPCC) estimates more frequent and intense flooding for most areas around the world due to anthropogenic climate crisis.[7] Recent calculations show that global mean sea level has risen about 8-9 inches since 1880, with about a third of that coming in just the last two and a half decades.[8] The acceleration of melting glaciers and ice sheets, as well as the thermal expansion of the oceans virtually guarantee that sea level rise by 2100 will meet or exceed the highest projections of the United Nations Framework Convention on Climate Change (UNFCCC).[9] Rising surface temperatures likewise guarantee new conditions of drought, flood and cyclonic storms exacerbated by a slowing jet stream that will alter weather systems in unpredictable ways. In all cases, rising sea levels have led to increased coastal flooding, as the associated risks of higher background water levels serve to strengthen destructive storm surges that push further inland than they once did. High-tide flooding is already a serious problem in many coastal communities, and it is only expected to get much worse in the future with continued rising seas. As we head towards a rise of at least 1.5° above pre-industrial global temperatures by the middle of this century, many of us will become familiar with floods as synonymous with the global impacts of the environmental and climate crisis.

Narratologists stress that humans make sense of the world around them, and of relationships and events, by telling stories. It is unsurprising, therefore, that the contemporary literary moment demonstrates a distinct cultural awareness of climate and environmental crisis, and this is represented by a broad range of flood fictions that have dominated the bookshelves in recent decades.[10] In each of the examples, literal and symbolic floods are used to represent the engulfing and precarious effects of climate collapse at local and planetary scales. At the same time, they also embody the

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[7] IPCC: Summary for Policymakers. In: *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [ed. by Valérie Masson-Delmotte and others (Cambridge and New York: Cambridge University Press, 2021), pp. 3−32, doi:10.1017/9781009157896.001.

[8] John. A. Church, and Neil. J. White, ‘Sea-Level Rise from the Late 19th to the Early 21st Century’, *Surveys in Geophysics,* 32 (2011) 585–602.

[9] *Global Sea Level Rise is Accelerating* (2018) <https://unfccc.int/news/global-sea-level-rise-is-accelerating-study> [accessed 14 April 2019]

[10] Including Amitav Ghosh’s *The Hungry Tide* (2004), Sarah Hall’s *The Carhullan Army* (2007), Sam Taylor’s *The Island at the End of the World* (2009), Nathanial Rich’s *Odds Against Tomorrow* (2013), Antonia Honeywell’s *The Ship* (2015), Paolo Bacigalupi’s *The Windup Girl* (2010), Natasha Carthew’s *All Rivers Run Free* (2018), Alexis Wright’s *The Swan Book* (2016), Clare Morrall’s *When the Floods Came* (2016), Cyan Jones *Stillicide* (2019) Emily St. John Mandel’s *Station Eleven* (2014) and Margaret Atwood’s MaddAddam trilogy (2003–2013; *Oryx and Crake, The Year of the Flood, MaddAddam*), among many, many others.

mounting torrent of human, species and ecological losses that mark '[a] point of transition' in the history of the planet.[11] The novels and stories that shape our understanding of the climate emergency play a pivotal role as part of the larger discourse surrounding it.

Storytelling is an innately human way of making sense of the world, and this sense making, I propose, is fostered in large part by the historical inheritance of mythic stories and their narrative constructions. Specifically, I intend to explore retellings of the Yahwistic story of the flood myth, as it survives in chapters six to eight of Genesis.[12] As we know, the biblical flood story describes a situation in which cumulative human actions have issued in a transformative global calamity. Only a handful of humans and assorted species are saved from the calamity and placed in an uneasy new intimacy aboard an ark. The world is devastated by flood; the rains come; the seas rise; habitats are destroyed. However, the world is not beyond certain kinds of regeneration and repair in the wake of the disaster. Those aboard the ark find land again and begin the task of replenishing the earth. As Jeremy Davies and others have noted, 'the story of the deluge seems apposite in the present moment' of ecological imperilment.[13] Indeed, novels that draw on the biblical flood myth can often be seen to employ its particular themes and images, as well as its familiar narrative structure to draw out the sociopolitical, philosophical and ethical implications of ecological imperilment in a time of climate crisis.

Flood imagery is used in George Turner's *The Sea and Summer* (1987), Maggie Gee's *The Flood* (2004) and Margaret Atwood's *The Year of the Flood* (2009), for example, in association with the legacies of Christian apocalyptic and eschatological thought gained from Revelation to prompt the reader to imagine a countermodel to the devastation described in the novel. In these instances, floods are used to warn and give shape to fears of ecological crisis. Beyond literature, the biblical

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[11] James Bradley, *Clade* (London: Titan Books, 2015) p. 131.
[12] It is important to note here that while I refer to the biblical flood myth, suggesting one narrative, I am aware of its variable and shifting authorship, which belongs to at least two distinct voices from different time frames and purposes. I refer in most cases to the version of Genesis 6-9 as narrated in the King James Bible, or Authorised Version as it is sometimes called. This translation has had a marked influence on English literary style, and provides the biblical lexicon to which most Anglophone secular novels I refer.
[13] Davies, Jeremy, 'Noah's Dove: The Anthropocene, the Earth System and Genesis 8:8–12', *Green Letters*, 23 (2020) 337-349, p. 337. See also, Jeffrey Jerome Cohen, 'Anarky', *Anthropocene Reading: Literary History in Geologic Times*, eds, by. Tobias Menely and Jesse Oak Taylor (Pennsylvania State University Press, 2017) 25–42; Hannah Fair, 'Three Stories of Noah: Navigating Religious Climate Change Narratives in the Pacific Island Region', *Geo: Geography and Environment,* 5 (2018) 1-15; George Handley, 'Anthropocentrism and the Post secularity of the Environmental Humanities in Aronofsky's *Noah*', *MFS: Modern Fiction Studies,* 64 (2018) 277-284.

flood myth frequently functions as metaphor in the everyday language we use to express overwhelming emotion. The opening verses to Genesis 9 reveal the flood as an enactment of God's intense sorrow over the sin of humankind, rather than rage. The emotion of grief, therefore, is associated with the literal production of the flood, leading the reader to equate grieving with the threat of water to overwhelm, submerge and suffocate. Novelistic floods, therefore, are frequently deployed metaphorically to evoke the weight of ecological grief, as in Mireille Juchau's *The World Without Us* (2015), Natasha Carthew's *All Rivers Run Free* (2018) and Barbara Kingsolver's *Flight Behaviour* (2012).

Another motif that is frequently used in allusion to the biblical flood is that of rebirth and renewal following ecological calamity. James Bradley's *Clade* (2015), Megan Hunter's *The End We Start From* (2018) and Lydia Millet's *A Children's Bible: A Novel* (2020) are all examples that draw on the theme of rebirth to speak to intergenerational and futural concerns in a time of climate crisis. In this, I argue that the open-endedness of the flood myth is adopted by these novels as a form of what Christophe Bode and Rainer Dietrich call 'future narrative', in that it reserves an open space for the possibility of alternative paradigms to the present, and serves as a challenge for remedial change.[14] In drawing attention to the open ending of these novels, I want to highlight the critical mapping of narratological openness that comprises an important part of the flood narrative. As a descriptive term 'open' refers to how the principal ideas that a particular novel might mobilise are left suspended for the reader to attempt to resolve or leave unresolved. Flood novels contemplate the possibility of continuity, be it in the possibility of a form of continuance after the flood, like in Hunter's *The End We Start From*, or in the longue durée of the planet in geological time, which places hope for the planet's recovery in the unimaginably vast vistas of the earth's history, like in *Clade* and *A Children's Bible*. In all cases, the open-endedness of the novels serves to stimulate a desire for a more ecologically conscious future and motivate that desire toward action by conveying a sense that the current ecological crisis is not on a fixed trajectory but is always unfolding in indeterminate, continually changing ways.

Despite the number of works that explore environmental concerns in relation to flooding, there has been a gap in research on the use of myth, and the biblical flood

[14] Christophe Bode and Rainer Dietrich, *Future Narratives: Theory, Poetics, and Media-Historical Moment* (Berlin: De Gruyter, 2013).

myth in particular, in the climate novel.[15] Moreover, existing research does not always engage with environmental novels published before the emergence of climate fiction as a genre, choosing instead to focus solely on the ways in which flooding in the novel is explicitly used to address the climate crisis. This is partly to do with the definition of climate fiction or 'cli-fi' itself; a neologism allegedly coined by Dan Bloom in 2007 to describe novels in the late-twentieth and twenty-first century that tackle the issues of anthropogenic climate crisis. A definition put forward by Axel Goodbody and Adeline Johns-Putra describes cli-fi as a

> distinctive body of cultural work which engages with anthropogenic climate change, exploring the phenomenon not just in terms of setting, but with social issues, combining fictional plots with meteorological facts, speculation on the future and reflection on the human-nature relationship, with an open border to the wider archive of related work on whose models it sometimes draws for the depiction of climate crisis.[16]

This working definition of climate fiction is useful in that it helps to identify the advent of public concern over climate crisis, beginning in the late 1980s, as a unique turning point in environmentalist fiction, while also acknowledging that as a developing genre, cli-fi does borrow from existing cultural narratives. Examples of what Jim Clarke has called 'proto-climate-change fiction' includes representations of human interventions into global climatic conditions that predate a broader popular awareness of global warming, such as J. G. Ballard's *The Drowned World* (1962).[17] Similarly, Adam Trexler's wide ranging, albeit brief analysis of floods in the climate novel in *Anthropocene Fictions* (2015) includes twentieth century novels that employed the biblical deluge as a metaphor to explore apocalypse following the horrors of WW2 and the nuclear threat.[18] John Wyndham's *The Kraken Wakes* (1953), John Bowen's *After the Rain* (1958) and Ballard's *The Drowned World* are all examples to this effect.

[15] For a recent critical discussion of climate fiction and flood tropes, please see 'Waters Rising' in the Special Issue of *Green Letters: Studies in Ecocriticism*, eds by., Astrid Bracke and Katie Ritson, 24: 1 (2020).
[16] Axel Goodbody and Adeline Johns-Putra, *Cli-fi: A Companion*, eds. by, Axel Goodbody and Adeline Johns-Putra (Oxford: Peter Lang Ltd, 2019) p. 2.
[17] Jim Clarke, 'Reading Climate Change in J. G. Ballard', *Critical Survey* 25 (2013), 7-21.
[18] Adam Trexler, *Anthropocene Fictions: The Novel in a Time of Climate Crisis*, (London and Charlottesville: University of Virginia Press, 2015). Astrid Bracke, 'Flooded Futures: The Representation of the Anthropocene in Twenty-First-Century British Flood Fictions' *Critique: Studies in Contemporary Fiction,* 60 (2019) 278 -28.

While these narratives attribute dramatic climate change to natural, supernatural, or indeed extra-terrestrial, causes, they offer an appealing template and obvious structure with which to explore global warming.

It is not my intention to study these particular novels in the space of this thesis, however I am interested to see how climate fiction as a genre is already being expanded to include novels that predate awareness of the effects of greenhouse gases. These examples provided above indicate that mythic structures in climate fiction, like the biblical flood narrative, not only provide a useful framework for helping readers think through complex issues related to human interventions in global climatic conditions, but also offer an opportunity to include texts that would not ordinarily be considered under the rubric of climate fiction. In thinking through the ways that the biblical flood myth continues to resonate within contemporary novels about environmental and climate crisis, I argue that it is important to revisit past cultural narratives that evoke the mythic flood tradition for their, often implicit, representations of disastrous human interventions into natural systems, such as George Eliot's *The Mill on the Floss* (1860) and D H. Lawrence's *The Rainbow* (1915). I will discuss these novels in relation to the climate novel in the first part of this thesis and by doing so recognise them as examples of a literary prehistory of climate fiction. I argue that their incorporation of the biblical flood myth invites the reader to tap into the unpredictable, non-human agencies and the huge timescales of this geohistorical shift that we now identify as the Anthropocene.[19] By re-examining novelistic uses of the biblical flood myth from the nineteenth century to the present, I want to widen the historical parameters of climate fiction to include novels that speak to and display

[19] While I do not wish to offer a comprehensive summary of the Anthropocene as a term used in popular, environmental discourse, it is worth a brief overview here. The term Anthropocene first appeared in 2000 in a short scientific article by Paul Crutzen and Eugene Stoermer in an attempt to define human-caused changes of the biosphere. It has since become widely used as a term to define this geological epoch as the first that has been significantly altered by human activity. The Anthropocene Working Group (formed in 2009), has produced several interdisciplinary publications with the aim of creating a convincing argument for the Anthropocene to be formally recognised as a geological epoch. However, at the time of writing this it is still not officially recognised. More importantly, it is a controversial definition, with scholars across many disciplines pointing to the term as a politically infused geology and scientific/popular discourse that homogenises and naturalises the "we" of Anthropos, humanity as one, singular species. This fails to take into account the colonial legacies, extinctions and environmental harms that have been knowingly committed under the rubric of civilisation, progress and modernisation, or that not all humans have contributed to anthropogenic acceleration in the same way. A number of alternative terms have been proposed: the he Capitalocene (Jason Moore), the Ecozoic (Brian Berry), the Great Derangement (Amitav Ghosh), the Symbiocene (Glenn Albrecht), the Chthulocene (Donna Haraway), the Necrocene (Justin McBrien), the Age of Asymmetry (Timothy Morton), etc. In this thesis I use the term Anthropocene with acknowledgement of its synecdochical human (white) supremacist worldview and in recognition that the world has been irrevocably altered by human activities.

stories that imaginatively attempt to address the vastness of geological timescales with human questions of responsibility.

In the five chapters that form this thesis, I intend to look at the different ways in which flood narratives use particular recurrent elements and techniques that are inherited from the biblical flood myth. I show how narrative framings of flood-related catastrophe reveal the ways that myth functions as metaphor and operate on a pre-cognitive and embodied level, suggesting the extent to which we have internalised mythic stories. In doing so, I hope to reshape current thinking about the significance of myth in the ways that climate change is thought about and narrativized. My method of reading thus focuses on narrative arcs rather than providing detailed analysis or close reading of a particular text, since I am interested in the books as a whole. To that end, I deploy a narratologically inflected ecocritical approach that intersects with the emerging field of econarratology, a term first coined by Erin James in her 2015 work. It argues that the form in which a story is told works simultaneously with the ways in which human and nonhuman worlds are represented. This entails an analysis specifically of how the nonhuman world is described, since a textual, novelistic landscape is never mere representation, but is determined by the literary and narratological elements that shape it in the same way that extratextual landscapes are the product of their historical, political, cultural and environmental circumstances. In James' words, econarratology 'studies the storyworlds that readers simulate and transport themselves to when reading narratives, the correlations between such textual, imaginative worlds and the physical, extratextual world'.[20] Novelistic accounts of flooding offer a rich site to investigate the connections between imagined flooding and the real-world circumstances that produce them. Astrid Bracke's analysis of a selection of twenty-first century British novels that use flooding to tackle some of the representational and imaginative challenges of the Anthropocene offers one potential way of reading flood novels econarratologically. Bracke argues that when floods appear in the climate novel, they often metafictionally internalise the effects of climate crisis through narrative fragmentation and language erosion to indicate the break-up of narration due to climate change.

Bracke points to the ways in which novelists' use the material properties of floods to challenge and expand the boundaries of the novel as a form as the floods

[20] Erin James, *The Storyworld Accord: Econarratology and Postcolonial Narratives*. (Lincoln: University of Nebraska Press, 2015), p. xv.

seep and break apart the language and narrative coherence of the novel. Such metafictional flooding, she argues, seeks the boundaries of the novel as genre, not 'to foreground the limits of the novel, but rather to highlight the ways in which it expands and cracks to show its possibilities in a time of crisis'.[21] Bracke is concerned with the ways in which floods function at a narratological level to simulate the physical and embodied effects of flooding. As such, her analysis offers a useful jumping off point with which to explore the implications of the biblical flood myth as it resurfaces not only in contemporary, but also earlier realist novels. Bracke does not offer further insight into the pivotal role of the biblical flood narrative to the ways flooding is imagined and experienced in the climate novel. My research seeks to fill this gap. Taking a moment to concentrate on the production of myth as metaphor may help the reader to place in context the seven flood novels considered in this thesis and, coupled with my use of narratology, will help elucidate how environmental novels draw on the familiar structures of the biblical flood myth to engage the readers sensually and emotionally in the stories they tell.

To support this line of thought, I consider how the mythic mode of storytelling has risen to prominence within the period of the Anthropocene's emergence, and thus become a significant narrative device with which to communicate the perils of climate change. I also think about the ways in which the mythic mode bears traces of its entanglement with this distinct moment of rupture in the planet's history. For the purposes of this thesis then, I am interested in modern constructions of myth. As a reflection of the importance of this topic, I include a more detailed exposition of the role of myth as metaphor in the following section of this introduction.

ON MYTH AND METAPHOR

In this part of the introduction, I look at the origin of the word myth and consider the difference between myth and fable. I demonstrate how a temporal understanding of myth can influence the perspectives of subsequent generations and can lead to very different views of the same myth. I go on to explore myth as metaphor and the importance of narratological view of myth in literature.

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[21] Astrid Bracke, 'Flooded Futures: The Representation of the Anthropocene in Twenty-First-Century British Flood Fictions', *Critique: Studies in Contemporary Fiction*, 60: 3 (2019) pp. 278 -288. p. 283.

The concept of myth to emerge in the late eighteenth century dovetails and is entangled with the new scientific discoveries, inventions and modes of production that heralded the rise of the 'modernising unconscious' of the Anthropocene.[22] Indeed, in their original proposal for dating the Anthropocene, Paul Crutzen and Eugene Stoermer highlighted the late eighteenth-century as the point at which glacial ice began to accumulate evidence of growing carbon dioxide emissions. The construction of myth in this period, therefore, appears not just coincidental but constitutive with the new geological era in which 'we' (that is, diverse collectives in differing ways) currently live. It is important to identify the modern historical inheritance of myth as a concept therefore, as this may highlight some of the problems inherent in the frameworks which we have internalised from the biblical flood myth. In this way, I show that while the biblical flood myth is central to our cultural engagements with and ontological conceptions of eco-catastrophe, it will require continued assessment in future climate fiction as the effects of climate crisis no doubt worsen and evolve.

For an historical understanding of the term, I refer to Andrew von Hendy's *The Modern Construction of Myth* (2002). As von Hendy shows, while the words 'mythologist' and 'mythology' emerged as early in common English as 1425, the word 'myth' did not appear until the eighteenth century. Myth came into the English language via Greek in contrast to mythology that entered the language via French. Mythos in Greek comes from the verb μυω which means to initiate one to the mysteries of nature. Through its use in ancient Greek literature (e.g. Homer, Pindar, Hesiod, Aristotle), it came to be associated with advice, speech, philosophical instruction, point of view, and eventually storyline (the arrangement of incidents that represent the action). Before the term 'myth' came into being, however, vernaculars resorted to the Latin word for 'story', *fabula*, and thus developed analogues of the English 'fable'. The key to this puzzling split in linguistic usage lies in observing the meaning attached to the word 'mythology' and its grammatical variants. Mythology is about the study of myths. It combines the words myth and logos (discourse); it has to do with the discourses (interpretations) about myth. 'Mythology is not a body of stories', von Hendy writes 'but the scholarly science of allegorical reading; to

[22] I take this term from Christophe Bonneuil and Jean-Baptiste Fressoz who describe the history of the Anthropocene not as 'one of a frenetic modernism that transforms the world while ignorant of nature, but rather of the scientific and political production of the modernising unconscious' in Bonneuil, Christophe, & Jean-Baptiste Fessoz, *The Shock of the Anthropocene: The Earth, History, and Us,* trans, by. David Fernbac (New York: Verso, 2016) p. 199.

"mythologise" means not to invent or relay a mythos, but to engage in that kind of interpretative practice'.[23]

Myth, therefore, came to be used in the eighteenth century to displace *fable*, bringing along the added signification of religious importance. Moreover, the linguistic shift from 'fable' to 'myth', which von Hendy places in the 1760s, marks 'the outbreak of a revolution in Western conceptions of fantasy and storytelling in some ways comparable […] to the contemporary political revolutions in America and France'.[24] The concept of myth to emerge at this time thus motioned a radical departure from the two-thousand-year tradition of moralising allegory, to become 'a major move in the self-legitimisation of modernity'.[25] Von Hendy further claims that not only high art but virtually every form of modern critical discourse took shape in the struggle to re-evaluate the mythic from this point in history onwards.

The difference between myth and fable, von Hendy asserts, was made by early Romantic authors who began to accept myth on its own terms as the expression of unmediated religious experience, particularly in regard to nature. In the latter half of the eighteenth-century the German classicists Christian Gottlob Heyne and Johann Gottfried Herder helped to familiarise their readers with the term "myth" and frame its Romantic meaning. In particular, Herder understood myth as a religious response to nature, which finds echoes in the novels of George Eliot, especially *The Mill on the Floss.* At the turn of the century, Friedrich Schligel argued in *Dialogues on Poetry* (1800) that mythopoeia is a universal human faculty, which becomes fundamental to theories of myth from that point. Another important historical assumption to emerge from this period is that ancient poets had unmatched imaginative power because their experience of the world was unmediated by knowledge, reason and abstract thought. Instead, they articulate their experience of the world through 'imaginative universals' – this was the principal aspect of the Italian philosopher Giambattista Vico's historical view of myth.

Myth is identified as a symbolic mode of cultural construction and therefore symbol and myth are both seen as tautegorical.[26] For the Romantic authors and philosophers, von Hendy places Coleridge, Creuzer, and Schelling in this bracket, the meaning of the symbol is transformed from that of a tautegorical mode of

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[23] Andrew von Hendy, *The Modern Construction of Myth* (Bloomington: Indiana University Press, 2002) p. 2.
[24] von Hendy, *The Modern Construction of Myth*, p. 36.
[25] Ibid, p. 36.
[26] Ibid, p. 36.

communication to one that is 'miraculous'. In this light, the symbol participates in transcendent religious reality. This concept of the symbol would become canonical in the later nineteenth century. In particular, Friedrich Wilhelm Joseph Schelling contributes two further tenets to the Romantic construction of myth that would continue to influence understandings of this critical term and concept in the twentieth century, especially in relation to the use of myth in Modernist novels such as D. H Lawrence's *The Rainbow.* The first is that myth 'belongs to an unconscious, teleological process' that exists outside of time and history, and secondly, that human beings create their own social world and myth is constitutive of it.[27]

Another distinction to be made in the early nineteenth century is the entrenchment of the myth as a distinct genre of story. von Hendy notes that the emergence of myth's usage, first in Germany in the teens and twenties of the nineteenth century, indicates the 'growing persuasion that there is indeed an encounterable, and creatable, type of narrative charged with the power to inform a culture'.[28] A notable name to the construction of myth as a genre is Thomas Carlyle, who shares the Romantic view that myth can restore unity to modern culture, and he affirms our ability to attain transcendental knowledge. Carlyle popularises the word myth in English via his 1831 novel *Sartor Resartus* and puts forward the idea that symbols are viewed as the means by which humanity constructs its social worlds, while myth constitutes religious symbolism and is a communal product that produces cultural cohesion. Von Hendy concludes with a discussion of Nietzsche, whose early incursions into the ritual origins of Greek tragedy in ecstatic choral performance were a formative influence on the myth and ritual school. In his later work, Nietzsche is said to treat myth as a socially constructed, and necessary, illusion, a 'vital lie' that can be extended to understand all cultural constructions.

The model of myth proposed by folklorists, however, differs considerably from the critical discourses aforementioned. The American folklorist Barre Toelken, for example, views myth's primary purpose as a way of *enacting* the universe or an important aspect of it, rather than as an attempt to explain natural processes.[29] Myths, as I have previously acknowledged, reflect historical processes and alter over time alongside the cultures that maintain them. Likewise, they are not universal, but

[27] von Hendy, *The Modern Construction of Myth*, p. 39.
[28] Ibid, p. 59.
[29] Barre Toelken, *The Anguish of Snails: Native American Folklore in the West* (Logan: Utah State University Press, 2003) p. 112.

depend on a web of associations and social interactions between the interpreter and recipient. It is in this way that I view the biblical flood myth and the ways in which it is revisited and reinterpreted throughout the flood novels I discuss as part of this thesis. Furthermore, Toelken's emphasis on myth's ability to enable the simulation of an experience or environment and aid in the comprehension and communication of abstract concepts in a culture's social ontology, relates to the ways that myth functions as metaphor according to cognitive linguistics. This is because myth is associated with speech and hence language, and language works metaphorically because it involves a cognitive process. The idea of myth employed in this thesis refers to the realm of foundational or origin story that has, in the modern era, been distinguished from 'factual' or 'true' history, rather than to myth in the simpler, everyday meaning of a false belief. In focusing on myth as metaphor I want to suggest that myths inform and become a way for us to enact, imagine and perceive the world. Indeed, cognitive linguists have shown that metaphors can create implicit comparisons and have cognitive and affective meaning.[30] Through its metaphorical workings, the biblical flood myth can help to overlay the issue of ecological imperilment with reflections on the transcorporeal connections between humans, nonhuman entities and ecologies, their shared vulnerability to environmental devastation, and the role of stories in achieving a sense of ethical responsibility and environmental concern. As a type of 'living, feeling and knowing', to quote the German philosopher Ernst Cassirer, myth functions cognitively in a similar way to metaphor, as both are culturally mediated and play a crucial role in knowledge production and dissemination.[31] Thus mythic narratives function in a similar way to root metaphors in building symbolic universes or 'storyworlds', to use Erin James' terminology. In doing so, I argue, that the biblical flood myth provides an extradiegetic layer to the formation of flood-related catastrophe in the novels studied in this thesis. In this way, I hope to provide an extension of econarratology's limited engagement with myth and how it functions on a narratological level in the climate novel to contribute to the reader's understanding of climate change.

In his investigation of myth as metaphor, the cognitive linguist Gert Malan argues that narrative myths share the traits of metaphors because they are both types of analogy, fit into a comprehensive structure of meaning of a culture, and become a

[30] See Pradeep Sopory, 'Metaphor and Affect', *Poetics Today,* 26 (2005), 433–458
[31] Quoted in William Schultz, *Cassirer and Langer on myth: An introduction* (New York: Garland Publishing, 2000) p. 32.

meaningful way of thinking and being to their adherents.[32] In other words, they share the ability to create and shape worlds through language. Questioning the traditional view of metaphors as decorative and restricted to literary language, Malan recognises that it plays an important role in communication and thought. His analysis corresponds with recent developments in cognitive linguistics that put forward the idea that people speak metaphorically because they feel, think and act metaphorically. In this respect, metaphors are not an autonomous, formal structure of language, rather they are considered reflections of everyday conceptual organisation and cognitive processing.[33] As the cognitive linguist George Lakoff observes, 'metaphor allows us to understand abstract or inherently unstructured subject matter in terms of more concrete or at least more structured subject matter'.[34] Similarly, cognitive scientists have shown how metaphors evolve from embodied and cultural experience as cognitive tools to comprehend and communicate abstract concepts. This is because the human brain is structured by thousands of embodied metaphor mapping circuits that aid the conceptual system.

While they function largely unconsciously, these mapping circuits asymmetrically link distinct brain regions, allowing reasoning patterns from one brain region to another. Malan's analysis shows that humans are not only neurologically wired for metaphorical reasoning, but also use metaphor to 'enhance the process of understanding, interpretation and invention as it identifies or creates relations that were not previously observed or are completely new'.[35] With ordinary metaphorical expressions, the mapping 'is mostly unconscious, automatic and used with little effort, like our language system and the rest of our conceptual system'.[36] In this sense, metaphor is shown to be much more than a rhetorical device, it 'is structural to the processes of meaning production and the acquisition of knowledge'.[37] Moreover, because metaphors present a relation of similarity between 'interpreted' sign and 'interpretant' sign, they 'develop an infinite sequence of signs

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[32] Gert Malan, 'Myth as Metaphor', *HTS Teologiese Studies/Theological Studies,* 72 (2016) 1-8.
[33] Markus Tendahl and Raymond W. Gibbs, 'Complementary perspectives on metaphor, Cognitive Linguistics and Relevance Theory', *Journal of Pragmatics,* 40 (2008) 1823–1864.
[34] George Lakoff. "The contemporary Theory of Metaphor". *Metaphor and Thought.* Ed. Andrew Ortony. Cambridge University Press: Cambridge, 1993. pp. 202–251. p. 204-5.
[35] Malan, 'Myth as Metaphor', p. 3.
[36] Ibid.
[37] Ibid, p. 4.

that interpret and amplify the preceding sign, thus, intensify a metaphor's power to create new worlds'.[38]

Like metaphor, myths work to structure the conceptualities of a culture, or its worldview, and alter over time as a culture evolves. This is because the structure of a culture's worldview, or 'symbolic universe' as Malan describes it, is 'provided by root metaphors', which are coded in mythological language. In this respect, Eve Sweetser's analysis of myth in everyday language concurs with Malan's assessment. As the study of myth, '[m]ythology' Sweetser argues 'is a cultural ontology with what is a complex metaphorical basis'.[39] Having developed a variety of examples to that effect, Sweetser concludes that 'linguistic structure is a part of culture, and linguistic metaphor usages are based on broader cultural cognitive structures'.[40] Working as they do as root metaphors, mythic narratives build symbolic universes or 'storyworlds', that are 'mentally and emotionally projected environments in which interpreters are called upon to live out complex blends of cognitive and imaginative response', that are, in turn, embellished, reinterpreted and reimagined as they are circulated.[41]

We can see this at work with respect to the ways in which the biblical flood is frequently invoked within contemporary culture to describe the scale and devastation of natural disasters. Indeed, a quick internet search brings up headlines from 2019 citing 'biblical destruction' caused by storms and flooding in France, Greece and Italy.[42] Likewise, another headline from later in the year proclaims an 'almost biblical' downpour of torrential rain in the north of England.[43] The use of this adjective provides a cheap way of conferring meaning on everyday horror contends Andrew Tate.[44] As such, '[t]he epithet "scenes of biblical destruction"', Tate writes, 'has mutated into a journalistic cliché, one that generates an instantly recognised iconography of suffering, and which is also successful in promoting suffering'.[45]

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[38] Ibid.
[39] Eve Sweetser, 'Metaphor, mythology, and everyday language', *Journal of Pragmatics*, 24 (1995) 585- 593, p. 592.
[40] Sweetser, p. 592.
[41] David Herman, *Routledge Encyclopaedia of Narrative Theory*, eds, by. David Herman, Manfred Jahn and Marie-Laure Ryan (London: Routledge, 2010) p. 570.
[42] Angela Giuffrida, Kim Willsher and Helena Smith, Storms in France, Greece and Italy leave 'biblical destruction' (2019) <https://www.theguardian.com/world/2019/nov/25/storms-france-greece-italy-destruction-floods> [accessed 12 December 2019].
[43] Nazia Parveen and Simon Murphy, 'Woman dies as floods devastate Midlands and north of England' (2019) <https://www.theguardian.com/environment/2019/nov/08/midlands-north-england-floods-woman-dies> [accessed 12 December 2019]
[44] Andrew Tate, *Apocalyptic Fiction* (London: Bloomsbury, 2017) p. 23.
[45] Ibid, p. 23-24.

Such headlines also point towards the cultural potency of the biblical flood myth as a story which we readily use to narrativize environmental and climate crisis. Whether we are conscious of it or not, such public perceptions of climate change are inherently tied to narrative strategies that are used to emphasise, and in some cases simplify, the dramatic urgency of such disasters as they unfold. In this way, we are offered not just facts and modes when we read and hear about the environmental problems of our lifetime, but stories. A clearer understanding of the ways the flood myth is used as a narratological tool is necessary then to evaluate its effectiveness from a perspective of environmental concern.

This way of reading novelistic interpretations of the biblical flood myth emphasises the experiential and immersive aspects of flood narratives and demonstrates how this engenders compassionate responses to ecosocial and environmental injustices. A useful text in this regard is Alexa Weik von Mossner's *Affective Ecologies* (2017), which investigates readers' responses to environmental issues in literature and film as embodied cognition.[46] Weik von Mossner formulates her discussion on environmental narratives around empirical research in cognitive narratology to support her theoretical arguments. In particular, Weik von Mossner is interested in cognitive science studies that show how reading about a particular event stimulates the same regions of the reader's brain as would the direct experience of that event in a real-world context. Readers can thus be seen to construct mental simulations of the events and contexts they read about for narrative comprehension. Additionally, in *Empathy and the Novel* (2007)*,* Suzanne Keen shows that there is significant evidence, particularly from mirror neuron research, that 'readers feel empathy with (and sympathy for) fictional characters'.[47] With regard to flood narratives 'empathy is more crucial because it allows us to understand *what it is like* to undergo a certain sensual experience'.[48]

The capacity for readers to map the sensations, emotions, and movements of characters, both human and otherwise, who experience flooding, is important given

[46] Embodied cognition is understood as a cognitive response that is both physical and emotional because it encourages comparisons between the reader's material, or 'real' world with the worlds of fiction and film. See, , Alexa Weik von Mossner, *Affective Ecologies: Empathy, Emotion and Environmental Narrative* (Columbus: Ohio State University, 2017).

[47] Mirror neurons are cells in the human brain that fire when we carry out an action and when we watch another person carrying out the same action, allowing us to understand the other person's action on a visceral level.

See, Suzanne Keen. *Empathy and the Novel.* Oxford, UK: Oxford University Press, 2007. p. vii.

[48] Ibid.

the difficulties the novel faces in adequately apprehending the complex spatiotemporal scales of climate crisis. Flood narratives invite readers to attend to the subjective sensual experience and imaginary perception of flooding in ways that allow them to understand ecological catastrophe on a visceral level, even if they do not have direct, real-world experience of such climate and environmental disasters. Readers can therefore simulate an experience of what it is like 'dancing with disaster', a term used by Kate Rigby to designate multispecies performance, at once rehearsed and responsive, of an interactive and mutually constitutive 'material-discursive *modus vivendi* in the midst of uncertainty' that is oriented toward preventing eco-catastrophe where possible, as well as 'enhancing resilience should one such nonetheless eventuate; and enabling transformation should that prove necessary'.[49] Doing so, Rigby asserts, may lead to an empathetic responsivity to those entities and environments suffering ongoing depredation through anthropogenic climate change. Building on Rigby's assertion, I draw on the aforementioned works in narrative theory and cognitive science to create a critical and methodological framework within which to analyse the set texts and better understand the ways in which flood narratives construct, subvert and perpetuate dominant representations of environmental crisis.

In this respect, it is also important to demonstrate how the cultural embeddedness of the biblical flood myth has been temporally mediated through its reception history. Reception history focuses on the reader and how they receive the text in their particular historical and cultural setting. My interest in the afterlife of the biblical flood myth from an ecocritical perspective relates to the agency it sees in the reader in responding to climate change. This is why I will revisit reworkings of the flood myth in novels that contribute to the development climate fiction and form part of its prehistory, such as George Eliot's *The Mill on the Floss* (1860) and D. H Lawrence's *The Rainbow* (1915), which I dedicate the first two chapters to. In the next section of this Introduction, therefore, I want to consider how contemporary readings of the biblical flood myth have been shaped by previous interpretations, particularly, its re-evaluation in the environmental humanities as an eco-narrative.

[49] Kate Rigby, *Dancing with Disaster: Environmental Histories, Narratives, and Ethics for Perilous Times,* (Charlottesville and London: University of Virginia Press, 2015) p. 21.

By exploring the entangled historiographical and mythical elements of the novels contained in my thesis from an ecocritical perspective, I aim to think through ways in which literary history changes when viewed in conjunction with the geohistorical shift that we now identify as the Anthropocene. So, in this section, I offer an overview of the reception history of the biblical flood narrative, specifically within a western context, to better understand the connections between the biblical flood myth and its use in contemporary Anglophone representations of environmental crisis. I go on to consider an ecological, historical and religious perspective and the dualism of man and nature juxtaposing positive and negative aspects on the flood myth. Finally, I cover how the narrative model of the flood myth is used in the climate novel in my thesis in my chapter breakdown.

First, it is worth considering the set of ecological circumstances from which the myth was generated. The earliest version of the flood myth as we recognize it in the Bible originated around 1600 BCE in the form of a Sumerian poem. The poem begins by referencing the importance of the creation of the irrigation system to the growth of the Sumerian cities. Later versions of the narrative, embraced and adapted by the Babylonian Empire around 1635 BCE in the *Atrahasis Epic* and later *Epic of Gilgamesh* again demonstrate the importance of irrigation to these ancient civilizations, recounting how humankind was created by the gods to assuage their back-breaking labour in keeping the river valleys watered. The flood arises out of the gods' desire for peace and quiet. Having been kept awake due to the noise of the ever-increasing human population, the gods decide to punish the humans by raising the salty sea from the earth, turning the fields white and bringing forth salt crystals 'so that no plant came forth, no grain sprouted'.[50] The Sumerians were first attracted to the fertile alluvial soils of the lowlands of southern Mesopotamia where siltation from the Tigris and Euphrates Rivers had led to the formation of extensive sweet-water marshes and brackish lagoons.

As the population grew with the expansion of agriculture so did the irrigation technologies that exploited the braided streams and natural incline of the land to

[50]*Ancient Near Eastern Texts Relating to the Old Testament*, ed. by James Bennett Pritchard (Princeton, NJ: Princeton University Press, 1969), p. 104.

create larger arable areas. However, the complex infrastructure necessary for urban dwelling, including the building of channels, dikes and reservoirs for flood control and water conservation, was ultimately unsustainable. In time, the build-up of silt led to successive flooding along the riverine channels, releasing salty water into fertile arable soils. According to Evan Eisenberg, this salty contamination led to a failure of the wheat crop and ultimately the crumbling of the Sumerian economy.[51] That the *Atrahasis Epic* shares many ecological concerns with our own time - deforestation, population growth, salinization of soils, and rising sea levels, to name a few - can go so far as to explain its mythic endurance in current environmental fiction. As such, it is easy to read the Mesopotamian flood narratives as cautionary tales about the limits of human mastery over nature.

The flood narrative in the *Atrahasis Epic* shares many common elements with its later version in the Hebrew Bible. In both myths a flood is brought forth by the God(s) to destroy humankind, an individual is chosen to build a large boat to carry the animals to safety, the boat eventually comes to rest on a mountaintop in the wake of the deluge (Mount Nimush in the *Atrahasis*, Mount Ararat in the Bible), finally doves and ravens are sent forth to find dry land and the world begins anew. A key difference in the texts is the role given to humanity. Humans are conjured as a solution to the hardship of labour in the Mesopotamian narrative and are largely devalued as slaves or playthings for the gods. They, therefore, bear no responsibility for the flood. In the Hebrew Bible, however, humans are elevated from a subservient position to being 'little lower than God'.[52] Consequently, their displeasing actions make them solely responsible for the flood, which is sent as a cosmic form of punishment.

This aggrandized form of theocentric belief has been taken as a starting point in discussion about the role of the biblical creation narratives within understandings of environmental crisis. In an article published in 1967, the American historian Lynn White Junior, theorized that we need look no further than the reception history of western Christianity in order to identify the prevalent attitudes to the natural world that have brought about its technocratic over-exploitation. White traces the ways in which Genesis One has been historically interpreted in the western Christian tradition from the twelfth century as a way of legitimising human mastery over nature as a

[51] Evan Eisenberg, *The Ecology of Eden: Humans, Nature and Human Nature* (London: Picador, 1998) p. 124.
[52] King James Bible, Genesis. 1:1 -2:4a.

mean to exploit natural systems. 'Christianity', White asserts, 'not only establishes a dualism of man and nature but also insisted that it is God's will that man exploit nature for its proper ends'.[53] White's analysis points towards a specific model of western Christianity foregrounded by the syncretism of science and religion in the works of Robert Grosseteste, Friar Roger Bacon and Theodoric of Freiberg in the early thirteenth century, who began scientific exploration into the optics of the rainbow in order to decode its biblical meaning. White concludes that 'science and technology have grown out from Christian attitudes towards man's relation to nature', namely that '[w]e are superior to nature, contemptuous of it, willing to use it for our slightest whim'.[54] It is commonplace among ecocritics to emphasise that our current ecological crisis arises ultimately from certain human cultures' strictly dualistic worldviews that insist upon the separateness of human culture from the natural world, which exists purely for human benefit. This dualism, as White and others have demonstrated, has been and continues to be particularly prevalent in westernised cultures and requires the deployment of colossal resources of power to maintain.

While it is not my aim to investigate White's hypothesis in further detail, I offer his analysis as a metanarrative on the ways in which myth can only be received and understood in temporal terms. It is of equal importance therefore that I show how narratives historically used in support of Euro-western exceptionalism and projects of mastery over other beings (both human and more-than) such as the biblical flood, have the potential to be reconsidered and reimagined from a perspective of environmental concern. One approach that attempts to reconcile a positive ecological system of values from the biblical text reinterprets the notion of human dominion as a model of stewardship. Re-evaluating the use of kingly language in Genesis 1:26-28 within the broader treatment of Kingship in the Hebrew Bible circumscribes the meaning of dominion as giving responsibility to humanity to tend the earth, as Adam and Eve nurture the garden of Eden in Genesis 2.15, and thus extend an ethics of care to all nonhuman ecologies.[55] Such engagements draw attention to the ecological potential of the narratives that have often been neglected. Kate Rigby, for example, observes that Noah's extension of hospitality to more-than-human others aboard the ark can be viewed as a counter-utopian narrative in which the ark models a form of

[53] Lynn White Jr, 'The Historical Roots of Our Ecological Crisis' *Science*, 155 (1967) 1203-1207, p. 1205.
[54] Ibid White Jr, 'The Historical Roots of Our Ecological Crisis', p. 1206.
[55] See Lucas F. Johnson, *Religion and Sustainability: Social Movements and the Politics of the Environment* (London: Routledge, 2014).

'ecstatic dwelling': a 'place of community of more-than-human strangers dwelling together equitably in exile'.[56] While Rigby acknowledges that the radical hospitality of the ark is forfeited once dry land is found and the hierarchical dualism between humans and animals is resumed once again, her analysis nevertheless suggests an alternative interpretation of the biblical flood narrative that places an emotional responsivity and ethical responsibility at its heart. Similarly, in a recent journal article for *Green Letters*, Jeremy Davies considers how the flood story, recounted in the J source of Genesis, might serve as a 'mythic vocabulary for the Anthropocene' in helping to reorientate thinking about our geological moment.[57] Davies eloquently argues that the Yahwist source, and the myths through which it is worked, demonstrate how the supposed divisions between the biological and the geological are bound to undo themselves.

Placing his reading of the Yahwist source in dialogue with Dipesh Chakrabarty's account of the life/world relationship in his 2009 essay 'The Climate in History', Davies questions 'Chakrabarty's sharp distinction between biological agents and geological agents, and his claim that the Anthropocene may be defined by twentieth-century humankind's unprecedented ascent to the status of a geological force'.[58] Davies argues that contrary to Chakrabarty's claim, recent developments in Earth system science shows that on a 'systemic level, biotic and abiotic factors cannot [...] be separated. Life has a leading role in the skeins of interactions, synergies and feedback loops through which the Earth system works'.[59] As such, the relationship between the biological and geological is far more complex and interdependent than Chakrabarty suggests. It is in this context that Davies reads the separation of the organic and telluric that leads to global collapse in the flood narrative. In the Yahwist source, Davies sees the 'perpetual enfolding' of living and non-living that make up the flood myth as a symbol of hope in our present crisis. Crucially, as we witness and experience 'the birth of the Anthropocene', he stresses that '[w]e might take a timely lesson from [the flood story]: that what is needed in the present moment is something still more than a "green" politics of the biosphere. What is needed is a politics of the

[56] Rigby, 'Noah's Ark Revisited: (Counter-) Utopianism and (Eco-) Catastrophe', *Arena Journal*, 31 (2008) 163-178, p. 175
[57] Jeremy Davies, 'Noah's Dove: The Anthropocene, the Earth System and Genesis 8:8–12', *Green Letters*, 23 (2020) 337-349, p. 337.
[58] Ibid, p. 339.
[59] Ibid.

Earth system itself'.[60] Davies and Rigby each attempt a reconceptualisation of the biblical flood myth away from the notions of human exceptionalism that became consolidated in the project of 'human mastery' in the context of the scientific revolution. As such, they both demonstrate the ways in which myths reflect historical processes and change over time as the cultures that maintain them evolve.

Furthermore, they emphasise the ability of myth to aid in the comprehension and communication of abstract concepts such as Earth system dynamics, the transcorporeal connections between humans, nonhuman entities and ecologies, their shared vulnerability to environmental devastation, and the role of stories in achieving a sense of ethical responsibility and environmental concern. Building on their research, my own ecocritical reading of the biblical flood myth acknowledges that the human focus of the dramatic mythological construction names humanity as a vulnerable species, but also points to the potential of humankind to be collectively harmful. In Genesis 6:12-13, the relationship between human activity and the earth's geology is transcorporeal, in accordance with Stacy Alaimo's description where human corporeality is inseparable from 'nature' or the 'environment'.[61] Human sin is reconfigured in this context as tangibly corrosive:

> for all flesh had corrupted his way upon the earth […] And God said unto Noah, The end of all flesh is come before me; for the earth is filled with violence through them; and behold, I will destroy them with the earth.[62]

The 'earth is filled with violence', the embodied existences of human and nonhuman are mutually imbricated. Interestingly, flesh in the biblical flood narrative encompasses all living terrestrial creatures: 'And *all* [my italics] flesh died, that moved upon the earth, both of fowl, & of cattle, and of beast, and of every creeping thing that creepeth upon the earth, and every man'.[63] Destruction is not limited to humanity as a single species, but is implicated in all living creatures on land. 'Flesh' demarcates here a transcorporeal orientation that foregrounds the flood as an equaliser and encourages a reconsideration of nonhuman agency.

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[60] Ibid. p. 348.
[61] Stacy Alaimo, *Bodily Natures: Science, Environment, and the Material Self* (Bloomington: Indiana University Press, 2010) p. 238.
[62] King James Bible, Genesis 6:12-13.
[63] Ibid, Genesis 7:21, (*my* italics).

The continuity between human and nonhuman natures, illustrated through this list of decomposing bodies, disturbs the fallacy of an impermeable skin, inviting the conclusion that just as 'all flesh in which is the breath of life' has absorbed the floodwaters, so must it have absorbed humanity's sinfulness.[64] It could be argued that in corrupting (or degrading) all earthly creatures and land, the 'natural disaster' has already happened, and thus preceded the destroying waters. From a narratological point of view, the divine determination behind the flood can be seen simply as a theological interpretation of human causation whereby the corruption of nonhuman nature results in the destruction of both. The narrative structure of Genesis makes it clear that the world of human experience is not as Yahweh intended it to be. Indeed, notions of collective flourishing are easily contradicted within the broader narrative framework. The post-diluvian world that emerges in the narrative is crucially not one of mutually beneficial cohabitation between human and nonhuman, but a compromised world which allows for the fact that it contains in the human species an animal that is resolute in its exploitation and domination of other living creatures, a state of affairs that the prophets show is to be overcome through the creation of a more just order (in Jewish tradition this is called 'tikkun olam', the repair of the world).

The biblical scholar John W. Rogerson sees this surprising turn of events in the text as 'functioning biblically as a prophetic critique of the actual state of human behaviour' and argues that the prophetic utopian vision called forth in the flood narrative is posed as a challenge 'to create human society that will be capable of living in a world that is the kind of world that God intends'.[65] As I have previously said, the open-endedness of the flood narrative operates as a form of what Bode and Dietrich call 'future narrative' in that it reserves an open space for the possibility of alternative paradigms to the present, and serves as a challenge for remedial change.[66] In this sense, the flood story can be viewed as a philosophical text insomuch as it uses narrative form as a prime locus for moral discourse by asking the receivers of the

[64] Ibid, Genesis, 6:17.
[65] John W Rogerson, 'The Creations Stories: Their Ecological Potential and Problems', *Ecological Hermeneutics: Biblical, Historical and Theological Perspectives,* eds, by. David G Horrell, Cheryl Hunt, Christopher Southgate and Francesca Stavrakopoulou (New York: T7T Clark International, 2010) p. 16.
[66] Christophe Bode and Rainer Dietrich, *Future Narratives: Theory, Poetics, and Media-Historical Moment.*

story to imagine an alternative, and perhaps better, model of reality as intended in Genesis before the fall.

Moreover, as recent research indicates, this form of 'future narrative' was not simply an expression of solidarity with the natural world, but was also an expression of outrage over the military practices of the new-Assyrian empire that abolished the Davidic monarchy and exiled the Israelite community. In his historicized reading of Noah's flood, Norman Cohn attributes the destroying floodwaters to the experience of state collapse, thus '[i]n the Flood the 'bars and door' that God fixed to keep the turbulent waters in place are broken through […] with the result that the cosmos dissolves into chaos. The destruction of Judah and Jerusalem meant no less".[67] Rogerson notes, however, that Hebrew legislation suggests that the divine intention within which the flood is interpreted is not only a reaction against a brutal regime, but is driven by a notion of empathy that is inspired by the belief that their freedom from Egyptian enslavement was testament of Yahweh's compassion for his chosen people. For example, the injunction in Deuteronomy 22 commands compassionate treatment that should be extended not only to your fellow human, but also to straying and lost animals, animals that have fallen down, and mother birds, as well as mindful forms of agriculture and animal husbandry.[68] Taken with Noah's extension of hospitality towards nonhuman others upon his ark, the injunction asks humanity to behave graciously to the natural world as the recipients of divine compassion.

In her essay on disaster, Deborah Bird Rose points out that '[c]atastrophes offer unprecedented opportunities for the formation of new transnational and transspecies communities', and that it is 'our challenge as scholars […] to identify processes of moral friendship and to work to enhance the moral possibilities inherent in catastrophes'.[69] Bird Rose makes an important point as an alternative to the opposition of anthropocentrism *versus* ecocentrism that I have just discussed in relation to the biblical flood myth. Consequently, throughout this thesis, I highlight the ways in which flood novels reimagine the biblical flood myth to develop the idea of multispecies communities that will help to break away from the binary thinking that has been characterising western philosophy and ethics since the Enlightenment. Myths, as I have said, are specialised story systems, and are therefore uniquely

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[67] Norman Cohn, *Noah's Flood: The Genesis Story in Western Thought* (New Haven: CT, 1996) p. 17.
[68] King James Bible, Proverbs, 22:4; (22:6); 22:9, 22:10.
[69] Deborah Bird Rose, "'Moral Friends" in the Zone of Disaster', *Tamkang Review*, 37 (2006) 77-97, p. 94.

positioned to articulate the changes we want to make to see a more ecocentric future. I therefore offer this thesis as a reflection on the ways in which retellings of myths that frame our relationship with ecological calamity can equip us to confront the Anthropocene.

Structure of Thesis

The six novels I examine are all Anglophone novels from British, American and Australian authors. As former British colonies, Australia and America are well versed with the biblical flood myth being a well-established cultural reference point. Other than a brief acknowledgement of the Indigenous cultures of these former colonies which also have their own long history of flood stories, it was not possible to discuss Indigenous flood traditions and their effects on climate fiction within the limits of this thesis. Rather, I concentrate on the biblical flood story which is a significant narrative repeatedly used throughout Eurowestern history to frame perceptions of ecological calamity. I have structured my thesis in such a way so as to explore and map out the different ways in which the biblical flood myth has been reworked in Anglophone literature to engage with themes ranging from apocalyptic destruction to rebirth and renewal. In doing so, I offer a critical intervention on the ways that the biblical flood narrative is often revisited in environmentalist discourse as a framework for making sense of the climate and environmental crisis.

As I have argued in this Introduction, myths are not timeless, but reflect historical processes and change over time as the cultures that maintain them change. As such, I have separated this thesis into two parts. The first part revisits reworkings of the biblical flood myth in novels that contribute to the development of climate fiction and form part of its prehistory, namely George Eliot's *The Mill on the Floss* (1860) in Chapter One, and D.H Lawrence's *The Rainbow* (1915) in Chapter Two. By exploring the entangled historiographical and mythical elements of these novels from an ecocritical perspective, I aim to think through ways in which literary history changes when viewed in conjunction with the Anthropocene. As I shall discuss further in Chapters One and Two, temporality is a key concept not only for flood narrative typology, but in terms of how one views climate change as cumulative, rather than in terms of progressive, linear time. This is because both Eliot and Lawrence use water to rethink how time and consciousness work and make such rethinking an integral part

of their aesthetic (realism/modernism) accordingly. With this in mind, my aim is to highlight the biblical flood myth as a useful vehicle for thinking about how literary narrative can model the concentric temporalities of human histories with natural systems. In focusing on time, and particularly the importance of historical perspective on present environmental issues in *The Mill on the Floss* and *The Rainbow*, these chapters set up continuities with Chapters Three, Four and Five in the second part of the thesis, which explores futurity as a key feature of the contemporary climate change novel. Read retrospectively and in dialogue with current climate fiction, *The Mill on the Floss* and *The Rainbow*, I contend, can offer a crucial perspective on the numerous temporal dimensions and viewpoints the novel might evoke in relation to the Anthropocene.[70]

In Chapter One, 'Myth and History in the Flood Narrative', I read Eliot's *The Mill on the Floss* which revisits the 1830s at a time when the coal-powered steam engine began to overtake older, more sustainable forms of energy. I discuss how this change drives the sense that the catastrophic flood at the end of the novel is not so much a 'natural disaster' devoid of human culpability but reveals the ways in which the accretional effects of industrial changes on the riverine and arable landscape have exacerbated the conditions which make the flood so devastating. The flood in *The Mill on the Floss* can be read in the critical light of this present moment in the Anthropocene as an open invitation to rethink human agency beyond the limited scale of an individual lifespan to a temporal scale on which "certain impersonal ecological dynamic start[s] to become visible".[71] In placing *The Mill on the Floss* in dialogue with twenty-first century climate fiction, my aim is to highlight the significant role of literature in illuminating issues connected to time and the environment.

Chapter Two, 'Temporality and the Flood Narrative', discusses Lawrence's explorations of time and futurity shaped by flood narrative typology. *The Rainbow*'s adoption of the biblical flood myth, I argue, places the family saga or 'realist' history of the novel within a much longer process of cultural evolution. I argue that the novel utilises the open temporality of the biblical flood myth to offer an alternative to

[70] My reading of Eliot's *The Mill on the Floss* and Lawrence's *The Rainbow* is drawn from debates around strategic presentism and is informed by related scholarship, see Wendy Parkins, *Victorian Sustainability in Literature and Culture* (London: Routledge, 2018); Jesse Oak Taylor, 'Where is Victorian Ecocriticism?', *Victorian Literature and Culture,* 43 (2015) 877-894.

[71] Timothy Clark, *Ecocriticism on the Edge: the Anthropocene as a Threshold Concept* (London: Bloomsbury, 2015) pp. 99–100.

conventional linear conceptions of time associated with the forward momentum of industrial progress and prevailing ideas about the future in light of industrialisation; linking the rise of the collieries in the English Midlands with the imminent destruction of the mythic flood. This is important to note when rethinking the temporal structure of *The Rainbow*, since it points towards how we might productively read the current climatological fallout of industrial extractivism alongside the rise of modernity in the novel.

In Chapter Three 'Apocalypse and the Flood Narrative', I show the extent to which climate fictions return to biblical narratives of flood and apocalypse when envisioning human-caused global environmental catastrophe but frequently do so without acknowledgment of the environmental 'world-ending' injustices that have befallen marginalised communities and continue to do so. The chapter takes George Turner's *The Sea and Summer* (1987) as both a precursor to twenty-first century climate fiction and an example of the failure of these fictions to address blind spots that permit the perpetuation of racial and environmental injustice. In the same manner that a historiographical reading of the biblical flood myth sheds light on how it has been shaped by its reception history, the apocalypse narrative is shown to have been used in descriptions of the colonial (settler) experience, as well as having facilitated the violent oppression of Indigenous communities and lands. The historical legacies of apocalypse narratives, therefore, complicate their use in environmental literature, revealing the veiled undercurrents of violent dispossession and ongoing extractive economies that are at the root of the ecological calamities of the perilous times in which we live.

Chapter Four, with the title 'Ecological Loss and Grief in the Flood Narrative' focuses on flooding and how it is used as a narratological tool to express the intensity of grief in its precognitive state as a force upon the body. I explore this in relation to Mireille Juchau's *The World Without Us* (2015) and Barbara Kingsolver's *Flight Behaviour* (2012) to argue that floods feature as literal consequences of climate and environmental crisis, but also come to shape the environing mood and affective structure of the texts as they illustrate the impacts of ecological loss on communities and familial environments. In so doing, they use flood narratives as a way to visually connect their characters to ecological others, and thus to a sense of shared loss and vulnerability.

In the final chapter (Chapter 5), 'Survival and Environmental Futurity in the Flood Narrative' I explore climate novels that tend to reassure the reader of an environmental futurity despite the devastations wrought by climate crisis through the metaphorical structure of rebirth and renewal acquired from the biblical flood narrative. The utilisation of the Genesis flood myth as a metaphor for environmental futurity sees James Bradley's *Clade* and Lydia Millet's *A Children's Bible* engage with latent reproductive ideologies that, when expanded to meet the requirement of intergenerational ethics, prove particularly problematic and exclusionary. On the other hand, we can read the entangled multispecies relationships in *Clade* and *A Children's Bible* as a gesture towards the recomposition of multispecies social reproduction or the 'making kin' that is encouraged by Donna Haraway in *Staying with the Trouble* (2016).[72] In this, I argue, that both novels reframe the animal/human relationships afforded on the ark in the biblical tale to think through the slow ruptures and reformations of ordinary family life and anthropocentric social reproduction towards a more generous model of posterity in a time of climate crisis that gives a higher priority to nonhuman flourishing.

[72] Donna Haraway, *Staying with the Trouble: Making Kin in the Chthulucene* (Durham: Duke University Press, 2016) p. 208.

CHAPTER ONE: MYTH AND HISTORY IN THE FLOOD NARRATIVE

The world is not just what we like; do touch it up with a tasteful pencil, and make believe it is not quite such a mixed, entangled affair.

George Eliot, *Adam Bede*, Chapter 17[73]

'We went into town today, and looked in the Annual Register for cases of inundation,' wrote George Eliot in an early 1859 journal entry, while awaiting for the publication of her first novel *Adam Bede*.[74] Recognised as the earliest allusion to her second novel, *The Mill on the Floss* (1860)*,* this note is significant in that it situates the novel's final catastrophe, the flood at Dorlcote Mill, as Eliot's starting point for researching and planning her next work of fiction.[75] The forewarning of the cataclysmic flood is present throughout the novelistic narrative, which harnesses the imaginative power of the biblical flood myth to evoke the convergences of social, historical, economic, and ecological forces entangled within the eponymous river's flow. By depicting cataclysmic flooding as a consequence of the human exploitation of the Floss rather than an act of God or a purely 'natural disaster', Eliot, I shall argue in this chapter, remythologises the biblical conventions of the flood narrative to demonstrate the ways in which human patterns of agency contribute to ecological calamity. In so doing, the cataclysm at the end of the novel recasts the archetypal event of biblical geology in anthropogenic and local terms as a consequence of industrial interventions made upon the Floss.

Set thirty years prior to its publication date, *The Mill on the Floss* revisits the 1830s, a time when the steam engine and other industrial technologies made possible by the rise of industrial extractivism were beginning to overtake older, more

[73] George Eliot, *Adam Bede* (Oxford: Oxford University Press, 2020) p. 176.
[74] George Eliot, *The Journals of George Eliot*, ed. by Judith Johnson and Margaret Harris. (Cambridge: Cambridge University Press, 1998) p. 145.
[75] Jayne Elisabeth Archer, Richard Marggraf Turley and Howard Thomas, 'Moving accidents by flood and field: The Arable and Tidal Worlds of George Eliot's The Mill on the Floss', *ELH*, 82: 2 (2015) 701-728, p. 712.

sustainable forms of energy production. ‘It’s this steam, you see, that has made a difference’, explains Mr Deane to his young nephew Tom Tulliver, thereby drawing to the foreground one of the primary industrial developments gathering pace in the early nineteenth century.[76] Indeed, steam powers the economic plot of *The Mill on the Floss* as debate over the possible conversion of Dorlcote Mill from water to steam gains momentum alongside the sense that the world is speeding up on the back of what Andreas Malm has termed ‘the fossil economy’- a time that witnessed the rapid development of steam-power, and which would come to expediate England’s global expansion of capital and imperial power in the subsequent decades.[77]

For Eliot, the spread of steam technology differentiates the rural 1830s from the metropolitan 1860s from which she writes. As such, *The Mill on the Floss* often invites the reader to look back and forth between past, present and future in a comparative approach that employs a peculiarly doubled narrative structure. The move backwards and forwards in time, however, is immersive. The narrative opens with a vivid description of the Floss under the observing eye of the narrator on the bridge outside Dorlcote Mill, which ‘seems to be like a living companion while I wander along the bank and listen to its low placid voice’.[78] It is only at the end of the chapter that the reader realises that the narrator is lost in memory from the comfort of her armchair, as she exclaims ‘Ah, my arms are really benumbed. I have been pressing my elbows on the arms of my chair, and dreaming that I was standing on the bridge’.[79] Both temporal and spatial boundaries are avowed and disavowed in this opening as past, present and future are conflated as part of a cumulative process that becomes one with the narrative as it progresses.

Eliot’s adoption of a double narrative structure, I argue, enables her to return to an earlier stage of human social economic development in order to dramatise the transformations of the past as well as to denaturalise the concerns and beliefs of her present in the 1860s. In particular, I shall discuss how the conversion of Dorlcote Mill from water power to steam drives the sense that the flood is more than mere ‘natural disaster’, disclosing human culpability in the transformation of the Floss from ‘living

[76] George Eliot. *The Mill on the Floss*, Open Road Integrated Media, Inc., 1980. *ProQuest Ebook Central*, <https://ebookcentral.proquest.com/lib/exeter/detail.action?docID=4729031> p. 296.
[77] Andreas Malm, F*ossil Capital: The Rise of Steam Power and the Roots of Global Warming,* (London: Verso, 2016) p. 16, 11.
[78] Eliot, *The Mill on the Floss*, p. 8.
[79] Ibid.

companion' to a harbinger of death and destruction.[80] By revealing these conditions, I argue, Eliot can already be seen to be putting pressure on the modern concept of 'natural disaster' that was only just emerging in the nineteenth century, but also challenging the processes of economic development that fail to take into account the historical and ecological roots of its social bodies.

In the first part of this chapter, I will briefly consider the historical legacy of 'natural disaster', with particular respect to the ways in which it was developed in accordance with what Michel Serres has termed the 'Modern Constitution'; that is, the idea that capitalist modernity in the nineteenth century constructed nature as an entity separate from and inferior to human culture, thus allowing for its exploitation.[81] In so doing, I argue that *The Mill on the Floss* can be seen to challenge this concept by demonstrating the ways in which the human and natural worlds of Dorlcote Mill and St. Ogg's are thoroughly intertwined. In the second part, I further consider the entanglement of human society and natural landscape in Eliot's novel via its doubled narrative perspective. I place the novel in conversation with the work of the German philosopher and anthropologist Ludwig Feuerbach, whose theories around sympathy and narrative had a great influence on Eliot's own work and writing. In particular, in *The Essence of Christianity* (1846) that Eliot translated and published under her maiden name Marian Evans in 1854, two years before she embarked on writing fiction, Feuerbach identifies the doubleness or 'twofold life' of the human condition, as that which makes them aware of both themselves as individuals and their relation to others.[82] 'Thus understood', writes Feuerbach,

> the animal has a simple, but man a twofold, life. In the case of the animal the inner life is one with the outer, whereas in the case of man there is an inner and an outer life. The inner life of man is constituted by the fact that man relates himself to his species, to his mode of being. Man thinks, that is to say, he converses, enters into a dialogue with himself. The animal, on the other hand, cannot perform the function characteristic to its species without the

[80] Ibid.
[81] Michel Serres, *The Natural Contract*, trans. by, Elizabeth MacArthur and William Paulson (Ann Arbor: University of Michigan Press, 1995).
[82] Ludwig Feuerbach, *The Essence Christianity*, trans, by. Marian Evans (Cambridge: Cambridge University Press, 2011) pp. 1-31 <doi:10.1017/CBO9781139136563> [Accessed 26 September 2022].

existence of another individual external to itself. But man can perform the functions characteristic to his species – thought and speech – in isolation from another individual. Man is in himself both 'I' and 'You'; he can put himself in the place of another precisely because his species, his essential mode of being – not only his individuality – is an object of thought to him.[83]

Feuerbach makes a distinction between man and animal here in terms of divided selfhood. Whereas animals appear united, man is divided between his relationship to himself and his relationship to society. The twofold life that Feuerbach points to conveys that his sense of selfhood emerges from this dialectical relationship between 'I' and 'You'. While it has the potential to tear him apart from within, it is also what makes him capable of sympathy, which is synonymous with social solidarity and makes community building possible. Placing Eliot in dialogue with Feuerbach, I discuss the ways in which the novel's double narrative structure exemplifies Feuerbach's notion of 'twofold life' to overcome the dualism between nature and culture inherent in Victorian society since the Enlightenment. In particular, Eliot uses myth as a narratological tool to create sympathetic identification with the past and retrieve a connection to the history of the landscape, its weathers and its particular topographical features. Myth in *The Mill on the Floss* thus challenges the Victorian notion that nature is an inanimate resource to be cultivated by industrial modernity, but is deeply entangled in peoples' social, emotional and intellectual lives.

To begin then, I return to the concept of 'natural disaster' as it came to be recognised in Eliot's own time of the nineteenth century. If our current ecological predicament is the result of historical processes, as I discuss in the next section, *The Mill on the Floss* offers us a way to work back through human history to reveal the mentalities that both underline and undermine the modern West's systematic and oppressive dualisms.

1.1 A History of Natural Disaster

I have written a little about the concept of natural disaster in the introduction to this thesis, however it is worth returning to an overview of the term post-Enlightenment, since this has paved the way for how we have come to understand calamities induced

[83] Feuerbach, *The Essence of Christianity*, p. 2.

by phenomena such as floods, droughts, wildfires, hurricanes and pandemics today. Throughout much of human history, these natural disasters, as they were so termed in English during the latter part of the nineteenth century, were interpreted as consequences of human wrongdoing on the part of a sacred order; be that God, or gods, or an indwelling power attributed to specific topographies. In such hermeneutical frameworks, how people behaved towards each other and their nonhuman counterparts had environmental consequences, suggesting that social relations and natural phenomena were closely interrelated. However, as Marie-Hélène Huet observes in her historical study about the culture of disaster in modern European thought, the vision of a disaster willed by a divine being was eventually (for the most part) replaced by disasters engendered by natural causes. This process was slow and uneven, with Christian versions of the punishment paradigm persisting well into the nineteenth century.

The Enlightenment ushered in rational discourse about the physical causes of 'natural disasters' to argue that these were not evidence of divine retribution, but chiefly human-engineered or, at least, exacerbated by human actions. Huet notes that what may strike us as modern about the way the Enlightenment project shaped understandings of ecological-related disasters,

> stems from the fact that we have inherited […] an 'anthropogenically primitive fear and need to control rebellious nature'. […] Each natural disaster challenges both the mastery that was our goal and our political system that was put in place to serve such a purpose.[84]

This dualistic worldview has been particularly prevalent in Eurowestern patriarchal cultures and requires the deployment of colossal resources of power to maintain. For the ecofeminist scholar Val Plumwood, these metaphysical dualisms - particularly between nature and culture, mind and body, human and animal - are 'not just free-floating systems of ideas', but are 'closely associated with domination and accumulations, and their major cultural expressions and justifications' that is the result of historical processes and accumulations.[85] The attempted human mastery of

[84] Marie-Hélène Huet, *The Culture of Disaster* (Chicago: University of Chicago Press, 2012), p. 7.
[85] Val Plumwood, *Feminism and the Mastery of Nature* (New York: Routledge, 1993), p. 42.

rebellious nature is enmeshed with other oppressive regimes of dualistic thought, including those which maintain clear distinctions of gender, race and class.

Made manifest by the binary logics of Enlightenment, such dualisms are no less influential in Victorian responses to 'natural disaster'. Upamanyu Pablo Mukherjee's *Natural Disasters and Victorian Empire* (2013) for example, explores how debates about the origins of disaster, as well as conflicting ideas about aid and intervention, were common to both imperial and anti-imperial British discourse where the management of 'natural disaster' became yet another way for the Victorians to legitimate the empire. Mark Frost's recent essay on late-Victorian disaster narratives, meanwhile, argues that while many fictional stories of eco-catastrophe often point towards anthropogenic causes, they also express confidence in the powers of civilisation and technology to curtail such tragedies. Both analyses of natural disaster in Victorian culture point to what Michel Serres has termed the 'Modern Constitution'.[86] Under the Modern Constitution, nature was deemed to be separate from a transcendent modern human culture, and therefore, capable of being constrained and tamed by means of ever more expansive techno-scientific powers. Following Serres, Bruno Latour observes in *We Have Never Been Modern* (1993) that the dualism of the Modern Constitution became entrenched in the institutionalisation of knowledge production just as the nineteenth century was beginning to enrol ever more nonhuman entities into the complex networks and violent global systems of the Industrial Revolution and British Empire.[87]

The Mill on the Floss is well-placed to extend the relevance of Serres' analysis of the Victorian period, as it not only unveils anxieties concerning nature's agency through the power and flow of the river, but also challenges the belief that man should, or indeed can, exert control over the natural world – a cultural myth that eventually displaces the Tullivers from their family home and agrarian way of life. At the novel's opening, we learn that Mr. Tulliver has successfully fought off a neighbour's attempt to dam the river and is now engaged in another legal battle against Mr. Pivart, a neighbouring farmer who has set up an irrigation scheme further up the river. Mr. Tulliver believes that this scheme will have a detrimental effect on the river's flow and subsequently on the production of his mill. '[F]or a river's a river', Tulliver explains, 'and if you've got a mill, you must have water to turn it; and

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[86] Michel Serres, *The Natural Contract*, trans. by Elizabeth MacArthur and William Paulson. (Ann Arbor: University of Michigan Press, 1995).
[87] Bruno Latour, *We Have Never Been Modern* (Cambridge: Harvard University Press, 1993), p. 35.

it's no use telling me, Pivart's erigation and nonsense won't stop my wheel; I know what belongs to water better than that'.[88]

Mr Tulliver's claim, while difficult to predict the threat that Pivart's irrigation system actually poses to Dorlcote Mill, establishes his position within a pre-capitalist era where knowledge of the land and water is crucial to not only for means of production, but also for the effective management of the river.[89] Tulliver's repeated claim that he knows what 'belongs to water' is difficult to argue with given his innate knowledge of Dorlcote where his family have been situated for over five generations since 'the last great floods'.[90] As such, the Tullivers represent an agrarian way of life that is in danger of being lost to the new, capitalist age, along with those lifestyles and knowledges of the language and systems of the arable and riverine worlds *The Mill on the Floss* depicts. As Elizabeth Carolyn Miller has observed, Tulliver's legal dispute with Pivart points to the fact that water is spatially and temporally ill-suited to privatisation, and therefore, meet the needs of capitalisation on a larger scale concomitant with new, global markets.[91] Indeed, for Pivart, Lawyer Wakem and even Maggie, and Tom's uncle and local businessman Mr. Deane, water is not simply water, and the Floss is not simply a river, but a means of profit. Transfigured to the world of business, and viewed as commodities and capitalist energy resource, water and rivers are subject to the uncertainties of a rapidly changing economy.[92]

Between 1825 and 1845, the approximate period in which the novel's events take place, the technologies of river and mill management, largely unchanged for centuries, became newly intolerable for manufacturers due to the pace of demand, despite the fact that water power was such a cheap and accessible means of producing energy in England.[93] While expensive to maintain, coal-fired steam engines

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[88] Eliot, *The Mill on the Floss*, p. 116.
[89] Kyle McAuley's claim that misunderstanding of the estuarial nature of the St. Ogg's hydrography is the primary source of communal divisions with which the novel is so famously riven is of relevance here, see Kyle McAuley, 'George Eliot's Estuarial Form', *Victorian Literature and Culture* 48 (2020) 187 – 217, <https://doi.org/10.1017/S1060150319000512> [Accessed 26 September 2022].
[90] Eliot, *The Mill on the Floss*, p. 209.
[91] Elizabeth Carolyn Miller, 'Fixed Capital and the Flow: Water Power, Steam Power, and *The Mill on the Floss*' in *Ecological Form: System and Aesthetics in the Age of Empire,* ed. by Nathan K. Hensley and Philip Steer (New York: Fordham University Press, 2019), pp. 85-100.
[92] On the growing disconnect between the mid-century economy and the material reality of agrarian resources and products represented in *The Mill on the Floss*, see Deborah Shapple Spillman, 'All that is Solid Turns into Steam: Sublimation and Sympathy in George Eliot's *The Mill on the Floss'*, *Nineteenth-Century Literature*, 72 (2017), 338-373. For a discussion on Victorian debates surrounding riparian rights and changing legal definitions of 'water' informing Eliot's novel, see Jordan Brower, '*The Mill on the Floss*, Riparian Law, and the Difficulty of Judgment', *ELH*, 83 (2016), 211–32.
[93] Miller, 'Fixed Capital and the Flow', p. 88.

eventually superseded water power because they better suited the abstractions of time and space that accompanied the rise of global capitalism, offering a release from the variabilities of water power that were tied to seasonal and weather fluctuations. 'You see, Tom,' Mr. Deane explains to his nephew and young protégé Tom Tulliver:

> …the world goes on at a smarter pace now than it did when I was a young fellow. Why, sir, forty years ago, when I was much such a strapping youngster as you, a man expected to pull between the shafts the best part of his life, before he got the whip in his hand. The looms went slowish, and fashions didn't alter quite so fast […] Everything was on a lower scale, sir, in point of expenditure, I mean. It's this steam, you see, that has made the difference; it drives on every wheel double pace, and the wheel of fortune along with 'em. […] I don't find fault with change, as some people do. Trade, sir, opens a man's eyes; and if the population is getting thicker upon the ground, as it's doing, the world must use its inventions of one sort or other.[94]

According to Deane, commodities like clothes and corn must be circulated faster to keep up with a demand based on a faster supply chain stimulated by faster production. His reference to the wheel of the mill in comparison with the 'wheel of fortune' connects steam's accelerated temporality directly to the rise of global capitalism and its attendant increase in the production of commodities that the water-powered mills of Mr Tulliver's generation cannot keep pace with. In this historical shift, economic growth became decoupled from the limits of agricultural production for the first time in history. The changing patterns in agriculture and food production brought about by the proliferation of free-market trade and combined with a succession of poor harvests and the long-term effects of the amendment of the Assize of Bread and Ale in 1822, as well as the more immediate impact of the Corn Laws in 1846 plunged Britain into agricultural crisis between the years 1849-53.[95]

Recent scholarship by Jayne Elisabeth Archer, Richard Marggraf Turley and Howard Thomas has shown that the effects on the rural landscape were multifaceted: many farmers and millers failed to compete with the increasing volumes of cheap

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[94] Eliot, *The Mill on the Floss*, p. 296.

[95] On the British agricultural crisis in the mid-nineteenth century and its representation in the Victorian novel, see David Jules Law, *The Social Life of Fluids: Blood, Milk, and Water in the Victorian Novel* (Ithaca: Cornell University Press, 2010).

imports and many were forced out of business, taking their symbiotic farming practices and knowledge of the worked arable and tidal environs with them.[96] This caused widespread and irreversible separation from the land creating a gap in localised knowledges of farming, milling and river management necessary to maintain businesses, and thus safeguard local communities against risks of poverty and food-shortages. As Mr. Glegg wryly observes in the novel, when food is a subcategory of the 'money business', 'you may be taking one man's dinner away to make another man's breakfast'.[97] The introduction of the coal-fired steam engine in *The Mill on the Floss* offers the Tulliver's a temporary reprieve from their financial woes following the recent, but no less devastating, impacts of free-market trade alongside the hefty expense of Mr. Tulliver's lawsuit against Pivart. Yet, it also engenders their disengagement from the environment because they no longer need to attend to the river's water level and flow to ensure the mill's successful operation.[98] Importantly, Archer, Marggraf Turley, and Thomas note that knowledge of how to work with the land, grain and water was passed down from generation to generation. To break the line of oral tradition and introduce workers and management that did not share in the knowledge practices of their forebears held potentially disastrous consequences for local industries and hence put agricultural communities at risk.[99]

In the novel, Tom asks Deane if his firm would consider buying the Mill now lost to his family and owned by Wakem, his father's arch-enemy. Deane had attempted to buy it in the past, considering it a good investment, 'especially if steam were applied'.[100] Tom explains that if Deane were to buy it, he could still manage it and thus keep his family's legacy of 'a hundred years or more' alive by 'gradually working off the price'.[101] Tom can be seen here to be attempting to revisit the slower time of his father's ownership of the Mill, and at the same time to accelerate the turn of the wheel with steam, thus keeping pace with the sped-up fossil-led economy of the present. Sara Thornton has observed in her reading of the novel, that both Deane and Tom entertain a vision that is interestingly split between the-soon-to-be present

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[96] Jayne Elisabeth Archer, Richard Marggraf Turley, Howard Thomas, 'Moving accidents by flood and field: The Arable and Tidal Worlds of George Eliot's The *Mill on the Floss*', *ELH*, 82 (2015) 701-728.
[97] Eliot, *The Mill on the Floss*, p. 722.
[98] For further details on the water powered mills in England during the eighteenth and nineteenth centuries, please see Claude Debeir, Jean-Paul Deleage, and Daniel Hemery, *In the Serviitude of Power: Energy and Civilization through the Ages,* trans. by John Barzman (London: Zed, 1991).
[99] Archer, 'Moving accidents by flood and field', p. 702.
[100] Eliot, *The Mill on the Floss*, p. 367.
[101] Ibid, p. 298.

of the 1860s when Eliot is writing and the past or 'natural history' in which a slower time of more fixed relations in work and in family seemed to prevail and with which they both have affective ties.[102] Thornton's reading points to the doubled temporality inhabited by the novel, which, connotes the conflict between the older agrarian economy and new coal-driven economy that was only just taking precedence at the time in which *The Mill*'s plot is set.

Tom does not win back the mill, however, and it is sold to Wakem who hires a manager who is unfamiliar with the flow of the Floss and Ripple at Dorlcote, and is therefore unable to make the mill turn a profit. '[H]e's letting the business go down', Tom comments, quoting the head miller at Dorlcote Mill, Luke Moggs. Mr. Deane similarly observes that Dorlcote 'isn't answering so well as it did'.[103] Interestingly, the new manager's name is Jetsome, perhaps a reference to the 'flotsam and jetsam' of debris after a shipwreck, which links the wreckage of the mill that crushes Maggie and Tom's boat during the flood with the inevitability of such a disaster given Jetsome's lack of knowledge about the Floss and its propensity to flood. Consequently, the steam engine and misappropriation of the river under Jetsome's management escalates the scale and magnitude of the 'natural disaster' concluding the novel.

Eliot's well-documented accounts of floods and of trips taken with her partner George Henry Lewes to study different rivers for their potential of flooding suggests that she wanted the flood in her novel to be realistic. After considering rivers in Dorset and Nottinghamshire, she travelled to Gainsborough in 1859 to study the Trent in Lincolnshire, a tidal river formed at the furthest point inland where sea meets river. Critical consensus largely assumes that the Trent served as inspiration for the Floss, since, like the Trent, Eliot's river is tidal, as described in the novel's opening lines: 'A wide plain, where the broadening Floss hurries on between its green banks to the sea, and the loving tide, rushing to meet it, checks its passage with an impetuous embrace'.[104] The Floss's status as a tidal river is important to the material and metaphorical currents of the novel for it shapes the land through which it runs. As a channel connecting England's rural interior with the sea, the Floss 'links the small

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[102] Sara Thornton, 'Eliot's Mitwelt: Productive Environments in *The Mill on the Floss* and Middlemarch', *Polysèmes* (2022) <https://searchebscohostcom.uoelibrary.idm.oclc.org/login.aspx?direct=true&db=edsrev&AN=edsrev.4745E643&site=eds-live&scope=site> [accessed 11 September 2022].
[103] Eliot, *The Mill on the Floss*, p. 298, 314.
[104] Eliot, *The Mill on the Floss*, p.3.

pulse of the old English town with the beatings of the world's mighty heart' to provide a crucial link between the provincial life of St. Ogg's and the wider world of industry and capital beyond.[105] The Floss thus reveals itself to be an artery between the seemingly feudal space of St. Ogg's and the 'wide and arduous national life' of England's ever-expanding industrial and imperial powers.[106] The connection is not only spatial but also temporal as it connects the past, 'the old English town', with the present moment of global capitalism. The conspicuous presence of freighters sailing into St. Ogg's at the beginning of the novel, 'laden with the fresh-scented fir-planks, with rounded sacks of oil-bearing seed, or with the dark glitter of coal', offers an early indication of the emergent function of the river as a conduit for economic modernity.[107]

For Mr. Deane, the river's accessibility makes it possible to grow profits via new markets, as he explains to Tom:

> Somebody has said it's a fine thing to make corn grow where only one grew before; but, sir, it's a fine thing too, to further the exchange of commodities. And that's our line of business; and I consider it as honourable a position as man can hold, to be connected with it.[108]

Tidal rivers like the Trent supported a complex and far-reaching network of industries, which, as Archer, Marggraf Turley, and Thomas point out, wielded clear pressures on its waters, banks and floodplain. Noting the significance of the port at Gainsborough to Eliot's conception of her fictional setting, they note that while the main cargo throughout the decade of the 1830s was corn, Gainsborough 'was home to a number of non-food-producing mills, including an iron mill, cotton mill, and paper mill'.[109] It therefore provided Eliot 'with a model for a river capable of supporting light and heavy industries', as well as the threats to those living and working on the banks.[110] Moreover, historical accounts reveal that the upsurge in industrial mills along the banks of the River Trent during the early-to-mid nineteenth

[105] Eliot, *The Mill on the Floss*, p. 203.
[106] Ibid, p. 272, 255.
[107] Ibid, p. 11.
[108] Ibid, p. 296.
[109] Archer, 'Moving accidents by flood and field', p. 715.
[110] Ibid.

century were suspected, although yet unproven, to be the cause of successive floods during the 1850s in the Gainsborough area and West Midlands.[111]

In his examination of the Tulliver vs. Wakem case, Brian Lancaster notes that farmers whose lands had been flooded blamed the increasing 'presence of industrial mills whose dams held back the water and raised the water level, causing rivers to flood more easily and more often'.[112] Thus, while Deane in the novel 'doesn't find fault' with the burgeoning changes in agricultural production and free-market trade on the back of coal-fired capitalism, the accretional effects of the industrial changes on the riverine and arable landscape show his assertion to be short-sighted.[113] It is precisely this lack of foresight that, I argue, the mythic aspect of the novel attempts to readdress by drawing on the long history of the river and the 'visitation of the floods', which I shall return to in the next part of this chapter.[114]

In writing about *The Mill on the Floss* as a novel concerned with the historical impacts of industrialism on the environment particularly in relation to the extraction industry, this chapter forms a dialogue with current scholarship in Victorian studies which aims to illustrate connections between the current environmental crises and the legacies of industrial capitalism and imperialism that emerged in the nineteenth century. Victorian Ecocriticism is a relatively new research area. My research aims to contribute to as well as benefit from this fresh body of scholarship as it continues to help readers to see the nonhuman environment as central to the production of culture in modernity.[115] Jesse Oak Taylor's *The Sky of Our Manufacture: The London Fog in British Fiction from Dickens to Woolf* (2016) for example, demonstrates the effects of coal-burning on the climate imaginary of Victorian literature, whereas a recent anthology edited by Nathan K. Hensley and Philip Steer, *Ecological Form: System and Aesthetics in the Age of Empire* (2019), reconsiders how nineteenth-century culture developed powerful aesthetic and political tools for engaging with questions of the British Empire and the Industrial Revolution's carbon economy. These scholarly studies reframe ongoing discussions surrounding extraction to position coal within a wider nexus of nineteenth-century extractive industries, and

[111] Brian Lancaster, 'George Eliot's Other River', *Notes and Queries* 54 (2007) 150–51, p. 151.
[112] Ibid, p. 150.
[113] Eliot, *The Mill on the Floss*, p. 296.
[114] Ibid, p. 88.
[115] For a summary of the field of Victorian Ecocriticism thus far, see Daniel Williams, 'Victorian Ecocriticism for the Anthropocene', *Victorian Literature and Culture*, 45 (2017) 667-684.

show how extraction possesses social, temporal and aesthetic forms which have become embedded in the conditions of modern life.

On this point, Hensley and Steer argue that Victorian England is significant in our 'own moment of catastrophic mastery' because it features as the world's first wholly industrial society as well as its most powerful global empire.[116] They write,

> Given that the Victorian Empire's world-spanning configuration was the first political project in history to be powered exclusively by fossilized plant life it follows that the carbon-saturated atmosphere we breathe today is, in both metaphorical and brutely chemical sense, the atmosphere of the British Empire.[117]

The pervasive material presence of the nineteenth century's coal-powered and imperial past, then, situates this current moment of climate and environmental crisis within a longer timeframe encompassing the world within which Eliot inhabited. The material presence of the Victorian carbon economy and imperial past means that our new contemporary in the Anthropocene is best viewed as but a moment in a much longer timescale that includes not only the nineteenth century, but stretches back farther to the dualistic onto-epistemology of Enlightenment that has become so entrenched in the global proliferation of ecological calamity.

Maggie Tulliver, Tom's estranged sister, notes in *The Mill on the Floss* that '[i]f the past is not to bind us, where can duty lie? We should have no law but the inclination of the moment'.[118] In other words, to ignore or forget the past and to act only according to the promptings of the present, the novel suggests, creates a limited comprehension of events and their futurity. Eliot redefines duty as a force of social cohesion. She uses it here in order to talk about the importance of cumulative time. If the present is not connected to the past, social unity is under threat.[119] This is addressed in the novel through the mismanagement of Dorlcote Mill to steam, which does not account for the river's particular flow that the Tullivers, having been managing the mill for a century before, were well acquainted with. Yet, it is also

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[116] Nathan K. Hensley and Philip Steer, eds, *Ecological Form: System and Aesthetics in the Age of Empire*, (New York: Fordham University Press, 2019), p. 3.
[117] Ibid.
[118] Eliot, *The Mill on the Floss*, p. 329.
[119] X. Ciao, 'George Eliot and the Victorian Idea of Duty', *Foreign Literature Studies*, 31 (2009) 104-112.

addressed through Eliot's use of stories, myths and legends that disclose the history of the landscape, its weathers and its particular topographical features such as the tidal bore, that the present inhabitants of St. Ogg's disregard as they become increasingly disconnected from their environment.

As another feature the Floss shares with the Trent, the bore or Eagre, as it is so called in the novel, is a peculiar feature among English rivers. The bore occurs twice each year, at the Spring and autumn equinoxes (the latter occurring in the same week as the Harvest festival). It features twice in the novel: once in the opening chapters as young Maggie and Tom walk alongside 'the great Floss' in a yearly tradition 'to see the rushing springtide, the awful Eagre, come up like a hungry monster', and latterly in confluence with the concluding flood as Maggie looks upon the swollen Floss, flowing 'swift with the backward-rushing tide'.[120] As such, the Eagre holds emblematic status in *The Mill on the Floss* both in terms of the novel's double narrative structure and in the way it functions as a metaphor for the collision between industrial modernity and the agrarian society that the Floss has enabled for centuries previous. For the focus of this study, the Eagre is significant because it is explicitly linked with the flood as portrayed in the origin myth of St. Ogg's, demonstrating that the flooding of the Floss is not an unusual occurrence, but historically habitual. Indeed, as Elizabeth Carolyn Miller's reading of the novel has shown, by situating the flood at the time of the autumnal equinox, the novel also aligns it with long-held folk belief about the 'equinoctial storm', which held that 'a severe storm is due at or near the date of the equinox'.[121] In weaving together legend, folk-belief, weather, time and water, the novel establishes 'the temporality of water power as seasonally variable, bound to the calendar, and occasionally catastrophic'.[122] As such, the latent disaster of the flood can be distinguished as less of an apocalyptic event, as suggested by Mary Wilson Carpenter, and more of an ordinary occurrence in the geological history of the river that has shaped the characteristics of the species that inhabit it, be they plant, animal or human.[123]

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[120] Eliot, *The Mill on the Floss*, p. 31, 380.

[121] Folk belief held that the 'equinoctial storm' occurred during or near the date of the equinox. This theory gradually faded as improvements were made in meteorological science towards the end of the nineteenth century. For further information, see 'Equinoctial Storm, or Gale,' *The New International Encyclopaedia,* 7 (New York: Dodd, Mead and Co., 1907) p. 166.

[122] Miller, 'Moving accidents by flood and field', p. 59.

[123] Mary Wilson Carpenter has argued that both *The Mill on the Floss* and *Romola* "are built on subversive appropriations of an apocalyptic structure" of history. See Mary Wilson Carpenter, *George Eliot and the Landscape of Time: Narrative Form and Protestant Apocalyptic History* (Chapel Hill: University of North Carolina Press, 1986) p. 102.

In other ways, Maggie's question about the past stands out as eerily prescient in conjunction with recent discussions within ecocriticism about the need for the environmental humanities to apprehend literature with new, larger time scales over the limited scale of an individual lifespan.[124] However, as Astrid Bracke has counterargued, 'the true challenge in representing climate and environmental collapse may not be finding or developing new genres, but rather unifying the temporal and spatial scale of environmental crisis with a scale more suitable to human understanding'.[125] More specifically, Taylor has suggested that we read the past with attention to its unintended consequences and with an awareness of our present limited comprehension of events and their futurity. After all, ecological calamity is one of our oldest and most persistent stories as the biblical flood myth attests. An ecocritical reading of historical narratives, therefore, may 'adjust our perspective on the past, calling attention to the myriad roads not taken and reminding us of the radical contingency of history'.[126] Taylor's assertion makes visible our need for a critical practice willing to jostle between past and present in order to grasp the magnitude of the challenges facing us now.

Similarly, in *The Mill on the Floss*, Eliot demonstrates a historiographical interest in the agrarian world of the Tullivers being rapidly lost to the forces of industrialisation that were well established by the time she came to write the novel. By interpreting the recent past of the last thirty years that still resonated in the 1860s, Eliot is attempting to prompt readers to recognise its implications for the present. As Hao Li argues, the historical past in Eliot's novels is not just 'a recollected or a consulted past, but always "an historically understood past"'.[127] In other words, Eliot evokes the past in order to diagnose and understand the present conditions of her society. This last point is especially pertinent to how I perceive the open temporal structure of *The Mill on the Floss* in conjunction with flood narrative typology as a formal strategy ideally suited to communicating the possibility of new paradigms

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[124] For discussions on human ontology and the problem of the spatial and temporal scale of the Anthropocene, see Timothy Clark, *Ecocriticism on the Edge: the Anthropocene as a Threshold Concept* (London: Bloomsbury, 2015); also, Adeline Johns-Putra, 'The Ethics of Posterity and the Climate Change Novel', *Climate Change and the Contemporary Novel* (Cambridge: Cambridge University Press, 2019) pp. 9-55.
[125] Astrid Bracke, *Climate Crisis and the 21st-Century British Novel*, (London: Bloomsbury Academic, 2018) p. 26.
[126] Jesse Oak Taylor, 'The Novel After Nature, Nature and the Novel: Richard Jefferies's Anthropocene Romance', *Studies in the Novel* 50 (2018) 108-133, p. 112.
[127] Hao Li, *Memory and History in George Eliot: Transfiguring the Past* (Basingstoke: Macmillan Press Limited, 2000) p. 7.

beyond the familiar. The open-endedness of Eliot's novel, crucially in the wake of the flood, operates, I argue, as a form of what Christophe Bode and Rainer Dietrich call 'future narrative', insomuch as it preserves an open space for the future that serves as a challenge for remedial change in the present.

In this, *The Mill on the Floss* utilises the open-endedness of the flood myth to situate the reader in an open narrative space to provoke ethical reflection about capitalism's uneven development underpinned by unbridled extractive industrialisation. Before I discuss the mythic aspect of the text in further detail, however, I want to spend some time on how Eliot's metaphorical understanding of myth was shaped through her engagement with German historicism and its participation in the emerging discourse on the science of religion in Britain; more precisely, the work of the German theologian Ludwig Feuerbach; and the philological, comparative, and historical-critical methodologies of the German-born philologist Fredrich Max Müller. Müller and Feuerbach's work allowed Eliot to artistically exploit the truths of feeling embodied by biblical myth in her realist fiction, enabling her novels to take on layers of meaning in the manner of major works of the past such as epic poetry or tragic drama. In tying these contemporary writings on myth, I will investigate in the final section of this chapter, how *The Mill on the Floss* creates sympathetic identification with the environment of the Floss through myth, and thus represents the sphere of human culture not as separate from but interdependent with the natural world.

1.2 ELIOT'S 'WORK ON MYTH'

In *The Mill on the Floss,* myth is central to Eliot's attempt to truthfully represent commonplace life and show the sacred in the ordinary. In particular, I argue that the myth of St Ogg, which combines the biblical flood and fictional local folklore becomes a palimpsest in the novel, upon which Eliot layers the temporal oscillations of the river's geological processes with those of human social history to highlight the ways in which human identity is shaped by its environment. As such, Eliot's metaphorical use of myth works to complicate the novel's quotidian, realist narrative, and enables a sympathetic identification between humans and the natural world by tying them into a long, shared history.

Eliot's use of mythology in her novels has been well-discussed in conjunction with her ethical views. For example, Joseph Wiesenfarth's *George Eliot's Mythmaking* (1977) shows how Eliot engaged Christian, Hebrew and Greek mythologies in her novels to present a 'mythology of fellow-feeling' for her nineteenth-century audience, which drew on myth as the expression of communal feeling represented in human ideals, fears and needs.[128] A more recent study on Eliot's use of myth is Avrom Fleishman's *George Eliot's Intellectual Life* (2010), which argues that a key component in Eliot's writings was her understanding of myth, since her 'strongest suit' was the ability to combine the ideal and realistic to show 'the human tendency toward myth-construction'.[129] Similarly, in his reading of *Silas Marner*, David R. Carroll claims that Eliot 'demands that we perform a kind of demythologising, removing the myths, the superstitions, and the miracles, until we get to the essential core of human meaning'.[130] Carroll's essay is significant in illustrating how Eliot's characters develop by way of a process of de- and remythologisation. 'The subject of the novel' he writes, 'is the different ways in which we create myths, valid and invalid, to bridge the gap in an ultimately mysterious universe'.[131] While these readings all connect Eliot's interest in myth and myth-construction to her understanding of sympathy, Eliot's engagement with the biblical flood myth deserves further attention from an ecocritical standpoint since it provides readers with new ways of ethically responding to the nonhuman environment.

Eliot's novels uphold sympathy as a basic component of successful human relationships and critics have variously connected this thinking to an ecological drive.[132] Eliot's understanding of sympathy is developed in accordance with Feuerbach's as described in *The Essence of Christianity*, wherein he credits the potential social and ethical value of religion as a medium that motivates 'fellow feeling' with others and urges 'man [to] rise above merely egotistic impulses'.[133] *The*

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[128] Joseph Wiesenfarth, *George Eliot's Mythmaking* (Heidelberg: Carl Winter-Universtatsverlag, 1977) p. 9.
[129] Avrom Fleishman, *George Eliot's Intellectual Life* (Cambridge: Cambridge University Press, 2010) p. 111.
[130] David R. Carroll, '*Silas Marner*: Reversing the Oracles of Religion', Literary Monographs I (1967), 165-200, p. 312.
[131] Ibid, p. 314.
[132] For scholarship that connects Eliotic sympathy with an ecological ethos, see: Maria Tang, 'Embroiled Mediums: George Eliot and Environment; or, the Ecologies of *Middlemarch*', *Études anglaises* 73 (2020/1) 3-29; Sophie D. Christman, 'The Rise of Proto-Environmentalism in George Eliot', *Dickens Studies Annual: Essays on Victorian Fiction*, 50 (2019) 81-105.
[133] Feuerbach, *The Essence of Christianity*, p. 353.

Essence of Christianity provides a theory of what Elizabeth Deeds Ermarth has termed 'the psychic conditions for sympathy', which Eliot would explore more fully in 1856 essay 'The Natural History of German Life' for the Westminster Review in relation to the social function of art and literature.[134] In accordance with Feuerbach, sympathy is understood by Eliot as an imaginative impulse that transcends egotism to bridge the epistemological and ethical gap between the self and the world.

In situating sympathy as an extension of the self, Cristina Richieri Griffin argues that '*Essence of Christianity* offers Eliot and us a theory of not only the "psychic conditions of sympathy" but also – and according to Feuerbach, more vitally – the material conditions for sympathy'.[135] Unlike other critiques of Feuerbach's *The Essence of Christianity*, Griffin's analysis focuses on his emphasis on embodied 'feeling' – a term, she highlights, that Eliot's translation uses synonymously and interchangeably with 'sympathy'.[136] For Feuerbach then, the senses take key prominence in sympathetic understanding; there is little separation between the mind and body. Rather, sympathy combines both in 'participated sensation' that relies upon the mind and body working in productive interchange.

This position is unlike Adam Smith's, who regards sympathy as 'fundamentally a cognitive process' rather than an embodied feeling.[137] Feuerbachian sympathy is characterised as a sensory experience that transcends or 'rise[s] above' an individual or 'egotistic' sense of self to become fully embodied in the world.[138] From a twenty-first century ecocritical perspective, Feuerbach's insistence on sympathy as a sensory and embodied feeling shares similarities with Donna Haraway's discussion of 'situated knowledges', in that we understand the universe

[134] Elizabeth Deeds Ermarth, 'George Eliot's Conception of Sympathy', *Nineteenth- Century Fiction* 40 (1985) 23-42, p. 24.

[135] Cristina Richieri Griffin, 'George Eliot's Feuerbach: Senses, Sympathy, Omniscience, And Secularism', *ELH*, 84 (2017) 475-502, p. 479.

[136] It is worth noting here that the definitions used to distinguish the difference between empathy and sympathy in contemporary use are not the same as those used by Eliot and the tradition of moral philosophy with which she ascribes. In our contemporary use empathy refers to the ability of a person to simulate another's emotional state (feeling with). Whereas, sympathy denotes feelings of compassion and care for another (feeling for). As Robert Solomon helpfully illustrates, however, in their eighteenth-century context, empathy refers to "the sharing of emotion (any emotion). Sympathy, by contrast, is an emotion, a quite particular though rather suffuse and contextually defined emotion. It is therefore sympathy that does the motivational work […] but that in turn requires empathy, the capacity to "read" and to some extent share other people's emotions". Sympathy is thus an evaluative emotional response to another's situation, although both definitions make clear the import of empathy for the understanding of what it is like to have a certain sensual experience.

[137] For a detailed reading of Adam Smith's theory of sympathy, see Rae Greiner, *Sympathetic Realism in Nineteenth-Century British Fiction* (Baltimore: Johns Hopkins University Press, 2012), p. 16.

[138] Feuerbach, *The Essence of Christianity,* p. 353–54.

through metaphoric extensions of our bodies and, because sign systems are collective, we are all immersed in the symbolic language of our communities.[139] For Eliot, this immersion is something to be examined, questioned and revised. In 'The Natural History of German Life' Eliot argued for the 'participated sensation' of embodied interactions – what she terms a 'natural history of social bodies' – over a distanced and abstracted point of view, in calling for writers to abandon the distance of 'books' and 'spectacles' for 'immediate intercourse with people'.[140]

Eliot's materialist understanding of sympathy, via Feuerbach, is embedded within the realist mode she uses to represent the 'ordinary' world of her subjects. Yet, Eliot is not simply engaged with the accuracy of such depictions, but also attempts to capture the authentic representation of feelings and perceptions which would otherwise render the accuracy of representation false. In this respect, the mythological elements in Eliot's fiction are used as an extension of Eliot's desire to express deep human truths. As I will demonstrate, the myth of St. Ogg can be seen to instruct the reader of Eliot's sympathetic ethos, in that it encourages them to abandon their distanced or abstracted perspective and seek instead that 'wide, fellow feeling' with agrarian families like the Tullivers who have eked a living from the river for centuries.[141] Eliot's use of myth, therefore, works in a metaphorical sense to elucidate the emotional undercurrents of the novel.

Eliot's metaphorical use of myth recalls Fredrich Max Müller's work in the comparative study or 'sciences' of mythology, language and religion, to advocate for the metaphorical value of myth. In his investigation of ancient religious texts in *The Science of Religion* (1870), Müller argued that it was of the utmost importance when interpreting a past text not to take it at face value, but acknowledge the intricacies therein: 'It is impossible in human language to express abstract ideas except by metaphor,' he writes. Indeed, 'the whole dictionary of ancient religion is made up of metaphors. With us these metaphors are all forgotten. We speak of spirit without thinking of breath, of heaven without thinking of sky'.[142] Metaphor always exceeds the limits of its denotation; the study of myth, therefore, requires a balanced approach

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[139] Donna Haraway, 'Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective', *Feminist Studies*, 14 (1988) 575-599.
[140] George Eliot, 'The Natural History of German Life', *George Eliot: Selected Essays, Poems and Other Writings,* eds, by. A. S. Byatt and Nicholas Warren, (London: Penguin, 1990) p. 131.
[141] Feuerbach, *The Essence of Christianity*, p. 353.
[142] Fredrich Max Müller, *Introduction to the Science of Religion: Four Lectures Delivered at the Royal Institution in February and March 1870 (London: Spottiswoode & Co., 1870)* p. 57.

that systematically privileges fact over philosophic model or supposition and illuminate accurate details of the past. Since myth and metaphor are types of analogy, they fit into a comprehensive structure of meaning to a culture and become meaningful to their adherents.

In other words, they have an influence on how people think, feel and act. In her last novel *Daniel Deronda* (1876), Eliot condensed Müller's argument that much of the fantastic and mystical aspect of ancient religions should be attributed to modern-day misunderstandings of ancient language by referring to myth as 'a truth in thought though it may never have been carried out in action. It lives as an idea […] an extreme image of what is happening every day - the transmutation of self'.[143] Similarly, the various interpretations of the flood myths of St. Ogg and the biblical story in *The Mill on the Floss* teaches the reader to attend to the ways in which myth shapes our perceptions, but also to the sociopolitical and cultural circumstances that reproduce them. Indeed, the two main mythic currents in the narrative, the story of St. Ogg and the story of the biblical flood are both woven into the novel's cataclysmic ending, thus emphasising the extent to which both Maggie and Tom have internalised these stories.

This returns us to the double narrative structure employed by Eliot in *The Mill on the Floss*, since the mythic narrative of St. Ogg provides the novel with its 'split in consciousness' or dual consciousness identified by Ermarth and others.[144] The novel's doubled narrative structure can be seen in dialogue with Feuerbach's identification of the doubleness or 'twofold life' of humans in *The Essence of Christianity* form the cultivation of an individual's moral awareness. In this context, an individual's conscience derives from the recognition of and regard for others, which are understood as a tangible collective mindful of human differences rather than a universal, abstract singularity. Expressed in a different way, the relation between subject and object, or the I and thou coexist within the 'twofold life' of each individual and thus serve as the basis for one's moral awareness and sense of responsibility toward others. Eliot's double narrative perspective in *The Mill on the Floss* operates on many different levels, formally as well as thematically.

As such, critical analysis has varied in its focus, ascribing the novel's dual temporality to the collision between the steam-powered world of modernity colliding

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[143] Eliot, *Daniel Deronda*, (Oxford: Oxford University Press, 1984), p. 394.
[144] Ermarth, 'George Eliot's Conception of Sympathy', p. 24.

with the older, water-generated one, as in Miller's case. Sally Shuttleworth and Jonathan Smith, meanwhile, argue that the double narrative structure represents geological catastrophism against Lyellian uniformitarianism.[145] For John Plotz, the doubled temporality inhabited by the narrator, exemplifies 'the sort of semi-detached relationship that the reader is […] meant to have to the text itself", which in turn is 'intimately linked to Eliot's sense that novels themselves may become testing grounds for universal laws of ethics and sociability'.[146] In my reading, I argue that the mythic aspect of *The Mill on the Floss* exemplifies another way in which it inhabits dual temporalities that is linked specifically to the moral message of the novel.

Specifically, Eliot uses the mythic mode of storytelling to position her narrator between the future and past, reading them in relation to each other and thus signalling the possible consequences of attending to 'no law but the inclination of the moment'.[147] In this way, the myth of St. Ogg is used by Eliot as a formal strategy to remind the reader of the scales of experience beyond the timeframe of an individual life or a single generation. Myth allows the novel to tap into the longer temporal scope necessary to situate ecological calamity of the flood not as a singular historical event, but as a recurrent phenomenon that reassembles itself in response to the changing social conditions that place greater demands upon the river. In this last section then, I shall focus on the two main mythic currents in the novel, the story of St. Ogg and the story of the biblical flood.

1.3 REMYTHOLOGISATION OF THE FLOOD MYTH IN *THE MILL ON THE FLOSS*

In this final section, I argue that Eliot's metaphorical use of myth works to complicate *The Mill*'s quotidian, realist narrative, and thus enables a sympathetic representation of the Floss that, crucially, draws attention to the dynamic relationships between humans and the environment. For the myth of St. Ogg ties human/nature relations into

[145] Sally Shuttleworth, *George Eliot,* 53. Ed, by. Jonathan Smith, *Fact and Feeling: Baconian Science and the Nineteenth-Century Literary Imagination* (Madison: University of Wisconsin Press, 1994) p. 141, 143.
[146] John Plotz, *Semi-Detached: The Aesthetics of Virtual Experience since Dickens*, (Princetown: Princetown University Press. 2018), p. 2.
[147] Eliot, *The Mill on the Floss*, p. 329.

a long history that offers a way of retaining memories of and connection to the geological processes of the land. Eliot devotes a lengthy passage to the history of the village's origin, in respect to its patron saint, Ogg, whose story has been collected by the narrator in the form of 'several manuscript versions':

> 'Ogg the son of Beorl,' says my private hagiographer, 'was a boatman who gained scanty living by ferrying passengers across the river Floss. And it came to pass one evening when the winds were high, that there sat moaning by the bridge of the river a woman with a child in her arms; and she was clad in rags, and had a worn and withered look. And she craved to be rowed across the river. And the men thereabout questioned her, and said 'Wherefore dost thou desire to cross the river? […] But Ogg the son of Beorl came up, and said, 'I will ferry thee across: it is enough that thy heart needs it'. And he ferried her across. And it came to pass when she stepped ashore, that her rags were turned into robes of flowing white and her face became bright with exceeding beauty and there was a glory around it so that she shed a light on the water like the moon in its brightness. And she said, 'Ogg, the son of Beorl, thou art blessed, in that thou didst not question and wrangle with the heart's need but wast smitten with pity and didst straightaway relive the same. And from henceforth whose steps into thy boat shall be in no peril from the storm, and whenever it outs forth to the rescue shall save the lives both of men and beasts'. And when the floods came, many were saved by reason of that blessing on the boat.[148]

The myth weaves together Christian hagiography and the local topography of the Floss to 'reflect[*sic*] from a far-off time the visitation of the floods, which, even when they left human life untouched, were widely fatal to the helpless cattle, and swept as sudden death over all smaller living things'.[149] In this light, the myth appears prophetic of the end flood, with Maggie taking up the mantle of the salvific boatman in her attempt to save Tom from the rising tide. In other ways, the myth can be seen as prophetic in forewarning St. Ogg's society of its capacity to 'question and wrangle with [the] heart's need', especially if that need wrests against the current of 'moral judgement solely by general rules' in relation to Maggie's ostracization from St. Ogg's society

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[148] Eliot, *The Mill on the Floss*, p. 159-60.
[149] Ibid, p. 88.

due to her ‘improper’ relationship with Stephen Guest.[150] As I discuss further in Chapter Three, the concept of prophesy in the Hebrew Bible is determined as that which seeks to reveal the potentially disastrous consequences of a trajectory society has taken. Maggie’s tragic death results in part from St. Ogg’s failure to look beyond ‘their moral notions’ which, although held with ‘strong tenacity, seem to have no standard beyond hereditary custom’.[151] Read as prophecy, the myth of St. Ogg warns about the potential for individual suffering if ‘eyes and hearts are too often fatally sealed’ and urges its adherents to lead with sympathy over judgement, just as Ogg, son of Beorl, did with the unnamed woman.

In another sense, the myth of St. Ogg’s takes on the didacticism of a parable by instructing the reader of Eliot’s sympathetic ethos that ‘moral judgements must remain false and hollow unless they are checked and enlightened by a perpetual reference to the special circumstances that mark the individual lot’.[152] Elsewhere, Eliot alludes to the sower parables of the gospel of Matthew, particularly the parable indicated in the title for book five of the novel, ‘Wheat and Tares’.[153] Dwight H. Purdy argues that the deployment of parables in *The Mill on the Floss* can be read in light of Eliot’s exploration of moral complexity. As such, ‘the wit of Eliot’s biblical allusions consists in part in how she goes beyond simple verbal echo to complicate ethical issues by juxtaposing the contexts of fiction and scripture’.[154] Archer, Marggraf Turley, and Thomas, however, point to the fact that both *The Mill on the Floss* and the Bible depict agricultural societies, for whom the double nature of the parables holds particular significance. ‘Wheat and Tares’, like the other sower parables, recalls practical advice to farmers, asking them to keep watch over their fields and to take appropriate measures to manage weeds such as tares, while also encoding metaphorical significances – for example, in Biblical exegesis, the difficulties of disentangling heresy from orthodoxy. *The Mill on the Floss*, Archer, Marggraf Turley and Thomas argue, develops the parable to conceptualise ‘the more inscrutable question of human nature’ in response to Maggie’s unorthodox behaviour.[155] The myth of St. Ogg, like the sower parables, underscores the novelist’s entreaty to her readers to abandon their

[150] Eliot, *The Mill on the Floss*, p. 88, 674.
[151] Ibid, 203.
[152] Ibid, p. 371.
[153] King James Version. Matthew 13:24-30.
[154] Dwight H Purdy, ‘The Wit of Biblical Allusion in *The Mill on the Floss*’, *Studies in Philology* 102 (2005) 241-267, p. 236.
[155] Archer, ‘Moving accidents by flood and field’, p. 706.

distanced or abstracted perspective and seek instead that 'wide, fellow feeling with all that is human'.[156]

In attributing the myth of St. Ogg to the judgement St. Ogg's society wreaks on Maggie, Eliot presents the active operations of myth in everyday life that do not come into their own until they are taken up by the modernist novelists of the early twentieth century, a point I shall return to in relation to D. H Lawrence in Chapter Two. In *The Mill on the Floss,* characters embody mythological archetypes, suggesting that myth operates at an unconscious level. The mythic character of Noah, for example, is used repeatedly in the novel to draw a parallel between Tom's feelings of familial duty to protect the Tullivers from the rising threat of insolvency. This is introduced to the reader early in the novel when as a child Tom keeps rabbits in case of flood, telling his friend Bob, '[w]hen I'm a man, I shall make a boat with a wooden house on the top of it, like Noah's ark, and keep plenty to eat in it — rabbits and things — all ready'.[157] In recasting himself as Noah, Tom makes a comparison between his family's struggle for economic survival with the flood story, seeing it as his duty later in the narrative as acting patriarch when Mr. Tulliver dies to protect the Tullivers (his own kind/species) from extinction.

On this point, Juliette Atkinson points out that the environment in which Maggie and Tom develops is written with the language of 'evolutionary thinking': 'the modern trade world of St. Ogg's is pushing traditional mills such as the Tullivers towards extinction', she writes.[158] *The Mill on the Floss* thus reveals 'a troubled sense that natural selection enables the survival of the fittest but not necessarily the noblest'.[159] That Eliot was reading Darwin's *On the Origin of Species* (1859) whilst writing *The Mill on the Floss* and that she was famously underwhelmed by it on first reading is well-known. In a letter to her friend, Barbara Bodichon, Eliot shares her concern on Darwin's failure to impress his concepts on the reader with adequate 'illustrative facts'.[160] '[T]o me the Development theory and all other explanations of processes by which things came to be,' writes Eliot, 'produce a feeble impression compared with the mystery that lies under the processes'.[161] For this reason, many

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[156] Feuerbach, *The Essence of Christianity*, p. 365.
[157] Eliot, *The Mill on the Floss*, p. 53.
[158] Juliette Atkinson, Introduction to *The Mill on the Floss* (1860), (Oxford: Oxford University Press, 2015) p. xxiii.
[159] Ibid.
[160] George Eliot, *The George Eliot Letters*, vol 7, ed. by Gordon S Haight (New Haven: Yale University Press, 1954) p. 68.
[161] Ibid.

critics have related the novel's depiction of the arable and tidal relationships and pressures placed on the centres of food production as illustrative of the identification of hunger, death and the 'desperate scramble for food' which Darwin posits amidst his processes of evolution.[162]

More specifically, the religious sentiments of Noah bring into relief the concrete feelings mythologised in the person of Tom. However, by the end of the novel this proleptic vision is reversed and it is in fact Maggie that takes up the mantle as the salvific boatman on the model of Saint Ogg in an attempt to save her brother from the rising tide. Maggie evokes the biblical character of Noah for the final time in the novel, saying: 'God has taken care of me, to bring me to you'.[163] The invocation of Noah here has a different hermeneutical function and works to rewrite Tom's more traditional version of the flood. In so doing, it juxtaposes Tom's utilitarian understanding of the flood myth based on social economy to Maggie's more humanist reading, based on transcendental economy.

Flood myth typology is thus not only recovered through Maggie and Tom's self-identification with the figure of Noah, it is also shown to be informed and modified by the environment in which they dwell. Such mythologizing can be clarified with the help of George Henry Lewes's concept of the 'General Mind', which he discusses in *Problems of Life and Mind* (1877), and provides a Victorian scientific perspective for understanding how environment shapes behaviour in Eliot's novel. Defined by Richard A. Currie as a pre-twentieth century theory of 'social conditioning', the General Mind formulates a science based upon physiology for understanding how social conditions create mental states in humans.[164] Lewes believed that the 'functions of the organism will be determined not only by his individual structure, but also by the structure of the collective organism'.[165]

Applied to *The Mill on the Floss*, such an analysis would see life at St. Ogg's – the customs, traditions, stories, and ways of thinking – internalised as part of Maggie's identity and subconscious. This is rendered explicit in the narrative when the myth of St. Ogg is reinterpreted by Maggie in a dream. Unlike, the myth that urges its adherents to choose sympathy of judgement, Maggie's reinterpretation of the myth

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[162] Archer, 'Moving accidents by flood and field', p. 722.
[163] Eliot, *The Mill on the Floss*, p. 587.
[164] Richard A. Currie, 'Lewes's General Mind and the Judgement of St. Ogg's: *The Mill on the Floss* as Scientific Text', Victorian Newsletter, 92 (1997) 25-27, p. 25.
[165] George Henry Lewes, *Problems of Life and Mind: The Foundations of a Creed,* (Boston: Houghton Osgood, 1880), p. 147.

carries the weight of social custom and her renunciation in St. Ogg's society as a newly fallen woman, following her liaison with Stephen Guest. In the dream, Maggie sees 'the Virgin seated in St. Ogg's boat, and it came nearer and nearer, till they saw the Virgin was Lucy and the boatman […] her brother, who rowed past without looking at her'.[166] Reaching for Tom, Maggie's boat capsizes and she is drowned. In foregrounding the myth through Maggie's dream, the novel demonstrates how the myth of St. Ogg has been internalised through Maggie to shape a perception of herself in relation to society. Yet, the meaning of the myth has changed in light of 'the crush of social custom'.[167] In this light, *The Mill on the Floss* demonstrates how myths evolve as the cultures that maintain them evolve. Maggie's reinterpretation of the myth of St. Ogg demonstrates Lewes's conception of the General Mind, which emphasizes the importance of evolved social custom and long-standing traditions communicated through language and enforced by consensus. In particular, Lewes identified that the internalisation of social ideas into individual mental function occurs because of language. 'The words spoken are not [an individual's] creation' he writes, 'what his tribe speaks, he repeats'.[168] Yet, Lewes caveats his claim by suggesting that the individual does not merely 'echo their words, he rethinks them'.[169] This process of rethinking is key to the ways in which mythic and hagiographic figures are remythologised in *The Mill on the Floss* to reflect the collective conditioning of the oppressive environment Maggie and Tom have grown up in. Myth and myth-making is thus revealed as a significant characteristic of the 'mind of St. Ogg', even while it is transformed by the individual characters in accordance with the customs and modes of thinking demanded by the 'old-fashioned' conventions of St. Ogg's society.[170]

Myth is shown to form an important part of the Tullivers relationship to the social environment of St. Ogg's, but what part does it play in informing their connection to the physical environment? The two main mythic currents in the narrative, that of St. Ogg and the biblical flood, are both woven into the novel's cataclysmic ending, emphasising the extent to which Maggie and Tom's response to the flood is influenced by the stories they have been told about flood and cataclysm. As readers we are first made aware of the flood when Maggie is suddenly made aware of the waters circling around her feet in the night. The narrator explains that on feeling

[166] Eliot, *The Mill on the Floss*, p. 470.
[167] Ibid, p. 222.
[168] George Henry Lewes, *Problems of Life and Mind,* p. 160.
[169] Ibid.
[170] Eliot, *The Mill on the Floss*, p. 89, 202.

the waters, Maggie is 'not bewildered for an instant', knowing 'it was the flood!'.[171] By using the definite article to define *the* flood, instead of *a* flood, the narrator connects this particular flooding of the Floss to 'the visitation of the floods' that are warned of in the mythic tale of St. Ogg. The myth can thus be seen as a reflection of the impact of the physical phenomena of the recurring floods on the development of the community's ways of life and cultural responses to the land, its climate, geology, flora and fauna.

In this light, one would surmise that the community of St. Ogg's would not only be aware of the Floss's propensity to flood but, crucially, be prepared for it and the threat to life, property and livelihood it presupposes. Yet, Eliot's narrator is at great pains to show St. Ogg's indifference towards its natural history, and by extension its environment. Indeed, mere pages before Maggie is alerted to flood as it washes over her feet, the narrator alludes to its inevitability, saying,

> In counties higher up the Floss the rains had been continuous, and the completion of harvest had been arrested. And now, for the last two days, the rains on the lower course of the river had been incessant, so that the old men had shaken their heads and talked of sixty years ago, when the same sort of weather, happening about the equinox, brought on great floods […] and reduced to the town to great misery.[172]

Collective memory of previous flooding aligns with local folklore about the equinox to reassert the tendency of the Floss to break its banks, however 'the younger generation, who had seen several small floods, thought lightly of these sombre recollections and forebodings'.[173] The dismissive attitude taken by the younger generations reflects the experience of change as England moves further into industrialisation, and towards the obsolescence of forms of agrarian organisation and production that had to be attuned to weather fluctuations for the processes of production. Yet, the note that elsewhere the harvest has not been brought in due to the weather demonstrates that, while these forms of agri-business help the privileged few to prosper, they equally dispossess others of their lands, livelihoods, and ultimately of the food they need to survive.

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[171] Eliot, *The Mill on the Floss*, p. 385.
[172] Ibid, p. 382.
[173] Ibid.

Unlike those of her generation, however, Maggie and Tom are described as 'children for the water' insofar that the river and its propensity to flood is an integral part of their situated knowledge of their home, including the memories of the 'last great floods' that had damaged the mill so badly that their great-grandfather was forced to rebuild.[174] As such, they can be seen to have adopted a mythical view of the floods, which is made evident in the novel's final scenes. Indeed, as Maggie and Bob Jakin rescue the boats from being swept away, Jakin has 'a vague impression of her as one who would help to protect, not need to be protected […] suddenly lifting the light of his lanthorn on Maggie, as she stood in the rain with oar in her hand and her black hair streaming'.[175] Maggie is at once St. Ogg, the would-be protector, and the Virgin 'shedding a light around as of the moon in its brightness'.[176] However, once on the water, Maggie cannot help but think of the 'awful visitation of God which her father used to talk of – which had made the nightmares of her childish dreams'.[177] Her father's God is the vengeful Jehovah interpreted from the Old Testament flood myth, yet the memory returns her to Dorlcote Mill with 'Tom – and her mother' as they 'all listened together'.[178] The two myths are held in tension in Maggie. The St. Ogg myth appears to validate the possibility for Maggie's self-realisation and self-dependence; as "one that would help protect" her family, she feels a 'sensation of strength, inspired by mighty emotion'.[179] However, the flood also evokes the fears of her childhood, returning her to the potential anger and vengeful opprobrium of her brother and St Ogg society at large that seek to condemn her rebellious spirit.

The memory of the biblical flood read by her father however, propels her into the darkness toward Dorlcote Mill. In another way, the allusion to the biblical flood story recalls Tom, who boasted as a child that he would build an ark like Noah if the floods came. However, it is crucially not Tom, but Maggie who is propelled into the boat toward 'possible rescue for those long-remembered beings at the old home'.[180] When Maggie arrives at the Mill, Tom is dumbfounded that she would come to rescue him after all his cruelties, and 'the full meaning of what had happened rushed upon him'.[181] The 'overpowering force' of Maggie's self-sacrifice silences him with a

[174] Eliot, *The Mill on the Floss*, p. 77, 197.
[175] Ibid, p. 386.
[176] Ibid, p. 159.
[177] Ibid, p. 386.
[178] Ibid.
[179] Ibid.
[180] Ibid.
[181] Eliot, *The Mill on the Floss*, p. 388.

'certain awe and humiliation', and 'though he could ask no question, he guessed a story of almost miraculous divinely-protected effort'.[182] The effort Tom speaks of here could easily point towards the awe he feels towards Maggie's strength and bravery in coming to save him, but the word 'story' gestures to the myth of St. Ogg and of Noah's Ark. In both invocations, Maggie is 'divinely-protected' and not the befallen woman he once scorned. Tom's utterance 'Magsie!' signals their reconciliation and his forgiveness in recalling their childhood.[183] Maggie, in turn, tells Tom that they will go to Lucy to 'see if she is safe' in a realisation of the dream she had while on the river with Stephen, only it is Maggie in Lucy's place in the boat.[184] This link to the novel's mythic counterpart reinforces Tom and Maggie's emotional reconciliation. However, in the next moment they see '[s]ome wooden machinery had just given way on one of the wharves, and huge fragments were being floated along. […] Tom, looking before him, saw death rushing on them'.[185] It is not the river which kills Maggie and Tom; they are swept under by industrial machinery from St. Ogg's. Their deaths, therefore, are caused by the collision between the old conventions of St. Ogg's which forces Maggie into ignominy, and the new industrial economy; two tides meeting together but neither 'loving' nor joined in an 'impetuous embrace', but a force of destruction.[186]

Eliot's use of the St. Ogg myth is two-fold in that it functions as a metaphor for the emotional undercurrents of the novel and as a material history of the floods that are a part of the lived experience of the community of St. Ogg's, and are part of their bioregional identity. While, the Floss provides a model of relationality between the natural and social worlds of St. Ogg, Eliot's narrator is at great pains to show St. Ogg's indifference towards its natural history, and by extension its environment. Addressing the reader directly, the narrator comments, '[y]ou could not live among such people; […] these dull men and women, as a kind of population out of keeping with the earth on which they live'.[187] The sense that the St. Ogg's community is 'out of keeping' with their environment is linked to their anthropocentric view of nature, which is afforded by the form of capitalist modernity that refashions their agrarian society into a mercantile one set at odds with the river and its tidal geography.

[182] Ibid.
[183] Ibid, p. 388.
[184] Ibid, p. 384.
[185] Ibid.
[186] Ibid, p. 5.
[187] Ibid, p. 202.

The novel presents the ways in which capitalism commodifies nature not only through the conversion of Dorlcote Mill, but in the way the Tulliver's cousins, the Pullets, tend to their garden at Garum Firs, which is contained by 'white railings and white gates all about, and glittering weathercocks of various design, and garden-walks paved with pebbles in beautiful patterns' with which to demarcate it from the surrounding countryside.[188] By extension, the animals they keep: the pouter pigeons, tame magpie and guinea fowls, are products of selective breeding or imported, domesticated species. Nature is reduced to a passive, aestheticized object presented for human pleasure. The commodification of nature taking place in the novel exists as part of Serres' 'Modern Constitution', wherein nature is ascribed as separate entity from human culture.

It is precisely this view of nature, afforded by capitalist modernity, that causes the residents of St. Ogg's to disregard the 'visitation of the floods' and consign them to the past. As the narrator explains, '[t]he mind of St. Ogg's did not look extensively before or after. It inherited a long past without thinking of it, and had no eyes for the spirits that walked the streets'.[189] Quoting the Wanderer from the first book of William Wordsworth's *Excursion*, an earlier passage emphasises that St. Ogg's has an accumulated sense of history which is simultaneously familiar and forgotten, as the narrator explains:

> It is one of those old, old towns which impress one as a continuation and outgrowth of nature, as much as the nests of the bower-birds or the winding galleries of the white ants; a town which carries the traces of its long growth and history like a millennial tree, and has sprung up and developed in the same spot between the river and the low hill from the time the Roman legions turned their backs on it from the camp on the hillside, and the long-haired sea-kings came up the river and looked with fierce, eager eyes at the features of the land. It is a town 'familiar with forgotten years'.[190]

The presence of Roman legions that first formed a settlement on the Floss's embankments, is written into the town as part of its physical incarnation yet remain ghostly, mere 'spirits' to St. Ogg's later occupants. So too, are Saxon, Dane and

[188] Eliot, *The Mill on the Floss*, p. 119.
[189] Ibid, p. 161-2.
[190] Ibid, p. 87.

Norman histories, which are legible as the architectural remnants of the town's 'old Hall, which is like the town – telling of the thoughts and hands of widely sundered generations'.[191] These have been woven into the rich oral history of the village, such as 'the bit of wall now built into the belfry of the parish church and said to be a remnant of the original chapel dedicated to St. Ogg'.[192] The architectural fingerprints are traces of the continuation and outgrowth of the village's history, which, like the millennial tree of the narrator's description, form the rings of its social trunk.[193] While the present inhabitants of St. Ogg's have 'no eyes' for the entwined socio-historical and environmental features of the landscape, the narrator emphasises how these particular moments of human interaction with the physical environment have produced myths and folklore that is relevant to the past and to the future-focused industrial praxis of the present.

However, in forgetting their past, the inhabitants of St Ogg's have acquiesced to the idea of time as an extending temporal structure, a 'level plain' that appears to them as a successively recurring contemporary, continuous present. The narrator observes that the collective memories of the village have become transient over time, meaning that they are no longer able to recall their 'belief in volcanoes and earthquakes, thinking tomorrow will be as yesterday and the giant forces that used to shake the earth are for ever laid to sleep'.[194] Consequently, these equalise the 'giant forces' (i.e.; natural disasters) into stable a view of history that, crucially, places the recurrence of the 'visitation of the floods' firmly in the mythical past. In comparing St. Ogg's geological history with the 'giant forces that used to shake the earth', *The Mill on the Floss* appears to ascribe to Charles Lyell's work in *Principles of Geology* (1830-33), which argued for a long and unbroken view of geological history, wherein momentary ruptures of historical change, (for example, volcanic events, earthquakes and what he calls 'aqueous causes', i.e., floods) feature as mere blips within a grand, equalising extension of geological continuity. Lyell's uninformative perspective refuted Georges Cuvier's theory of catastrophism, the idea that a lost world had been demolished in short, violent interruptions — 'révolutions de la surface du globe', as

[191] Eliot, *The Mill on the Floss*, p. 159.
[192] Ibid.
[193] Ibid, p. 161-2.
[194] Ibid.

the title of his 1825 treatise puts it.[195] Eliot encountered a version of Cuvier's catastrophist thesis in biblical terms in Leveson Venables Vernon-Harcourt's *Doctrine of the Deluge* (1838). Against long-durational histories, Harcourt claimed that the world had been renewed forever in a single watery event. In contradiction of catastrophist models both secular and Christian, Lyell, whom Eliot read in preparation for *The Mill on the Floss*, argued for a long and unbroken view of history in which apparent ruptures are contained within the grand, equalizing extension of geological continuity. In an oft-quoted passage of *Principles of Geology*, Lyell explains previous geologists' miscalculations when attempting to envisage the extreme age of the Earth through an analogy to social history. He argues that if events that took two thousand years were viewed as having occurred in a century

> such a portion of history would immediately assume the air of a romance; the events would seem devoid of credibility and inconsistent with the present course of human affairs A crowd of incidents would follow each other in thick succession. Armies and fleets would appear to be assembled only to be destroyed, and cities built merely to fall to ruins. There would be the most violent transitions from foreign or intestine war to periods of profound peace, and the works effected during the years of disorder or tranquillity would be alike superhuman in magnitude.[196]

The challenge Lyell recounts in attempting to find the right literary mode with which to communicate the long, complex timescales of the earth sits alongside Eliot's use of myth in *The Mill on the Floss* because of the way they both highlight our perception of the conditions of possibility to genre. Whereas realism depends on the slow accrual of events, 'romance' collapses timescales and thus encourages the reader to, in Lyell's words, 'form most exalted ideas of the activity of the agents, and the suddenness of the revolutions'.[197] Similarly, as a non-realist mode of storytelling, myth offers a means of reconceptualising the realist novel and destabilising the imagined temporal

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[195] Translation, 'revolutionary upheavals on the surface of the globe' in George Cuvier, *Discourse on the Revolutionary Upheavals on the Surface of the Earth*, trans, by. Ian Johnston (Arlington: Richer Resources Publications, 2009).
[196] Charles Lyell, *Principles of Geology,* (New York: Penguin, 1997) p. 30.
[197] Ibid.

stability of the environment therein.[198] Given our current time of accelerated climate change, where the anthropogenic impacts on geological and climactic phenomena do appear 'superhuman in magnitude', storytelling that plays with the notion of mythic time, as in *The Mill*'s case, might help to unify the temporal and spatial scale of environmental crisis with a scale more suitable to human understanding.

In the context of Eliot's novel, the invocation of the romance genre is interesting as it points to the novel's doubled or 'twofold' structure. In von Hendy's historicist study of myth, he comments in relation to Keats's poem 'The Fall of Hyperion' that '[t]he essence of the medieval [romance] genre is that its narrator recounts a dream framed in the circumstances of his waking life and constituting a commentary on something with which he needs to come to terms'.[199] Note the similarity to *The Mill*'s prologue in which the narrator actively inhabits the setting of Dorlcote Mill ('I wander along the bank and listen to its low placid voice') and recalls it as a dream from the comfort of her armchair where she has been 'pressing [her] elbows on the arms of [her] chair and dreaming that [she] was standing on the bridge in front of Dorlcote Mill' all along.[200] In calling attention to the doubled temporality of the fictional world within which she is situated, the narrator performs the part of interpreter, signalling to the reader not only how they might sensorially inhabit the storyworld, but how they might decipher those feelings from a sympathetic perspective.

In this regard, the narrator can be seen as a dreamer modelled on the conventions of the Medieval romance genre, in that she is afforded 'the backwards contemplation of the cost of evolving consciousness'.[201] In this regard, Eliot's narrator acts as a witness to the effects of free-market capitalism on agricultural production and society that, as Archer, Marggraf Turley, and Thomas have shown, engendered

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[198] Following Ian Watt's account of the history of the novel, Jesse Oak Taylor emphasises the environment as being of particular importance to the rise of the novel, since the individualisation of character and privileging of plot as a sequence of casually connected events unfolding in real time cannot take place without attention to their setting. At the same time, Taylor notes that this literary environment has to remain fixed in order to provide a backdrop for human characters to act out individual or societal dramas, thus establishing the staged conditions upon which the casual connection between them depends. Somewhat paradoxically however, the realist novel gained status during a time of rapid industrialisation and globalisation. The type of imagined environment essential to the realist novel, Taylor argues, "depends as much on a form of inattention as it does on actual attention, producing an imagined environment that is stable, or perhaps more accurately, an environment of *imagined stability* in the midst of transformation". Jesse Oak Taylor, 'The Novel After Nature, Nature and the Novel: Richard Jefferies's Anthropocene Romance', *Studies in the Novel* 50 (2018) 108-133, p. 113.

[199] von Hendy, *The Modern Construction of Myth*, p. 47.

[200] Eliot, *The Mill on the Floss*, p. 7.

[201] von Hendy, *The Modern Construction of Myth*, p. 47.

widespread and irreversible disengagement from the land. Yet, she does not seek to condemn or provide an alternative to the processes of industrialism and free-market capitalism already well-underway by the time she came to write *The Mill on the Floss*. Instead, Eliot uses the mythic mode of storytelling to position her narrator between the future and past, reading them in relation to each other and thus signalling the possible consequences of attending to 'no law but the inclination of the moment'.[202]

The novel's link to the Medieval romance genre is made explicit in Book IV, Chapter One: 'A Variation of Protestantism Unknown to Bossuet', in relation to another story of flood and calamity. In the passage, the reader is taken out of the immediacy of plot to the villages on the Rhone and the castles on the Rhine to compare the two. For the narrator, the Rhone villages, flooded by former storms, their inhabitants swept away, lacks the chivalric 'romance' of the castles on the Rhine, which 'have crumbled and mellowed into such harmony with the green and rocky steeps', creating the impression that they have matured organically with their surroundings and are now part of the natural landscape.[203] The narrator goes on to equate the castles to the 'natural fitness' of 'the mountain-pine', echoing the tree metaphor used to describe Dorlcote Mill in the novel's opening that appears 'as old as the elms and chestnuts that shelter it from the northern blast'.[204] The organic metaphors used to describe the castles on the Rhine and Dorlcote Mill present both human habitations as outgrowths of nature.

In particular, the castles on the Rhine 'thrill' the narrator 'with a sense of poetry' because they 'belong to the grand historic life of humanity', 'a day of romance!'.[205] The invocation of the word 'romance' recalls the mythic works of the past as ameliorated in Middle English Romance. Eliot's narrator makes this link explicit in her evocations of 'drunken ogres', 'wild beast[s]', 'forest boars with tusks' that make 'fine contrast' with 'the wandering minstrel' and 'the soft-lipped princess'.[206] 'That was a time of colour,' she enthuses, 'when the sunlight fell on glancing steel and floating banners; a time of adventure and fierce struggle – nay, of living, religious art and religious enthusiasm'.[207] The Rhine is explicitly rendered as a Romantic construction of a sublime landscape, revalued as theophanic than the

[202] Eliot, *The Mill on the Floss*, p. 329.
[203] Ibid, p. 202.
[204] Ibid.
[205] Ibid.
[206] Ibid.
[207] Ibid.

villages of the Rhone, which are marred by their association with 'human life'. Yet, whereas the castles of the Rhine exist in 'harmony' with their environment, the villages of the Rhone are marred by death and decay:

> … these dead-tinted, hollow-eyed, angular skeletons of villages on the Rhone oppress me with the feeling that human life – very much of it – is a narrow, ugly grovelling existence, which even calamity does not elevate, but rather tends to exhibit in all its bare vulgarity of conception; and I have a cruel conviction that the lives these ruins are the traces of, were part of a gross sum of obscure vitality, that will be swept into the same oblivion with the generations of ants and beavers.[208]

The narrator invites the reader to make a comparison between the flooded villages along the Rhone, where human life is reduced to a 'narrow, ugly, grovelling existence', and the oppressive character of the 'old-fashioned family life of the banks of the Floss', yet insists that this oppressiveness is important if readers are to understand the reality of the environments inhabited by the ordinary, everyday people she describes.[209] The passage foregrounds 'the desolation wrought by the flood' in the novel's epilogue, yet human impact in this passage is swept away 'into the same oblivion with the generations of ants and beavers'.[210] In shifting the locus of agency and presenting humanity as one species among many, as well as narrative interest from character to environment, Eliot reminds her readers that the social life of humans is part of the natural world, not separate from it.

This notion is taken up in the final pages of the novel as human labour is placed centrally to the restoration and regeneration of the arable landscape after the destruction of the flood. As the narrator insists, 'Nature repairs her ravages […] with sunshine, and with human labour':

> The desolation wrought by that flood, had left little visible trace on the face of the earth, five years after. The fifth autumn was rich in golden corn-stacks, rising in thick clusters among the distant hedgerows; the wharves and warehouses on the Floss were busy again, with echoes of eager voices, with

[208] Eliot, *The Mill on the Floss*, p. 203.
[209] Ibid.
[210] Ibid.

hopeful lading and unlading. […] Nature repairs her ravages- but not all. The uptorn trees are not rooted again- the parted hills are left scarred: if there is a new growth, the trees are not the same as the old, and the hills underneath their green vesture bear the marks of the past rending. To the eyes that have not dwelt of the past, that is no thorough repair.[211]

The narrator asserts that the flood has left little trace of its destruction, however it has notably taken five years for the land to recover well enough to support crops of 'golden corn-stacks', five years for the 'wharves and warehouses' to resume the work of food production 'among the distant hedgerows'.[212] The reader is left to question what happened during those four previous years to those communities along the Floss whose lives and livelihoods subsisted on the health of the land. In her reading, Miller sees this passage as Eliot's insistence that unlike the community of St. Ogg's who 'did not look extensively before or after' and therefore did not anticipate the calamity of the flood, a longer view is indeed possible. 'There may be "little visible trace" of the flood's destruction', Miller notes, 'but the trace is there for those who see with an eye to the past as well as the present'.[213] The trees that grow back, but they will not be the same trees; the ancient chestnuts and elms that, like Dorlcote Mill, have watched over the comings and goings of the Floss for 'a hundred year or more'.[214] Similarly, the scarred hills may never fully recover enough to be sufficiently capable of supporting crops.

Miller sees the narrator's dialectical perspective in these final descriptions of St. Ogg's as positioned between present and future, to ultimately 'refuse[sic] the consolation and recompense of a cyclical ending'.[215] As such, the novels leaves the reader with a sense of the temporal limitations of individual understanding at this key historical juncture. In extension of Miller's analysis, I propose that the open-endedness of the passage and the novel's conclusion overall mirrors the narrative structure of biblical flood, operating as a form of what Bode and Dietrich call 'future narrative', in that it operates as a challenge to change from one particular course of

[211] Eliot, *The Mill on the Floss*, p. 589.
[212] Ibid.
[213] Miller, 'Fixed Capital and the Flow', p. 94.
[214] Eliot, *The Mill on the Floss*, p. 589.
[215] Miller, 'Fixed Capital and the Flow', p. 94.

action, in this case the rapid progress of fossil fuelled industrial life, to a model of production that is in keeping with the ecological bodies it depends upon.[216]

The narrative responds to the restrictions placed on the environment within a decidedly ethical framework that resists received biblical doctrine to demonstrate sensitivity to situational detail in the 'natural histories' of agrarian families like the Tullivers who have lived with the river for centuries, but also of the riverine landscape itself and the many social and ecological histories it has engendered. *The Mill on the Floss* thus shows reaction and resistance to the concept of natural disaster and advocates for a revaluation of the processes of economic development that gloss over the historical and ecological roots of its social bodies. Moreover, the flood myths in Eliot's novel challenge the Victorian notion that nature is an inanimate resource to be cultivated by industrial modernity by giving the natural world of the Floss agency and identity beyond its human usage. Read ecocritically, myth in *The Mill on the Floss* invites the reader to extend 'fellow feeling' to the river and its inhabitants, and therefore direct our responsibility more consciously to that which we are affecting.

In the next chapter, as we travel away from the Floss, along the River Trent and down one of its tributaries, we reach the setting for Marsh Farm in D.H. Lawrence's 1916 novel *The Rainbow.* Lawrence's novel*,* like *The Mill on the Floss* is crucially a historiographic novel that utilises the narrative conventions of biblical flood myth to express the sense of dissolution fostered by the changing patterns rural life during the mid-late nineteenth century, as well as the First World War in Lawrence's present. I explore how Lawrence contributes to ideas of time and the environment by revealing a sense of the extraction economy as a future-depleting system. In doing so, I show how historical novels like Eliot's and Lawrence's can help us to reassess the distributed agencies and actions of anthropogenic climate change as they have accumulated across time and space.

[216] *Future Narratives: Theory, Poetics, and Media-Historical Moment.*

CHAPTER TWO: TEMPORALITY AND THE FLOOD NARRATIVE

> There is not one great question relating to the former changes of the earth and its inhabitants in which considerations of time do not enter.
>
> Charles Lyell, *The Principles of Geology*[217]

The aim of this chapter is to show, through a discussion of D. H. Lawrence's *The Rainbow* (1915), how temporality is a key concept not only for flood narrative typology, but in terms of how one views climate change as cumulative, rather than in terms of progressive, linear time. Just like *The Mill on the Floss*, discussed in the previous chapter, *The Rainbow* undertakes a historiographic project that explores the relationship between myth and history, while also being concerned with cumulative and historical changes in the environment. As I have already pointed out, *The Mill on the Floss* is set at a historical moment of energy transition from water power to coal-fired steam power, and therefore identifies and inhabits the new temporal regime that accompanied the accelerating pace of life of industrial modernity. The conversion of Dorlcote Mill to steam drives the sense that the archetypal flood at the end of the novel is more than mere 'natural disaster', disclosing human culpability for creating the conditions in which the flood became so destructive.

Eliot could not have known about the cumulative effects of fossil fuel extraction and combustion that emerged from the nineteenth century and have resulted in the most pressing climate and environmental challenges of the twenty-first century. However, *The Mill on the Floss* reminds its readers that in order to attend to the present crisis, we must first understand the historical circumstances that produced it. In her reading of Eliot's novel, Elizabeth Carolyn Miller notes that in its reflections on energy regimes and water power, *The Mill on the Floss* 'speak[s] to […] the limitations of individual human perspective': 'Humans are ill-equipped to understand the longer

[217] Charles Lyell, *The Principles of Geology*, p. 320.

temporal arcs of the energy systems they use, Eliot suggests, because of their short lifespan and transient memories'.[218] The flood, therefore, can be read in the critical light of this present moment in the Anthropocene as an open invitation to rethink human agency beyond the limited scale of an individual lifespan to a temporal scale on which 'certain impersonal ecological dynamic start[s] to become visible'.[219] In placing *The Mill on the Floss* and *The Rainbow* in dialogue with twenty-first century climate fiction in this thesis, my aim is to highlight the significant role of literature in illuminating issues connected to time and the environment.

In thinking through the co-merging and intermingling mythic and historiographical temporalities in *The Rainbow,* I argue that Lawrence works to challenge the dominant hierarchies of time that legitimised the unsustainable environment of industrial modernity in the early twentieth century. Set between 1840 and 1905, *The Rainbow* follows the lives of three generations as they come to terms with the rapid rise of the industrial age powered by coal and the physical labour of newly urbanised masses. From its outset, *The Rainbow* engages in what Lawrence calls 'eternal time', which absorbs the biographical time of the novel's characters in confluence with the natural world of the Marsh.[220] This sense of eternal time is strongly bound to the timeless state of 'blood-intimacy' the Brangwens share with the 'rich land' surrounding Marsh Farm, changing only through the natural, annual cycles of 'earth and sky and beast and green plants'.[221] Nevertheless, with the introduction of industrial extractivism and the expansion of the collieries that surround the Marsh, *The Rainbow* conveys a new conception of time and futurity imbued with a growing, fearful recognition that England was fast becoming dependent on industrial and labour systems that were incapable of replenishment through seasonal renewal. As I will show in this chapter, these two conflicting temporalities in the novel convey the complex and myriad interdependencies between human and ecological relations, which ultimately serve to challenge the notion that nature is stable in favour of a more critical understanding of changing ecosystems, temporal ideologies, and human culpability in bringing about environmental damage and decline.

A critical focus on time as it relates to the environment is important because it emphasises that time is not a single entity, but a collection of multiple, contested

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[218] Miller, 'Fixed Capital and the Flow', p. 93.
[219] Timothy Clark, *Ecocriticism on the Edge: the Anthropocene as a Threshold Concept* (London: Bloomsbury, 2015) p. 99–100.
[220] D. H Lawrence, *The Rainbow* (London: Vintage Classics, 2011) p. 105.
[221] Ibid, p. 6.

experiences and practices that are continuously being shaped by the interwoven processes of nature and culture. Many critics, including Rob Nixon, Paul Huebener, Barbara Adam and Timothy Clark have shown how human cultures and the larger environments to which they belong involve many complex, intertwined temporalities that are often obscured by the problematic notion that culture and nature move to their own separate rhythms. A case in point is the idea of 'natural time' that is, time formulated by the earth, the seasons or a 'biological clock'. As Paul Huebener notes, discussions around natural time tend to privilege limited perspectives that envision a particular scale or focus while excluding others. He uses an ancient bristlecone pine as an example; growing in the White Mountains of California, the pine is today 5,062 years old, meaning that it began growing as a seedling several centuries prior to the erection of the earliest Egyptian pyramids. 'While the bristlecone pine is among the slowest of organisms' he writes, 'it also participates, minute by minute, in the same ecological world that enacts the faster, sometimes astonishingly rapid, temporalities of hurricanes, forest fires and electrons'.[222] The bristlecone pine exists within and contributes to many different forms of time that are nested within one another and whose boundaries are forever changing and undefined.

These 'concentric temporalities' or 'fuzzy temporalities', as Timothy Morton has called them, are significant to the shift in historical and temporal perspective in ecocritical thought, since they highlight the challenges in representing time in ways that accurately reflect the particularities of different climates and longitudes, as well as the ways in which these are bound to cultural permutations.[223] Just as nature and culture are deeply entangled in myriad complex ways, so too are 'natural times' transformed through human activities; from the destruction of old-growth forests to make way for new urban infrastructure to the disruption of circadian rhythms in wildlife where light pollution has been shown to affect sleep cycles and mating habits. As ecocritics, we might ask how these 'concentric' or 'fuzzy' temporalities translate to the level of narrative. Huebener argues that the task to imagine the negotiations between different, shifting forms of time is an impossibility. Rather, a critical awareness of the continuous, and continually incomplete, process by which we shape our encounters with ecological times is sufficient in interrogating the limits of cultural

[222] Paul Huebener, 'Timely Ecocriticism: Reading Time Critically in the Environmental Humanities', *ISLE: Interdisciplinary Studies in Literature and Environment,* 25 (2018) 327-344. p. 333-4.
[223] Timothy Morton, *Dark Ecology: For a Logic of Future Coexistence,* (Columbia University Press, 2016) p. 61, 71.

conceptualisations of time and comment on the human place within both time and the ecosphere itself.

Of particular interest for this study is the ways in which Lawrence's explorations of time and futurity are shaped by flood narrative typology. *The Rainbow*'s adoption of the biblical flood myth places the family saga or 'realist' history of the novel within a much longer process of cultural evolution which, as Michael Bell asserts, 'lives on as an unconscious history within the modern'.[224] In exploring the entangled historiographical and mythical elements of *The Rainbow* from an ecocritical perspective, I aim to think through ways in which literary history changes when viewed in conjunction with the Anthropocene as a geological epoch. In Greek, eternal, mythic time (*kairos*) is distinct from measurable, linear time (*chronos*) (interestingly, the word kairos is used in the passage on time in Ecclesiastes 3:1-8). Unlike chronos, kairos is cyclical; it therefore facilitates the questioning of linearity because it precludes a definitive end-point, and instead motions towards the possibility for multiple new beginnings. This is important to note when rethinking the temporal structure of *The Rainbow*, since it points towards how we might productively read the current climatological fallout of industrial extractivism alongside the rise of modernity in the novel.

Within *The Rainbow*'s larger mythological framework, these events might be included as 'concentric temporalities', described by Morton as 'a nested series of catastrophes that are still playing out rather than as a sequence of events based on a conception of time as a succession of atomic instants'.[225] In other words, these are catastrophes that are ongoing; rendering the ecologically calamitous events of the early twentieth century, the Victorian era and even those of Ancient Assyria, contemporaneous in a circle or 'twist' that is 'already twisted [in the] spatiotemporal fabric of an existing catastrophe'.[226] Morton gives shape to this idea through the image of the Norse serpent Jörmungandr who surrounds the earth by grasping its own tail. However, the cycle of death and rebirth gleaned from the biblical flood in Lawrence's novel is also fitting insofar that it invites multiple opportunities to unsettle the perceived inevitability of impending calamity given the inherently open-ended quality of the Anthropocene. With this in mind, my aim is to highlight the biblical flood myth

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[224] Michael Bell, 'Lawrence and Modernism', *The Cambridge Companion to D. H. Lawrence*, (Cambridge: Cambridge University Press, 2001) pp. 179-196, p. 189.
[225] Morton, *Dark Ecology: For a Logic of Future Coexistence,* p. 69.
[226] Ibid.

as a useful vehicle for thinking about how literary narrative can model the concentric temporalities of human histories with natural systems. In focusing on time, and particularly the implications of industrialisation on notions of futurity in *The Rainbow*, this chapter forms a counterpart to both the previous chapter, which emphasised the importance of historical perspective on present environmental issues, and sets ups continuities with the twenty-first-century climate novels I explore in the next three chapters, in which futurity is explored as a key feature of the contemporary climate change novel. Read retrospectively and in dialogue with current climate fiction, *The Rainbow*, I contend, can offer a vital perspective on the numerous temporal dimensions and perspectives the novel might evoke in relation to the Anthropocene.

In a more direct sense, *The Rainbow's* preoccupation with the troubling environmental and socioeconomic implications of coal mining place it alongside a canon of realist Victorian novels set in extractive landscapes that includes *The Mill on the Floss*. Many scholars in Victorian Studies have shown how the magnitude of large-scale industrial mining and its environmental impacts in the nineteenth century extended into its literary, textual and aesthetic culture.[227] The coal industry motivated the most significant advances in technological and material progress in the nineteenth century, and aided in the expansionist policies of England's rapid aggrandizement and increasingly acquisitive militarization after 1880.[228] This has led Benjamin Morgan, among others, to observe that the Victorian period might be best described as the Age of Coal.[229] By the turn of the century, the coal industry provided over 90 per cent of Britain's energy requirements and accounted for 45 per cent of total exports. In 1911, around the time Lawrence began to gain ground as a professional author, 264 million tons of coal were produced at the expense of 1,700 miners' lives.[230] While Lawrence would not have been aware of coal's particular atmospheric legacies – those of CO2 emissions by fossil fuel combustion, but also the pollution from heavy metals in e-waste and other toxic reminders of extraction – he had an intimate knowledge of the

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[227] See, Nathan K. Hensley and Philip Steer, 'Signatures of the Carboniferous: The Literary Forms of Coal', *Ecological Form: System Aesthetics in the Age of Empire,* eds, by. Nathan K. Hensley and Philip Steer, (New York: Fordham University Press, 2019) pp. 63-85.; Corbin Hiday, 'Heathcliff Walks', *Novel*, 54 (2021) 248-269.; Jesse Oak Taylor, 'The Novel as Climate Model: Realism and the Greenhouse Effect in Bleakhouse', *Novel*, 46 (2013) 1-25.; Elizabeth Carolyn Miller, 'Drill, Baby, Drill: Extraction Ecologies, Open Temporalities, and Reproductive Futurity in the Provincial Realist Novel', *Victorian Literature & Culture*, 48 (2020) 29-56.

[228] The British Navy had transitioned from sail to a primarily steam-powered fleet by the 1880s, see Eric J. Hobsbawm, *The Age of Empire, 1875-1914*. (New York: Vintage, 1989), p. 28.

[229] Benjamin Morgan, '*Fin du Globe*: On Decadent Planets,' *Victorian Studies* 58, (2016) 609-635, p. 610.

[230] David Powell, *The Power Game: The Struggle for Coal,* (London: Duckworth, 1993) p. 43, 44.

environmental and socioeconomic impacts of coal mining in the rural areas surrounding his childhood home of Eastwood. *The Rainbow,* like many of Lawrence's early novels, draws heavily on the local topography of Eastwood and surrounding countryside. In particular, the Marsh farmhouse, in which the Brangwens lived prior to the novel's opening, is next to what was probably the path of the old Nottingham Canal on the embankment at Cossall Marsh, a place that was significantly altered by the development of coal mines, roads, and water passages during Lawrence's lifetime.[231]

Lawrence's sensitivity to the character and atmosphere of his environment places him in comparison with Victorian writers like Thomas Hardy; as Sam Wiseman argues, both writers share a 'poignant, perceptive quality of this receptivity [which] stems, in part, from the dramatic social changes that both experienced'.[232] In its articulation of the differing ways in which the upheavals of industrial modernity change understandings and representations of regions identified as home, *The Rainbow* can be read as an extension of the concerns captured by its nineteenth-century predecessors. In comparison with *The Mill on the Floss,* Lawrence's novel illustrates how the rhythms of agricultural life and labour are transformed with the shift towards an extraction-based society.

Miller's essay 'Drill, Baby, Drill' provides a useful analysis of the temporal structures of realist Victorian novels to identify a growing conviction in the literature of the period that extraction-based life was creating a new sense of futurity born out of the realisation that Britain was fast becoming dependant on an industrial system powered by a non-renewable resource. For Miller, this shift in temporal mode is 'premised not on the human life cycle, like the bildungsroman, not the seasons of the year, like the pastoral', but is instead 'premised on the notion of a depleted or undead future. The future is "open" in the sense that it will not grow from the past – it will have been drained by the past'.[233] In a similar vein to the extraction-based novels of the nineteenth century, Lawrence's novel offers a view of the future that is open insofar that it refuses any sense of closure or completion, and like *The Mill on the Floss*, it also employs repeated allusions to the biblical flood myth to anticipate and foreground its open temporal framework. Miller's critique offers an excellent starting

[231] John Worthen*, D H Lawrence: The Life of an Outsider*, (London: Penguin, 2005) p. 24.
[232] Sam Wiseman, *The Reimagining of Place in English Modernism*, (Liverpool: Liverpool University Press, 2015) p. 15.
[233] Miller, 'Drill, Baby, Drill', p. 30-1.

point to develop a reading of the temporal structure of *The Rainbow* in conjunction with the effects of extractive industrialism and urban development in the early twentieth-century.

Reading the novel's *syuzhet* or structure, I argue that the novel utilises the open temporality of the biblical flood myth to offer an alternative to conventional linear conceptions of time associated with the forward momentum of industrial progress and prevailing ideas about the future in light of industrialisation, linking the rise of the collieries in the English Midlands with the imminent destruction of the mythic flood. My reading of *The Rainbow* will, therefore, focus on the three points of narrative dénouement in the novel: 1. the building of the canal that ushers in the age of industrialism to Marsh Farm at the novel's opening, 2. the flood that kills Tom Brangwen at its halfway point, and 3. Ursula's vision of the rainbow at the novel's close. These moments of cessation, I argue, point towards the uncertainty and indeterminacy that accompanied the new sense of time emerging from the impacts of the First World War, alongside developments in the standardisation of time-keeping and a general sense that the technological developments of the early twentieth century were speeding up the world on the back of coal-fired capitalism.

At the same time, the mythopoeic structure of *The Rainbow* also illustrates the changing understandings and uses of myth by writers of the modernist generation that, to some extent, have informed its literary instantiation in the contemporary novel. In the next section therefore, I provide a brief summary of myth in relation to modernist thought. To explain the modernist inheritance and reformulation of myth in literature, it is necessary to provide a potted historical summary. It should be said, however, that this history is complex and open to multiple evaluations. Nonetheless, I shall endeavour to bring these scattered, sometimes contradictory, insights into a single explanatory purview.

2.1 Myth and Modernism

If we understand that the primary drive of the European rationalist Enlightenment was to dispel myth, the final chapter of the eighteenth century and beginning of the nineteenth can be seen as an attempt to reclaim and reframe myth. This reaction was compelled in part by the German philosophical movement called Higher Criticism, which I spoke of in the previous chapter, as well as an enthusiasm for folk literature

and what we would call Indigenous cultures inspired through the work of Johann Gottfried von Herder. As the Bible ceased to command belief as a sacred history, it acquired a new authority as the collective poetic creation of Hebraic culture. This new secular understanding of the Bible as literature lent it an authority of historical experience condensed into wisdom or the 'lived experience' of faith as Feuerbach called it.

For Eliot, the gradual displacement of theology for a more anthropological study of myth and religion more generally as a pre-modern phenomenon, helped her engage sympathetically with the past which, in turn, gave shape to the historical subjects of her fiction. As Sarah Barnette notes, Eliot's attentiveness to higher biblical criticism and the anthropological study of myth indicates her fundamental concern was with determining how to decipher accumulated knowledge. Barnette highlights *Middlemarch* in particular as 'Eliot's exercise in sympathetically imagining herself into the past, experimenting like the historian with how past events and perception affected the intellectual and emotional lives of the men and women of the period'.[234] For Eliot then, the anthropological project of enquiring into the myths of others was also a means of critical self-reflection. Indeed, Eliot's concern with the mental and affective structures of cultures and histories, including her own, seems to have anticipated the modernist insight into the mythopoeic as a form of self-understanding and world-creation.

Like the modernist writers that followed her, Eliot had complicated notions about the authenticity or truth of realist representation. She places greater emphasis on the ways in which external details and images are as much a part of the consciousness of her characters as they are representations of material reality. Eliot's realism, therefore, can be read as extending from the external world to individual consciousness; like the psychological novelists who followed in her wake, she focused her novels' action on the inside. Myth for Eliot, thus provides the metaphorical and allegorical space within which to represent the inward consciousness of her characters and the cultural values that they internalize. Lawrence, by extension, consciously modelled his second novel *The White Peacock* (1911) on the intensity and formal

[234] Sarah Barnette, 'Friedrich Max Müller and George Eliot: Affinities, Einfühlung, and the Science of Religion', *Publications of the English Goethe Society*, 85 (2016) 191-203, p. 198.

complexity of Eliot's oeuvre.[235] As Bell observes, 'No one was more alive to […] the peculiar value of the novel to the life of feeling, than Lawrence'.[236] However, he later dismissed *The White Peacock* as 'a florid prose poem and a decorated idyll running to seed in realism', suggesting his complex relation to realism and desire to mitigate the genre even as he used it.[237]

Whereas in the Victorian decades, myth was an object of anthropological study, as I have noted, modernist readers were attracted to myth as 'a *function* of literature rather than its *pre-condition*'.[238] Friedrich Nietzsche's *Die Geburt der Tragödie aus dem Geiste der Musik* or *The Birth of a Tragedy* (1872) was crucial to this theory as it argued for the recognition that modern culture rests on myth, even if it is manifestly unconscious and dishonoured. The new recognition that Nietzsche brought into focus was that man was always and already an inescapably mythopoeic being. The felt alienation of modern man, therefore, was not because the gods and myths had abandoned him, or vice versa, but because he had lost touch with the mythopoeic dimension of his world and self. 'Without myth', he writes, 'every culture loses the healthy natural power of its creativity: only a horizon defined by myths completes and unifies a whole cultural movement. Myth alone saves all the powers of the imagination'.[239] In Nietzsche's account, the birth of Greek tragedy was one with the origins of culture. It was the extended moment in which the primordial, naïve, participatory experience of myth was transposed into an aesthetic modality. This philosophical viewpoint was a reaction, in part, to the conceptualisation of the aesthetic as a mode of separation from life that was upheld by Schopenhauer. Nietzsche's life-long labour was, in this regard, to bring the aesthetic back to the centre of life in a reversal of Schopenhauer's conclusions. Bell notes that 'Nietzsche's espousal of the aesthetic as the basis of a life attitude' took the aesthetic as 'the modern forms of myth as a self-conscious equivalent to archaic myth'.[240] In other words, Nietzsche believed that the self must craft his/her own identity through self-realization

[235] Michael Bell, 'D. H. Lawrence', *The Cambridge Companion to English Novelists*, (Cambridge: Cambridge University Press, 2009), pp. 309-325. p. 309.
[236] Ibid, p. 12.
[237] D. H. Lawrence, *The Selected Letters of D. H. Lawrence* ed, by. James T. Boulton (Cambridge: Cambridge University Press), p 184.
[238] Michael Bell, 'Myth and Literature in Modernity: A Question of Priority', *Publications of the English Goethe Society*, 80 (2011), 204-215, p. 206.
[239] Fredrich Nietzsche, *Birth of Tragedy: or Hellenism and Pessimism*, trans, by. William A. Haussmann, (Edinburgh: T.N. Foulis, 1910) p. 135.
[240] Michael Bell, 'Myth and Literature in Modernity: A Question of Priority', *Publications of the English Goethe Society*, 80 (2011) 204-215, p. 208.

in which myth plays an important role in the recreation of the self independently of social institutions (e.g. church).

Modernist writers, especially those influenced by Nietzsche, thus came to interpret and use myth in a self-reflexive way. Not only did they engage with mythic figures, structures and themes; but they believed that there was a mythopoeic foundation to all human life. In this way, the modernist generation did not typically take a regressive or nostalgic stance towards myth, but invoked it as the essential signature in a new understanding of the world-creating capacity of man. Although very different in application, authors and poets put Nietzsche's mythopoesis into practice with writings that affirmed the conscious recognition of myth as world-making. In its self-conscious embedding of the first book of the Bible into an experience of industrialism of the late nineteenth century, *The Rainbow* provides a practical application of Nietzsche's philosophy. The fact that Lawrence hoped his 'Bible of the English people', as he called it, would act as a clarion call to those eager to overcome the state of division, fragmentation and alienation that had overshadowed an increasingly mechanized modern England with its emphasis on collective regeneration speaks to Lawrence's concern about the responsibility of world creation, specifically the creation of European modernity.[241] However, whereas Nietzsche saw modern realism as the ultimate demise of the mythopoeic, and consequently, of the aesthetic consciousness, for Lawrence the mythopoeic consciousness of the Bible lifts the naturalistic detail of the story to a level that highlights significances which would be more limited in respect of either of them taken individually. I will discuss this aspect in more detail in the next part of this chapter to argue that repeated allusion to the biblical flood reflects, to a large extent, the temporal experience of the early twentieth century in the years leading up to and following the Great War. In this sense, floods in the novel, whether real or metaphorical, connote the capacity of industrial modernity to bewilder the characters' sense of place and home, linking their sense of disillusion and collapse with the destruction of the biblical flood.

As previously mentioned, the open temporal structure of *The Rainbow* can be read as an extension of the concerns captured by its nineteenth-century predecessors, in that its open temporal structure reflects a sense of the extraction economy as a future-depleting system untethered from past cycles of seasonal renewal and

[241] D. H Lawrence, *The Lost Girl*, eds, by. John Worthen (Cambridge: Cambridge University Press, 1981) p. 21

reproduction. Yet, it is important to highlight the ways in which Lawrence's novel responds to emerging ideas of time and futurity in the years during the Great War in which it was written. Indeed, by 1927 Percy Wyndham Lewis's *Time and Western Man* was already critical of what he saw as the period's obsessive privileging of the dimension of time.[242] In *The Culture of Time and Space*, Stephen Kern characterises this period as facing a 'crisis of abundance' that transformed the intellectual, quotidian and political life of Western Europe and America.[243] By 1900, Europe was at the centre of a thriving world economy and was experiencing a discontinuous leap forward in technological innovation that had marked industrial progress since the mid-eighteenth century. Electricity, petroleum for lighting and fuel, the internal combustion engine, the automobile and airplane, refrigeration, the wireless telegraph and motion pictures were available to the public for the first time. Yet, as the production of such commodities became commonplace so did the increased pressure on labour. In Lewis Mumford's well-known account, '[t]he clock, not the steam engine, is the key-machine of the modern industrial age', since its products – seconds and minutes – move us away from 'eternity […] as the measure and focus of human actions', and towards the single metric necessary for the management of nation and empire, including the quantification and regulation of labour associated with the flow of capitalism.[244]

These rapid technological advancements meant that by the year 1900, Europeans had become conscious of living within 'new times' or *neue Zeit*. As Reinhart Koselleck notes, the present was understood not as a stable historical period, but as something unprecedented and distinctive. The present was considered to be 'a period of transition', characterised by 'the expected otherness of the future, and associated with it, the alteration in the rhythm of temporal experience: acceleration, by means of which one's own time is distinguished from what went before'. [245] The consequence of this was a sense that 'lived time was experienced as a rupture, a period of transition in which the new and the unexpected continually happened'.[246] This sense

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[242] See Michael Bell, 'Lawrence and Modernism', for further information; also, Michael Levenson, 'The time-mind of the twenties', *The Cambridge History of Twentieth-Century English Literature*, eds, by. Laura Marcus and Peter Nicholls (Cambridge: Cambridge University Press, 2005) pp. 197-217.
[243] Stephen Kern, *The Culture of Time and Space 1800-1918 (Cambridge: Harvard University Press, 2003)*, 1983. p. 9.
[244] Lewis Mumford, *Technics and Civilization*, (New York: Harcourt, Brace, 1934) p. 14
[245] Reinhart Koselleck, *Futures Past: On the Semantics of Historical Time*, trans, by. Keith Tribe (Cambridge: MIT Press, 1985), p. 251–2, 257.
[246] Ibid, p. 257.

of transition or rupture, I will show, is made clear in the open ending of *The Rainbow* which sees Ursula on the precipice of a 'new architecture' that promises redemption from the rising flood of industrialism.[247]

At the same time, the outbreak of world war threatened social advancement and, for many individuals, the expectation of a life long enough to allow maturity or personal fulfilment to be realised. This sense of disillusion is marked in many accounts of the period. For example, writing in November 1918, Thomas Hardy states that: 'old hopes that earth was bettering slowly, were dead and damned'.[248] Similarly, Henry James remarks in a letter written just before the outbreak of war in August 1914: 'the plunge of civilisation into this abyss of blood and darkness […] is a thing that so gives way the whole long age during which we have supposed the world to be, with whatever abatement, gradually bettering'.[249] Lawrence for his part considered that 'it was in 1915 the old world ended', 'there is now no smooth road into the future'.[250] The war occasioned a sense of 'rupture with the past', and a 'breach […] with the course of history', as James puts it, to point towards a future that was anything but certain.[251] The nineteenth century 'idea of continuity', or the belief in necessary or inevitable progress through time and history, so championed in the work of influential thinkers such as Charles Darwin and Karl Marx, was placed under scrutiny in the interwar period.[252]

Before the advent of war, Lawrence like many others, had a Whitmanesque surety that 'the great procession is marching, on the whole, in the right direction'.[253] However, any faith in progress and fulfilment associated with progressivist versions of futurity diminished following the Great War, and this extended deeply into the temporal structures of the novel during the interwar years.[254] As Marina MacKay notes, 'it would be hard to overstate the prevalence across the whole of the modernist period of the feeling that the First World War had ruptured historical continuity by

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[247] Lawrence, *The Rainbow*, p. 460.
[248] Thomas Hardy, 'And There Was a Great Calm', *The Complete Poems of Thomas Hardy*, ed, by. James Gibson (London: Macmillan, 1991), p. 589.
[249] Henry James, 'Letter of 4/5 August 1914 to Howard Sturgis', *Letters* II, ed, by. Leon Edel (Cambridge: Belknap Press, 1975) p. 398.
[250] D. H. Lawrence, *Kangaroo* (London: Heinemann, 1974) p. 220; D. H. Lawrence, *Lady Chatterley's Lover* (Harmondsworth: Penguin, 1982) p. 5.
[251] James, 'Letter of 18 June 1915 to Compton Mackenzie', *Letters II*, p. 493.
[252] Hugh Kenner, *Joyce's Voices*, (London: Dalkey Archive, 2007) p. 49.
[253] Quoted in John Worthen*, D H Lawrence: The Life of an Outsider*, (London: Penguin, 2005) p. 151.
[254] See Randall Stevenson, *Reading the Times: Temporality and History in Twentieth Century Fiction* (Edinburgh: Edinburgh University Press, 2018) p. 47-72.

unsettling what once had been taken for granted'.[255] The mythopoeic narrative techniques of the modernist novel, developed through figures such as E. M. Forster, Virginia Woolf, James Joyce and of course Lawrence, involved increasingly complex renderings of time as a result. Indeed, throughout Lawrence's letters during the interwar period he evokes biblical flood to reiterate his growing conviction in the future on the destruction of the old. In a letter to Lady Ottoline Morrell in April 1915, Lawrence expresses this conflicting sense of hope and despair, writing: 'All the beauty and light of day seems like an iridescence [sic] on a very black flood. Mostly one is underneath: sometimes one rises from the ark: but there is no olive branch'.[256] He returns to the idea in a letter to Catherine Carswell the following October, recasting his hopes for a renewed life after the war: 'We shall be like Noah, taking all the precious things into the ark, when the flood comes, and disembarking on a new world'.[257] His writings during the war reflect, at one level, the ways in which Modernist writers were acutely attuned to the First World War as a 'war to end all wars' and thus an inaugural event in a new history of worldwide peace, and at the same time, a threat to the very futurity of the world and humanity altogether.

Similarly, as I will show, flood imagery in *The Rainbow* points towards Lawrence's fluctuating attitude towards the war, which constantly waivers between a dialectics of breakdown and renewal, loss and compensation, punishment and redemption. In the next section I will look at how the novel thematises time by using the simple past and continuous tenses in fluid ways. Spanning three generations, the novel most obviously allows for a traditional sense of time's passing. However, the same generational structure also allows for the sense of recurrence, pattern and renewal. As Bell notes, 'in many episodes we feel time to have been compressed rather than extended'.[258] Lawrence registers different time-scales that are compressed into a moment through the psychological state of a character. The past, both in a historic and mythic sense then, is significant because it is still part of characters' present, even while they are not consciously aware of it. Moreover, the Brangwens' inheritance of the past, having lived 'for generations' on Marsh Farm, is crucial to the characters'

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[255] Marina MacKay, *Modernism and World War II,* (New York: Cambridge University Press, 2007) p. 36.
[256] Lawrence, *The Selected Letters of D. H. Lawrence,* p. 330.
[257] Ibid, p. 663.
[258] Michael Bell, *D. H. Lawrence: Language and Being,* (Cambridge: Cambridge University Press, 1992) p. 68.

emotional investment in their surroundings.[259] The tangibility of the past within the present timeframe of the narrative, prominent in the early sections of the novel, is progressively lost as the external pressures of modernity come to dominate.

2.2 Mythic Versus Industrial Time in The Rainbow

In the first few pages of *The Rainbow,* Lawrence takes up elements from the biblical story of creation and Garden of Eden to foreground the evolution of the Brangwen clan as interwoven with their surroundings. The opening sentence records how the Brangwen family 'had lived for generations of the Marsh Farm': on the 'horizontal land', beneath 'empty sky' whose horizon is broken only by the distant 'church-tower on a hill, the houses of the little country town climbing assiduously up to it'.[260] The emphasis on 'generations' in the sentence highlights the Brangwens' generative powers, much as 'the generations of Adam' are enumerated in Genesis 5. However, the Brangwens' regenerative capacity is wholly tied to their engagement with the environment, as they:

> felt the rush of the sap in Spring, they knew the wave which cannot halt, but every year throws forward the seed to begetting, and, falling back, leaves the young-born on the earth. They knew the intercourse between heaven and earth, sunshine drawn into the breast and bowels, the rain sucked up in the daytime, nakedness that comes under the wind in autumn, showing the bird's nests no longer worth hiding. Their life and interrelations were such; feeling the pulse and body of the soil that opened to their furrow for the grain, and became smooth and supple after their ploughing, and clung to their feet with a weight that pulled like desire. [261]

The words used to indicate the passage of time and its felt experience here are concrete nouns instead of verbs or adjectives ('rush', 'wave', 'throws forward', 'falling back', 'pulse'). This makes the experience of the passing of time through seasonal change tangible, it is a felt experience that is focused predominantly on the feeling of

[259] Lawrence, *The Rainbow*, p. 1.
[260] Ibid, p. 5.
[261] Ibid, p. 6.

connection between the bodies of the pluralized, and specifically ungendered, Brangwens and the surrounding environment. Crucially, their bodies are not discrete from, or shown as existing outside of the natural milieu, but are illustrated as important conduits that are sustained by and help to continue the cyclical rhythms of the seasons alongside the 'earth and sky and beast and green plants'.[262] These transcorporeal transitions between the bodies of the agricultural laborers and the weather; 'heaven and earth', sunshine, rain and autumn wind illustrate a responsivity to the natural world that corresponds to Lawrence's fierce sense of embodiment. This is similarly articulated through the image of the soil that clings to their 'feet with a weight that pulled like desire'. A fundamental psychic conflict underlying Lawrence's work lies in the struggle to reconcile his fierce sense of embodiment within the material world with the Protestant emphasis on the afterlife; to marry 'the blood and the spirit' as Lawrence puts it. Indeed, in her reading of Lawrence, Abbey Allen has argued that Lawrence felt 'Christian philosophy laid the foundation for human desire to renounce the flesh in pursuit of the spiritual ideal, thereby breaking down the relationship between themselves and the physical earth'.[263] *The Rainbow* can be read, therefore, as an attempt to redress this by reworking biblical motifs to articulate a sensual, embodied belief system in the Brangwens' prelapsarian union with the land.

At the same time, such emphasis on the rhythms and circadian patterns of the natural world delineates a specifically cyclical, rather than linear, model of time that explicitly incorporates seasonal change into its version of stability and the unvarying conditions experienced by generations of the Brangwen's predecessors. In particular, Lawrence's invocation of Spring, which 'every year throws forward the seed to begetting, and, falling back, leaves the young-born on the earth', points to classical versions of eternal spring found in Christian accounts of prelapsarian nature such as Dante's *Purgatorio* (1472) or Milton's *Paradise Lost* (1667). The description of Marsh Farm as a perpetual spring, therefore, foregrounds the historical period before the arrival of industrialisation as an Edenic paradise. The overall movement of the opening passage from Brangwen 'people' to 'men' and 'woman', and finally to named characters parallels the movement in Genesis from androgynous Adam to prelapsarian Adam and Eve to the Fall. The images of interpenetration and exchange between the Brangwens and the nonhuman living environment precedes the narrative's

[262] Ibid, p. 5, 6.
[263] Abbey Allen, 'Uprooting Nature and Ourselves: An Ecocritical Perspective on the Works of D.H. Lawrence' (unpublished M.A. thesis, Dartmouth College, 2008) p. 33.

differentiation of men and women and so applies to all the Brangwens. In a similar way that Maggie is presented as an extension of Dorlcote Mill in *The Mill on the Floss*, the Brangwens are presented as an extension of Marsh Farm, and therefore are actively engaged in the activities of the plant and mineral world, which then leads to animal husbandry and stewardship of the land. This order suggests to the reader that husbandry of the land should be predicated on a connection with the natural world and appreciation of its power and vitality.

Lawrence's description of the bodies of the Brangwens as 'impregnated with the day, cattle and earth and vegetation and the sky' through a shared 'blood-intimacy', makes reference to his growing belief in an unconscious of the blood, which is closely tied to the novel's conceptualisation of time.[264] As scholars have variously attested, Lawrence's emphasis on the blood intimacy the men share with the land is based upon his own individual philosophy of the unconscious, which he saw as confronting the theories of Sigmund Freud. Layla Salter notes in her thesis on the subject that '[b]y placing impetus on the unconscious as part of the body's spontaneous blood-flow, Lawrence challenged what he felt to be the topographical basis of Freud's unconscious'.[265] Freud's conceptualisation of the unconscious as a reservoir of repressed feelings, thoughts and urges beyond conscious awareness was objectionable to Lawrence, who instead locates the unconscious as an embodied psychical energy. Blood-consciousness for Lawrence is therefore dependent on an unknown or secret vitalism of the human body that exists independently of consciousness.

In a letter, written January 17 1913, Lawrence makes reference to his strong belief in blood-consciousness as an essential foundation of being, writing: 'My greatest religion is a belief in the blood, the flesh, as being wiser than the intellect. We can go wrong in our minds. But what our blood feels and believes and says, is always true'.[266] Lawrence's religious conviction in blood-consciousness is epitomised in *The Rainbow* through characters' instinctual and innate attraction to one another. On his first meeting with Lydia Lensky, Tom identifies the materiality of his body within biblical allusion so that 'as he waited' for Lydia 'his limbs seemed strong and splendid to him, his hands seemed like passionate servants to him, goodly, he felt a stupendous

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[264] Ibid, p. 10

[265] Layla Salter, 'D.H. Lawrence and Fictional Representations of Blood-Consciousness' (unpublished doctoral thesis, University of Birmingham, 2013), p. 1.

[266] Lawrence, *The Letters of D. H. Lawrence*, p. 503

power in himself, of life, and of urgent, strong blood'.[267] In a similar vein to the language used to describe the Brangwen's connection to the Marsh, Tom's desire for Lydia is portrayed in dynamic terms that places emphasis on the import and urgency of the blood. Tom's sexual awakening creates a fantasy of earthy regeneration and self-growth, uniting his self-identity and emotional connection back to the ties he shares with the land. This is expressed through the recurring motif of the biblical flood, which asserts the imagery of immersion and new life through sexual union:

> Then suddenly, out of nowhere, there was connection between them again. It came on him as he was working in the fields. The tension, the bond, burst, and the passionate flood broke forward into a tremendous, magnificent rush, so that he felt he could snap off the trees as he passed, and create the world afresh.[268]

The regenerative effect of Tom's sexual desire for Lydia is translated via biblical distinctions recalling the renewal of the earth after the flood. Sexual experience is thus incorporated into the novel's conception of cyclical time, which is bound to the blood-consciousness of Lawrence's characters. Such emphasis on the dynamic language of Tom's sexual awakening; the 'magnificent rush' of emotion he feels towards Lydia parallels the rhythms and circadian patterns ascribed to the natural world, the 'rush', 'wave' and 'pulse' between the Brangwens and the Marsh environment, which draws attention to the transcorporeal movement between outside and inside associated with blood-consciousness.

In her chapter on Lawrentian blood-consciousness in *The Rainbow,* Salter compares the similarities between Lawrence's philosophy of the blood and Henri Bergson's ideas on time. While not immediately clear from a reading of Lawrence alone, Salter argues that in thinking about blood-consciousness, Lawrence was really thinking about time. When Lawrence differentiates between blood mental-consciousness, 'his ideas bear comparison to Bergson's suggestions of a fundamental difference between inner time and a "materialized" time which is "set out in space" as on a clock face'.[269] Blood-consciousness is illustrative of this inner time that is constant beneath conscious awareness and cannot be conceptualised or spatialized into seconds, minutes and hours. Lawrence can be seen to be adopting a Bergsonian

[267] Lawrence, *The Rainbow*, p. 60
[268] Ibid.
[269] Salter, 'D.H. Lawrence and Fictional Representations of Blood-Consciousness', p. 82.

approach to the unconscious, recognizing that it is 'not the negative of consciousness and being […] rather it is the seat of affectual being and creative life' that are denoted via his central concept of the *élan vital*, that is, 'an image that invites us to think outside the mechanistic framework of the physical sciences' and understand time as a force.[270] The antagonism between the idea of how time is lived, against its actual quality and how it is experienced, is central to Lawrence's thinking on unconscious and conscious processes. As Salter explains, for Bergson and Lawrence this antagonism that is central to philosophical theories of time stems from the fact that time's 'essence is really beyond comprehension, and the moment one attempts to conceptualise it, time becomes fixed and no longer resembles life at all'.[271] This is why both Bergson and Lawrence 'regard existence as a ceaseless process of becoming' which is central to the continuous flow of blood-consciousness and the organic force that is the *élan vital.*[272]

This 'ceaseless process of becoming' is echoed through repeated allusion to the image of the rainbow, a biblical symbol linked to the process of renewal, regeneration and rebirth. Although the rise of the collieries gradually disconnects the Brangwen family from the natural world, the older temporality of recurrence and renewal does not entirely disappear in the wake of development and industrial change as the characters remain tenuously linked to the perennial temporal cycles through the religious calendar and its annual festivals. For Anna, 'The year of Christianity, the epic of the soul of mankind' still offered a vestigial 'rhythm of eternity in a ragged, inconsequential life' – 'still it was there, even if it were faint and inadequate. The cycle of creation still wheeled in the Church each year'.[273] In this way, *The Rainbow* illustrates the cyclic aspects in secular experience are still shaped by recurrence as much as by change. More significantly, however, the two successful marriage plots in the novel promise the assurance of reproductive futurity that typically accompanies this plot, suggesting that the promise of a pastoral life lived according to the cyclical rhythms of the natural world are still possible. Appropriately, Lawrence intended both *The Rainbow* and *Women in Love* to be initially one novel entitled 'The Wedding

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[270] Jan Campbell, *Psychoanalysis and the Time of Life: Durations of the Unconscious Self*, (London: Routledge, 2006) p. 52, Suzanne Guerlac, *Thinking in Time: An Introduction to Henri Bergson* (New York: Cornell University Press, 2006) p.7.
[271] Salter, 'D.H. Lawrence and Fictional Representations of Blood-Consciousness', p. 86.
[272] Reiko Kamiishida, 'The Paradox in Lawrence's Speculative Writings', *Japan D. H. Lawrence Studies*, 17 (2007) 43-54, p. 46.
[273] Lawrence, *The Rainbow*, p. 279, 280.

Ring', and circular and semi-circular shapes feature predominantly – biblical symbols of rainbows and rounded arches often signify the dynamic integration achievable within a successful relationship. Chapter Three ends with the first of the bow/arch symbols in the novel, suggesting that the cyclical temporality so threatened by the incursion of the collieries has been restored. Anna is described as 'at peace' between her parents, playing

> between the pillar of fire on her right hand and the assurance on her left. She was no more called upon to uphold with her childish might the broken end of the arch. Her father and her mother now met to the span of the heavens, and she, the child, was free to play in the space beneath, between.[274]

The passage paraphrases two sections of the Old Testament, both concerned with spiritual forms of protection. Recalling the arch of heaven in Isaac 40:22 and the 'pillar of fire' in Exodus 13:21, Lawrence plays with the notions of familial dynamics in biblical terms, supplanting the transcendent for the earth-bound. Lawrence's inclination towards a circular theory of time also features heavily in *Apocalypse* (1931) where he investigates the changes in human consciousness over the centuries to claim:

> Our idea of time as a continuity in an eternal straight line has crippled our consciousness cruelly. The pagan conception of time as moving in cycles is much freer, it allows movement upwards and downwards, and allows for a complete change in the state of mind, and any moment. One cycle finished, we can drop or rise to another level, and be in a new world at once. But by our time-continuum method, we have to trail wearily on over another ridge.[275]

As with *The Rainbow*, the 'pagan conception of time' Lawrence puts forward in *Apocalypse* clearly demarcates a specifically cyclical model of time as being in direct opposition to the 'eternal straight line' of continuous progress. However, this circular conception of time is not closed off or complete as one might expect. It allows for upward or downward movement, or as Lawrence puts it 'a complete change in the state of mind' at 'any moment'. In this sense, time is not conceived of as an endless

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[274] Ibid, p 91

[275] Lawrence, *Apocalypse* (London: Penguin Classics, 1995) p. 97.

flow of repeated experiences, spinning for an eternity. Instead, in the same way that Morton's 'concentric temporalities' contain many temporal experiences and events that are nested within one another, Lawrence's cyclical conceptualisation of time is a perpetual—and perpetually incomplete—process that invites and is open to new modes of living.

The Edenic vision of pre-industrial life creates a framework of regenerative collectivity (between the human and living world) that forms the basis of Lawrence's powerful critique of industrial extractivism in the pages that follow. In direct opposition to the regenerative qualities of the living earth, which provide health and energy to the human body, the extractive industries of coal mining are presented as having a deleterious and enervating effect on the surrounding land and people for subsequent generations. Industrial development of the canals become present along the borders of the farm in 'about 1840' when

> a canal was constructed across the meadows of the Marsh Farm, connecting the newly opened collieries of the Erewash Valley. A high embankment traveled along the fields to carry the canal, which passed close to the homestead […] Then, a short time afterwards, a colliery was sunk on the other side of the canal, and in a while the Midland Railway came down the valley at the foot of the Ilkeston Hill, and the invasion was complete.[276]

Lawrence's attention to the clamour of industrial presence within the peaceful landscape wrenches the Brangwens from the reassuring atemporality of their setting, placing them precariously within the maelstrom of modernisation as described by Marshall Berman.[277] The 'cut' of the canal separates the Brangwens not only from part of their land, but from the cyclical rhythms of agricultural life they had previously experienced:

> At first the Brangwens were astonished by all this commotion around them. The building of a canal across their land made them strangers in their own place, this raw bank of earth shutting them off disconcerted them. As they worked in the fields, from beyond the now familiar embankment came the

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[277] Marshal Berman, *All that is Solid Melts into Air: The Experience of Modernity* (New York: Verso, 1983).

> rhythmic run of the winding engines, startling at first, but afterwards a narcotic to the brain. Then the shrill whistle of the trains re-echoed through the heart, with a fearsome pleasure.[278]

The circling seasons of earth, sky, beast and plant yield to the 'invasion' of development instead of repetition, as linear, forward movement is marked on the temporal landscape just as the new canal and railway lines manifest in the physical one. In this, Lawrence represents the forward momentum of industrial progress in the nineteenth century as it cuts across the rural landscape and its inhabitants, dividing and alienating one from the other. Nonetheless, Lawrence's vision of industrialisation does produce a sense of ambivalence and dualism in these early passages. On the one hand, the incursion of the canal and railway disconcerts the Brangwens to make them feel a burgeoning sense of what the environmental philosopher Glenn Albrecht has termed 'solastalgia', the psychological distress that results when one's home or familiar environs are subject to transformation or devastation.[279] Yet, on the other, the rhythms of industry are also conceived as a 'narcotic' and 'fearsome pleasure', suggesting that modernity is at once frightening and intoxicating. As Wiseman has noted, Lawrence's fixation on these instances of ambivalence and dualism fit in the context of his era in which growth and transformation sit alongside the fear that existing cultures and identities will disappear.[280] It is, therefore, equally important to note the ambivalences featured in this opening section as moves it from a purely nostalgic vision of pastoral England to a demonstration of the realities and limitations that accompanied gender roles.

References to the Brangwens' knowledge of 'the intercourse between heaven and earth', and their having 'ample' resources and 'senses full fed' are also indicative of Edenic myth – the biblical tale illustrates that the prelapsarian Adam and Eve had their basic bodily needs met, and lived-in harmony with their numinous natural surroundings. For the first four paragraphs, the Brangwens are described in the majority in ungendered terms as an undifferentiated 'they'. However, by the middle of the fifth and into the sixth paragraph Lawrence's descriptions of the Marsh family bifurcate into 'the men' and 'the women'. The movement is crafted gradually to bring

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[278] Lawrence, *The Rainbow*, p. 10.

[279] Glen Albrecht, 'Solastalgia and the New Mourning', *Mourning Nature: Hope at the Heart of Ecological Loss and Grief*, eds, by. Ashlee Cunsolo and Karen Landman (Montreal: McGill-Queen's University Press, 2017) p. 311.

[280] Wiseman, *The Reimagining of Place in English Modernism,* p. 15.

the reader's awareness to a differentiated experience of the pre-industrial world in regards to gender. Whereas the men are depicted as being content with their unchanging circumstances,

> The women were different, wanting another form of life than this, something that was not blood-intimacy. Her house faced out from the farm-buildings and fields, looked out to the road and the village with church and Hall and the world beyond. She stood to see the far-off world of cities and governments and the active scope of man, the magic land to her, where secrets were made known and desires fulfilled.[281]

In this way, Lawrence moves from 'blood intimacy' to an emergence of the self-consciousness that is underlined by an alienated relationship from nature. In this respect, the difference between genders is one coupled with the degree of immersion in the environment. While the Brangwen men are totally immersed in 'exchange and interchange' with the 'earth and sky and beast and green plants' of Marsh Farm, the women are only partially absorbed. In their desire for 'the world beyond' then, the women's subjectivity is split between rural domestic life and the possibility of 'scope and range and freedom' beyond domesticity.[282] In this way, Lawrence feminises the desire for modernity and attributes it to dissatisfaction with the limitations of the domestic sphere. Looking beyond the Edenic homestead, the women are conflated with the biblical Eve engaged in 'fighting out towards knowledge', asking 'Why must they remain obscured and stifled all their lives, why should they suffer from lack of freedom to move?'.[283] This movement is commensurate with the desire to break the organic relationship with the land and bears the consequences of self-alienation. In this respect the opening chapter retells the story of the fall in which Eve is seen to play a key role.

The Brangwens' relationship with the environment thus becomes a gendered matter. Industrial progress in the novel corresponds with the alteration of gender roles and an alienation from the land that further separates humans from the natural world of the Marsh. The introduction of the coal mine issues a turning point in the lives of the Brangwens, who from this point on live 'in their separate ways from one root' –

[281] Lawrence, *The Rainbow*, p. 7.
[282] Ibid.
[283] Ibid.

of the four sons and two daughters, only one chooses to stay at Marsh Farm while the rest marry or find positions in the developing towns. The novel continues to follow the life of Tom Brangwen, his marriage to Lydia Lensky, and then the life of their daughter Anna, and her daughter, Ursula. Each of the three generations move through the growing challenges of modernity up to the twentieth century as mechanical and industrial activity replace the 'organic formation' between land and its people in the centuries previous.

While it is tempting to view the Eve-like women as a factor in the Brangwens' 'fall' to accord with Lawrence's controversial sexual politics, it is important to highlight that Lawrence intended *The Rainbow* as his 'work for women, better than the suffrage'.[284] As such, the women's struggle for freedom from the novel's outset, culminating with Ursula's personal independence away from the domestic sphere, parallels the changes taking place in the political, social and economic position of women in the nineteenth century, in particular the campaign for women's rights that began in the mid-Victorian period in which the novel is set. Although the women are tied to Marsh Farm by the same 'blood-intimacy' as the men, they are not defined by their generative capacities in the same way that the men are, and are driven by their desire to break free from the bond with the earth, which for them is as restrictive as family ties. Throughout the period in which Lawrence was writing, the right to vote was a significant site of struggle for woman and the working class to attain political recognition. The period from 1880 to 1920, within which Lawrence wrote and attained a reputation, was also the peak of the first wave of feminism, consolidated in the woman's suffrage movement. *The Rainbow* underlines these tensions through its focus the generational conflict between each successive daughter and her parents, which culminates with Ursula.

When Ursula decides to leave the family homestead, receiving a letter to interview for a teaching position at Wellingborough Green School, Will sees her departure as a threat to the family unit, recognizing her as 'a separate social individual'.[285] Yet for Ursula, the growth of the town offers her emancipation from the domestic ties of Marsh Farm. As the youngest generation of the Brangwen family, Ursula is wholly divorced from her parents' generational concerns, particularly

[284] For further information on the critical reception of Lawrence's gender and sexual politics, see Drew Milne, 'Lawrence and the politics of sexual politics', *The Cambridge Companion to D.H. Lawrence*, ed, by. Anne Fernihough (Cambridge: Cambridge University Press, 2001) pp. 197-216; Lawrence, *The Letters of D. H. Lawrence*, p. 490.
[285] Lawrence, *The Rainbow*, p. 338.

Anna's domestic role as a mother. Describing her parents in terms of agricultural livestock as 'pervaded by the heat of breeding and rearing their young', and her mother in particular 'with all the cunning instinct of a breeding animal',[286] Ursula's flagrant disdain for her parents' circumscription of the domestic is wholly perceived within the frame of the arable homestead. 'How Ursula resented it', we are told, 'how she fought against the close, physical, limited life of herded domesticity'.[287] Domesticity in this way is the antithesis of the need for self-realization and fulfillment in that it does not allow for individuality. To an extent, the emerging consciousness of identity, beginning with Tom Brangwen and ending with Ursula's pursuit for a life away from the family home, suggests that the Brangwens' desire for education is equivalent to the fall from grace in the Garden of Eden. However, the tension in the novel circulates around how the characters balance their sense of blood-intimacy with the land, which has kept the family 'a law unto themselves, separate from the world', and their growing integration within the modern world without becoming alienated from their past inheritance.

Symbolic and biblical allusion in *The Rainbow* thus adds an element of transcendence to Lawrence's description of secular relationships, allowing them to feature as a substitute for older forms of faith and the fading vision of the Church. Yet, they also conform to the repeated cyclic patterns of marriage, procreation and renewal, which have come under pressure by the new socio-cultural conditions of industrial modernity. Although the rise of the collieries enables the Brangwen family to attain wealth and facilitates the education of successive generations, it also marks the family's gradual dislocation from Marsh Farm and the agricultural ties that bind them to the land. In particular, the novel's focus on the canalisation of the river and subsequent flood that kills Tom Brangwen stands as a crucial turning point and a space of dénouement to the pre-industrial values of the Marsh, as I will explore in the following section.

2.3 The Marsh and the Flood: Reading Time Ecocritically

I have been arguing that time in *The Rainbow* emerges as one signifier of human-natural coadaptation, and the novel conveys concentric temporalities that reflect the

[286] Lawrence, *The Rainbow*, p. 329.
[287] Ibid.

particularities of nineteenth and early-twentieth century industrial climates, as well as the ways in which these are bound to cultural permutations. More significant for my argument, is the way in which *The Rainbow* clearly ascribes the devastating flood at Marsh Farm to the rise of the extractive industry. The flood is caused by the processes of canalisation and water diversion, which have been put in place to benefit the extraction mechanisms of the colliery. This, like the flood in *The Mill on the Floss*, presents a tangible and catastrophic link to the impacts of the coal industry on the immediate environment. However, the tragedy of Tom Brangwen's death also represents a failure of human cognition. Indeed, a combination of drunkenness and refusal to acknowledge the changing circumstances of the farm cause Tom to succumb to the flood and drown. The flood thus appears to challenge the notion that the natural world is stable and something self-contained and separate from human intervention. Tom's adherence to these older belief-systems is thus shown to be unwise given the realities present in the modern world.

We are told at the start of Chapter Five 'The Marsh and the Flood' that 'a change in tone [had come] over the Marsh' since Anna and Will departed. The changes are characterised by the younger generation and their maintenance of the farm. Of the two sons Tom Brangwen has, one has moved to London as the apprentice of an engineer while the other plans to succeed the farm although he longs for 'something else, aware that he was scarcely living'.[288] As with the preceding chapters, the chapter begins with a description of the internal tensions of the characters as they struggle with the social changes of provincial middle-class life. Although Fred Brangwen is the same age as his father when he took on the management of the farm, his aspirations are different. Unlike Tom, whose identity is validated and nourished through his connection to the land, Fred is restless, finding no similar sense of stability at the Marsh. The narrative uses plant metaphors as a comparison, whereas Tom is held by a 'very strong root […] to the Marsh, to his own house and land', Fred is 'cut off', feeling that there is 'no root to his life, no place for him to get satisfied in'.[289] The difference between the generations then is notably one of mobility and deracinated individualism over the sense of community and rootedness.

Fred dreams of going abroad like his older brother who 'went away to Italy, then to America […] then went away to Germany […] bringing beautiful presents […]

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[288] Lawrence, *The Rainbow*, p. 225.
[289] Ibid, p. 24, 225.

such as Cossethay had never seen'.[290] However, he also feels that a change of place 'would not solve his problem', since he desires a 'deep, vital change of living'.[291] Fred's dissatisfaction is in many ways typical to his era, in the same way as the ease with which his brother is able to travel demonstrates the changes to transport in the late nineteenth century that made travel easier and cheaper. As Helen Carr notes, in the four decades between 1876 and 1915 'a quarter of the world's land mass was acquired as additional colonies by the main imperial powers'.[292] Added to this, vast improvements in transport 'were fanned by, and helped to fan, the empire building, trade expansion and mass migrations of the late nineteenth century'.[293] While not crucial to the overall plot of *The Rainbow*, these small glimpses into the minds of individual family members demonstrate the changing circumstances of the late nineteenth century and how they bear on identity, as viewed by Lawrence. Yet, they also serve to show the tensions between generations, as the narrative explains,

> Tom Brangwen the father, as he grew older seemed to mature into a gentleman-farmer. […] Things had puzzled him very much, so he had taken the line of easy good-humoured acceptance. He was not responsible for the frame of things. Yet, he was afraid of the unknown in life.[294]

Unlike his sons, Tom is still very much part of the living world of the Marsh, which 'seemed so kin to him, as if it partook of his being'.[295] He is, therefore, unable to fully grasp the industrial changes that surround Marsh Farm and the ways in which such changes impact the stability he has come to expect from the natural world. This is best illustrated by Tom's thoughts in the lead-up to the flood. Coming out of the inn on a 'rainy and dreary' evening, Tom notes that 'the water-works is busted' pointing to the canal. He drunkenly calls to his friend, asking 'Hey, Jack […] which of us is Noah?' before riding for home. But on the way home he frets

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[290] Lawrence, *The Rainbow*, p. 224.
[291] Ibid, p. 225.
[292] Helen Carr, 'Modernism and Travel (1880-1940)', *The Cambridge Companion to Travel Writing,* eds, by. Peter Hulme and Tim Youngs (Cambridge: Cambridge University Press 2002) pp. 70-86, p. 70-1.
[293] Ibid.
[294] Lawrence, *The Rainbow*, p. 224.
[295] Ibid, p. 33.

> It's high time [Fred] did a bit of clearing up, I'll be damned if it isn't. It was a lot of use putting those ten loads of cinders of th' road. They'll be washed to kingdom-come if it doesn't alter. Well, it's our Fred's look-out, if they are. He's top-sawyer now as far as those things go. […] They can wash to kingdom-come and back again for what I care.[296]

It is clear that Tom is rather disdainful of the connections between the farm and the colliery despite the wealth he has gained through them. Yet, in the next moment, his ramblings take a more ponderous turn as he contemplates the workings of the water cycle:

> I suppose they would be washed back again someday. That's how things are. Th' rain tumbles down just to mount up in the clouds again. So they say. There's no more water on earth than there was in the year naught. That's the story, my boy, if you understand it. There's no more to-day than there was a thousand years ago – not no less either. You can't wear water out. No, my boy; it'll give you the go-by. Try to wear it out, and it takes its hooks into vapour, it has its fingers as its nose to you. It turns into cloud and falleth as rain on the just and unjust. I wonder if I'm the just or unjust.[297]

Tom's representation of water as a continuous, repetitive flow resonates with Lawrence's inclination towards a circular theory of time. His assertion that 'you can't wear water out' affirms a view of the temporal oscillations of water as unchanging in keeping with the early Brangwens surety in the fixed seasonal cycles of Marsh Farm. Personified, water is a trickster: 'You can't wear water out. No, my boy; it'll give you the go-by. Try to wear it out, and it takes it hooks into vapour, it has its fingers as its nose to you' – it is slippery and elusive, giving a sense of the hydrosphere as a self-contained, dynamic structure at once distinct and impervious to human intervention. It also falls on the 'just and unjust', a nod to Matthew 5:45: 'God maketh his sun to rise on the evil and on the good, and sendeth rain on the just and on the unjust', begetting the question of guilt – who is to blame for the forthcoming flood, and what is Tom's part, if any, in the ensuing tragedy?[298]

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[296] Lawrence, *The Rainbow*, p. 226.
[297] Ibid, p. 226-7.
[298] *King James Bible,* Matthew 5:45

The fact that Tom presents the water cycle as something self-contained and outside of human intervention is unsurprising given that he shares the same belief in the stability and cyclicality of the Marsh as his ancestors. In this way, Tom's understanding of water can be characterised by what Mary Anne Melfi has described as 'circles of confinement', that is 'cycles of unconsciously motivated behaviour', because it closes off the possibility for variation and change.[299] Yet, the flood itself breaks with the unvarying conditions Tom has come to expect. This is because it is a result of the canalisation of the river, which cannot withstand the heavy rains and breaks its banks to inundate the land surrounding the farm. Tilly soon realises this when she comes downstairs to see her kitchen flooded: 'The cut's burst. That embankment broke down. Whativer are we goin' to do!'.[300] Tom, by comparison, is not so quick to the same conclusion, but is confused by the sight of the water as he goes to 'meet the running of the flood, sinking deeper and deeper. His soul was full of great astonishment'.[301] As such, he puts himself at risk of drowning by going to 'look where it came from, though the ground was going from under his feet':

> He had to go […] He went […] on, down towards the pond, shakily. […] As he staggered something in the water struck his legs, and he fell. He fought in a black horror of suffocation, fighting, wresting, but always borne down […] Something struck his head, a great wonder of anguish went over him, then the blackness covered him entirely.[302]

Tom's bewildered reaction to the floodwaters, relates to the 'puzzlement' and fear 'of the unknown in life' that have come to dominate his relationship with the changing world of his sons. By comparison, the flood is felt as a force that suffocates, and drags him down despite his attempts to 'fight' and 'wrest' against it. Tom's resistance to being swept under by the flood therefore, can be seen to echo his resistance to being 'swept forward' by the 'leaping, forward-traveling movement' of modernity. The flood, as an act of dénouement to the first half of the novel, disturbs the Brangwens blood-intimate connection to the land, suggesting that the modern world is incompatible with the older, cyclical theory of history. In his refusal to adapt and

[299] Mary Ann Melfi, 'The Shake of the Kaleidoscope: Memory, Entropy, and Progress in Lawrence's The Rainbow', *Journal of English and Germanic Philology*, 100 (2001) 355-376.
[300] Lawrence, *The Rainbow*, p. 229.
[301] Ibid.
[302] Ibid, p. 228.

evolve with the times, Tom, and by extension the farm, become another victim of the extraction industry.

Despite the fact that Lawrence lacked a full understanding of the accumulative effects of the industrial extractivism across time, his novel does, in its reflections on Tom's failure to fully comprehend the full significance of the flood, speak to the limitations of human perspective. Strangely enough, Jamie Linton's commentary on the hydrologic or water cycle becomes illuminating here. Much like Tom's privileging of cyclical time as a singular temporality, Linton shows how the notion of the water cycle itself is historically and geographically ascribed to a particular Western conception of water. As Linton notes,

> The geographical particularities of the place(s) in which it was conceived imbue the hydrologic cycle with a certain bias; however, this bias is concealed by its catholicity. The hydrologic cycle thus embraced all water, but it hardly treats all waters fairly: Its balance and symmetry, its even-tempered regard for evaporation, condensation, precipitation and runoff, is incongruous with the experience of water in deserts, polar regions, or places subject to pronounces hydrological variability (seasonal or actual fluctuations in precipitation)[303]

Linton likens the theory and scientific formulation of the water cycle to the scientific basis for the extractive economy, in that they both 'attempt to create a mathematical representation of the entire economic process as a self-contained, and dynamic mechanism'.[304] By so doing, he argues, hydrological science assimilated global waters into a singular, mathematical representation that could be taken up as standard:

> By representing water as a constant, cyclical flow, the hydrological cycle establishes a norm that is at odds with the hydrological reality of much of the world, misrepresenting the hydrological experience of vast numbers of people.[305]

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[303] Jamie Linton, 'Is the Hydrologic Cycle Sustainable? A Historical-Geographical Critique of a Modern Concept', *Annals of the Association of American Geographers*, 98 (2008) 630-649, p. 632.
[304] Ibid, p. 637.
[305] Ibid.

Linton's contention is that in privileging a single, limited perspective of the temporal structure of global waters, the water cycle has helped sustain what he describes as 'hydrological Orientalism', that is 'the misapprehension and portrayal of deserts, arid lands, and tropical regions as respectively barren, poor, uncivilised, lawless and violent places (and peoples) the require intervention of hydrological engineering to be made civilised'.[306] The implementation of a particular human experience of water through hydro-engineering projects across different temporal and climatic regions has had significant harmful consequences for their aquatic ecosystems, placing the water cycle itself at risk.

Linton shows that the modern hydrological cycle arose within a particular set of historical and geographical circumstances that aided the exploitation of particular areas in the world to advance the imperial project of global capitalism. Similarly, *The Rainbow* challenges, in its account of Tom's insufficiency to understand the ways in which the colliery and canal have affected the environment of the Marsh, the notions of stability, cyclicality, the idea of nature being separate from human intervention. As Miller notes in relation to *The Mill on the Floss,* the point of the flood 'isn't simply that there is no normal in the natural world', but that 'the human tendency to assert a normal actually has the effect of masking how profound humanity's impacts on the natural world have been'.[307] Similarly, this insight reiterates the larger conclusions about human time that have been made by various scholars in sociology. Barbara Adam, for example, has shown that human cultural temporalities are themselves complex and diverse, and that it would be a mistake to imagine that any cultural temporality can be reduced to merely the influence of cyclicality or any other form.[308] *The Rainbow* thus offers a lament not only for poor Tom, but also for the damaging cultural belief in a stable natural time unaffected by forms of discourse and social power.

Crucially, and in a similar manner to *The Mill on the Floss*, the narrative refuses the consolation and reparation of a cyclical temporality. In the wake of the flood, the pre-industrial trajectories of revival and seasonal renewal previously embodied by Tom Brangwen, give way to uncertainty, but also an opportunity for liberation from the destructive cycle of repetition and inertia. Indeed, the title of the

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[306] Linton, 'Is the Hydrologic Cycle Sustainable?', p. 638.
[307] Miller, "Fixed Capital and the Flow", p. 94.
[308] See Barbara Adams, 'Perceptions of Time', *Companion Encyclopaedia of Anthropology: Humanity, Culture and Social Life,* ed, by. Tim Ingold (London: Routledge, 1994) pp. 503–26, especially pages 509 and 519.

very next chapter, 'The Widening Circle', suggests that the lives of the Brangwens have expanded out from the 'circle of confinement' of the farm, to borrow Melfi's phrase, to perceive of themselves as part of a broader community.[309] Taken as a whole, the latter half of the novel appears to suggest that we cannot grow and develop as individuals or as a collective without first embracing wider physical and intellectual environments. As W.J. Keith argues, Lawrence was 'conscious that [his] own [life] would have been stifled by the narrowness of the "provincial", regional life […] [he] escaped and nostalgically missed'.[310] In this respect, it could be argued that Lawrence is a cosmopolitan figure in terms of his deracination and restlessness. Indeed, in later life he travelled extensively, expressing in *Sea and Sardinia* (1921), his desire 'to be free of all the hemmed-in-life – the horror of human tension, the absolute insanity of machine persistence'.[311] In *The Rainbow*, the self-same feeling is echoed by Ursula as she longs to break free of the provincial life embodied by her parents and 'burst the narrow boundary of Cossethay, where only limited people lived'.[312] The second half of the novel subsequently swaps focus to Ursula as she leaves Cossethay, first to school where she has a brief affair with her teacher Winifred Inger, and then to the colliery town of Ilkeston to take up a position as a teacher herself before entering college.

Unlike the earlier generations of Brangwen women, Ursula is the first to physically leave the confines of the Marsh for the 'the spoken world beyond'.[313] Her initial excitement however is doused upon first encounter with the restrictive atmosphere of Ilkeston and the 'mechanical' education system of the school where she teaches, suggesting that Ursula trades one internment for another. Entering the schoolhouse, Ursula is hit with the 'hard, stark reality – *reality* […] which she had never known till today, and which now so filled her with dread. […] This was the reality. […] This prison of a school was reality'.[314] Ursula's recognition of her new 'reality' disrupts *The Rainbow's* previous narrative rhythm as the fluid passages which typify the first half of the novel become fewer.

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[309] Melfi, 'The Shake of the Kaleidoscope', p. 355.
[310] W. J. Keith, *Regions of the Imagination: The Development of British Rural Fiction*, (Toronto: University of Toronto Press, 1988) p. 154.
[311] Lawrence, *Sea and Sardinia*, (Project Gutenberg Ebook, 2011) p, 55 <https://www.gutenberg.org/files/37206/37206-h/37206-h.htm> [accessed 26 September 2022].
[312] Lawrence, *The Rainbow*, p. 246.
[313] Ibid, p. 10.
[314] Ibid, p. 346-47.

This change in narrative rhythm is paralleled by a shift in temporal focus, whereby the gradual unravelling of time felt in relation to the pastoral lives of the Brangwens is replaced with a sense that 'each moment was like a separate little island, isolated from time, and […], unconditioned by time'.[315] The segregation of time in spatialised 'island[s]' emphasises the alienating process of modernisation that comes to characterise Ursula's *Bildung* in the second half of the novel. This shift towards an isolating and individualising modernity is linked to Ursula's move to the colliery town of Ilkeston and the extraction-based society the novel describes. In contrast to the Marsh, *The Rainbow* conveys this new society as premised on a break with the cycles of renewal and regeneration that previously characterised the blood-intimacy between Brangwens and land. Instead, Lawrence's novel repeatedly draws attention to the sense of exhaustion that distinguishes both people and place, suggesting that the non-living earth has seeped into the lives and futures of the town's inhabitants. In the next and final section then, I read Lawrence's depiction of extraction-based life and urban dwelling in conjunction with Ursula's thwarted marriage plot to argue that Lawrence's novel illustrates human life and reproduction as interwoven with the economies and ecologies of extraction. As such, *The Rainbow* demonstrates that the modernist subject can no longer separate environment from human influence, but has to come to terms with their place on a geographic and temporal scale previously unimagined. Ursula must therefore confront the culturally constructed living conditions of modernity in order to find a new model of regeneration that precludes a definitive end-point, and instead motions towards the possibility for multiple new beginnings.

2.4 Widening the Circle: Towards a New Model of Regeneration

As previously mentioned, the temporal rhythm of the second half of *The Rainbow* differs from the first insofar that it 'jolts forward […] impelled by [a] ceaseless desire to move', reflecting the global boom in modern networks of transportation, communication and commodity exchange. As Wyndham Lewis asserted in *Blast* in 1914, English technology had 'reared up steel trees where the green ones were lacking, […] exploded in useful growths, and found wilder intricacies than those of Nature […]

[315] Lawrence, *The Rainbow*, p. 320.

in the forms of machinery, factories, new and vaster buildings, bridges and works'.[316] While Lawrence did not share Lewis's 'technophilic antinaturalism' to borrow Anne Raine's term, *The Rainbow* adopts the accelerating tempo of modern life in conjunction with the rapid expansion technology and industry during this period. One of the first inclinations of this change in pace is the introduction of the motorcar which transforms the 'familiar' countryside to a 'wonderland' in Ursula's view, recalling the 'fearsome pleasure' that the introduction of the railway brings the early generations of Brangwens.[317]

At the same time, the motion of the car also unlocks and emboldens the sexual desire between Ursula and her first love, Antron Skrebensky: 'The car swerved round a corner, and Ursula was swung against Skrebensky. The contact made her aware of him. With a swift, foraging impulse she sought his hand and clasped it in her own, so close, so combined, as if they were two children'.[318] In comparison to Tom's first sexual awakening, Ursula's is fuelled not so much by the dynamic rhythms of the natural environment associated with blood-consciousness, but the exhilarating speed of the car. Ursula's reaction is an embrace of movement, change and energy reflective of the changing material conditions of modernity and the embrace of the new vibrant energies that man has gained from nature.

Yet, Ursula's initial eagerness to embrace the modern world is gradually altered as she becomes aware of the hardships of the inhabitants of the colliery town who 'seemed not like living people, but like spectres'.[319] In direct contrast to the energising capacity of new industry and technological innovation found in Wyndham's conception of the modern age and Ursula's car ride, Lawrence links the expansion of the collieries with enervation and exhaustion. As the nod to 'spectres' suggests, the new colliery towns Ursula encounters are haunted by exhaustion and death. On a trip to her uncle's colliery in the newly built town of Wiggiston, Ursula is confronted by the speed with which the town has been built, recalling that it had once been

> … a hamlet of eleven houses on the edge of healthy, half-agricultural country. Then the great seam of coal had been opened. In a year Wiggiston appeared, a great mass of pinkish rows of thin, unreal dwellings […] The place had a

[316] Wyndham Lewis, 'Manifesto—II', *Blast 1* (1914) 30–43, p. 38-39.
[317] Lawrence, *The Rainbow*, p. 282, 10.
[318] Ibid, p. 282.
[319] Ibid, p. 320.

> strange desolation of ruin. […] The rigidity of the blank streets, the homogenous sterility of the whole suggested death rather than life.[320]

Here the colliery is shown as not only draining the earth of its raw materials in the way of coal, but the vitality of the surrounding landscape and its people. Lawrence's atmospheric aesthetic blurs the individuals and surroundings, suggesting that the human life of the town is thoroughly interwoven with the coal deposits below, as Ursula's uncle explains of the miners, 'They believe they must alter themselves to fit the pits and the place, rather than alter the pits and the place to fit themselves'.[321] The risks and toxicities of the mine are visible in the physiology of the miners as a result of them 'fit[ting] to the pits', as Ursula observes with some surprise:

> The terrible gaunt repose of their bearing fascinated her. Like creatures with no more hope, but which still live and have passionate being, within some utterly unliving shell, they passed meaninglessly along, with strange, isolated dignity. It was as if a hard, horny shell enclosed them all.[322]

Just as the vitality and agency of the Brangwens are explicitly connected to the strength of the living land, the miners are shown to be as entombed as the coal reserves they extract. While the Brangwens take sustenance from the growth and renewal of the Marsh, the miners are drained of their life-force in the same manner that the extraction economy is draining a material base towards exhaustion.

Lawrence no doubt drew his portrait of the miners from the scenes he witnessed in childhood of his father and surrounding family members forced to suffer the tough working conditions and risks until they were replaced by machines in the early twentieth century and either lost their jobs or were forced into conditions made worse by mechanisation.[323] In his an autobiographical article for *The New Adelphi*, entitled 'Nottingham and the Mining Countryside' (1930), Lawrence recalls that during his childhood miners like his father were allowed to work in small collaborative groups called 'butties', writing, 'the pit did not mechanise men'.[324] However, modernisations made to the colliery in 1905-7, reflective of those made by Gerald

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[320] Lawrence, *The Rainbow*, p. 320.
[321] Ibid, p. 322.
[322] Ibid, p. 312.
[323] See Worthen, *D.H Lawrence: The Life of an Outsider,* for further details.
[324] Lawrence, 'Nottingham and the Mining Countryside', *The New Adelphi*, June/August 1930, p. 88.

Crich in *Women in Love* (1920), ensured that among other alterations towards mechanisation and increased profit, 'the butty system was abolished'.[325] While *The Rainbow* gives a sense of the harsh conditions of the local pits towards the end of the nineteenth century, Uncle Tom is shown to be sympathetic to his workers and is well-respected as the colliery manager.[326]

In *Women in Love* the effects of the new machinery and efficiencies introduced into the mine are more pronounced as Gudrun's lover Crich imposes radical new management policies on his family's mines to convert the colliery and its workers into a 'great and perfect machine, a system, an activity of pure order, pure mechanical repetition, repetition *ad infinitum*'.[327] Here, mechanical activity and mechanical repetition displace and obscure the individual rhythms or natural, biological cycles of the colliery workers within an accelerated regulatory system. As Gudrun observes in the novel, the miners, managers and even Crich himself have been made into 'pure machines, pure wills, that work like clockwork, in perpetual repetition'.[328] The narrative of rapid development is assumed here, where fast profit takes precedence over any other concerns, since, in Crich's view 'individuals did not matter in the least', but function merely as 'instruments'.[329] Crich's language echoes the 'principles of scientific management' of the Taylorist principles that gained popularity at the beginning of the twentieth century, largely imported from the United States through books and articles published by Frederick Winslow Taylor written in the last two decades of the nineteenth century. Taylor's 'rules, laws and formulae' for 'accurate minute, motion and time study' of the work productivity for 'men and machines' is clearly mimicked in Crich's principles, which aim to steadily ensure 'the subordination of every organic unit to the great mechanical purpose'.[330] His mobilisation of temporal power clearly privileges fast profits at the expense of the long-term security and health of the human and nonhuman agents at the mercy of rapid development. Perhaps more insidiously however, *Women in Love* illustrates how the mobilisation of temporal power allows those in positions of privilege to strategically

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[325] See, Lawrence, *The First 'Women in Love,* ed, by. John Worthen and Lindeth Vasey (Cambridge: Cambridge University Press, 1998), p. 483–5.
[326] Lawrence, *The Rainbow*, p. 320.
[327] Lawrence, *Women in Love*, (London: Vintage, 2010), p. 256.
[328] Ibid, p. 522.
[329] Ibid.
[330] Frederick Winslow Taylor, *The Principles of Scientific Management* (New York: Harper & Brothers Publishers, 1919) p, 25; Lawrence, *Women in Love*, p. 260.

manipulate differing temporalities, from the physical energy of the colliery workers to the extraction and combustion of materials drawn from the deep past.

In *The Rainbow*, no such position of power is critiqued and Uncle Tom is as much a part of the 'great machine' as his workers, suggested by his 'growing inertia', which he fears will 'lapse into apathy, complete, profound indifference'.[331] The novel emphasises the sense of exhaustion and depletion that seeps into the mental and physical countenance of those living and working within the remits of the mine. Not only do conditions in the mines dehumanise the physical bodies of the colliers, which are deformed and weakened through their exposure to its toxicities, dehumanisation also occurs on a social level so that the collier's individual lives are considered little more than a 'little side-show' to the workings of the mine.[332] 'You think like they do', Ursula accuses her Uncle Tom at one point, 'that living human beings must be taken and adapted to all kinds of horrors'.[333] Uncle Tom is similarly dehumanised, showing that while he may financially benefit from the exploitation of the miners, he too has been transformed by his entanglement with the extractive ecologies he has been placed in charge of. Like the miners, Tom is described in undead terms as 'marshy', embodying the 'effect of a marsh, where life and decaying are one'.[334] He is the antithesis of the lively, blood-conscious Brangwens of his ancestry because he is 'caught up' with the temporality of extractive exhaustion, diverging from the temporal structures of renewal and rebirth.

The repeated allusions to death and decay or afterlife can be illustrated, as Andrew Kalaidjian has shown in *Exhausted Ecologies: Modernism and Environmental Recovery* (2020), by the arrival of the term 'exhaust' itself as the 'quintessential yet elusive object of industrial modernity'.[335] The act of exhausting something can be traced back to Shakespearean days, where exhaust meant to move or carry away, to drink, such or use up something completely, the use of 'exhaust' as a noun appears only in the nineteenth century in relation to the by-product released by steam engines. Exhaust, Kalaidjian notes, becomes in this moment both 'a problem to be solved through engineering maximum efficiency as well as an actual physical

[331] Lawrence, *The Rainbow*, p. 327.
[332] Ibid, p. 324.
[333] Ibid.
[334] Ibid, p. 351.
[335] Andrew Kalaidjian, *Exhausted Ecologies: Modernism and Environmental Recovery* (Cambridge: Cambridge University Press, 2020) p. 7.

presence in the world'.[336] In its focus on the consumption of energy, Lawrence's text points to the way in which modernity exhausts material resources as well as the human bodies and psyches of its constituents to make a crucial connection between human physiology, affect and the natural living and non-living world. Against modern subjects who believe themselves to be separate from their human and nonhuman surroundings, enveloped in the same 'hard, horny shell' of Ursula's imaginary, *The Rainbow* portrays a world where humans are 'squeezed into alignment' with non-living nature by a capitalist order that views them both in terms of energy content. As such, all matter is seen to be equally exhausted by the production of the mines and, by extension, the production of modernity, an antagonistic exhaustion that Ursula struggles to escape.[337]

Lawrence finished writing *The Rainbow* in March 1915, mere months into the First World War, but conceded that the novel needed extensive revisions on the return of the typescript. His subsequent revisions, which focused on the last section of the novel with Ursula's vision of a changed and renewed society, were heavily based on his opposition to the war and developing a philosophy of the individuals' relationship with society.[338] In a letter in the spring of 1915, Lawrence outlined his new understanding of how to symbolize the historical development of human society and responsibility, writing, 'one is not only a little individual living in a little individual life, but that one is in oneself the whole of mankind, and one's fate is the fate of the whole of mankind'.[339] Lawrence's philosophy chimes with the principles of interrelationality and interdependence that characterize definition of ecology the German biologist Ernst Haeckel first put forward in 1866. 'By ecology', he writes, 'we mean the whole science of relations of the organism to the environment including, in the broad sense, all the "conditions of existence". These are partly organic, partly inorganic in nature".[340] Ecology thus suggests a complex web of interdependencies for which no singular part can be removed in isolation. In *The Rainbow*, Lawrence similarly demonstrates how industrial extraction is entangled with a multifarious array

[336] Andrew Kalaidjian, *Exhausted Ecologies,* p. 7.
[337] Lawrence, *The Rainbow*, p. 459.
[338] Worthen, *D.H Lawrence: The Life of an Outsider,* p. 159
[339] Lawrence, *The Letters of D. H. Lawrence II*, ed, by. George J. Zytaruk and James T. Boulton (Cambridge: Cambridge University Press, 1981) p. 302
[340] Robert C Stauffer, 'Haeckel, Darwin, and Ecology', *Quarterly Review of Biology* 32 (1957) 138–44, p. 140. For more on the emergence of this term in the Victorian period and its place in Victorian studies today, see Miller, 'Ecology', *Victorian Literature and Culture* 46 (2018) 653–56.

of socio-environmental causes and effects that is particularly bound to the temporal imaginary.

The ending of *The Rainbow* has elicited contradictory and often puzzled critical reaction, in the same manner as the ending of *The Mill on the Floss*.[341] I hazard part of the reason for this is due to the mythopoeic techniques both authors use to impede the sense of a definitive conclusion or end-point. In *The Rainbow*, Ursula breaks off her engagement with her lover Skrebensky after she realises that he, like her father, refuses to see her as a separate 'social entity' which would require him to challenge his assigned place in the patriarchal society of which he is part. Her resolve not to marry Skrebensky is furthered when he is dismissive of her need for inner-fulfilment, telling her that she will have no need of a college education once she is his wife, 'It doesn't matter […] What are the odds, whether you are a Bachelor of Arts or not […] if you are Mrs. Skrebensky, the B. A. is meaningless'.[342] The realisation that Skrebensky views her as without purpose apart from the domestic, fills her with a similar sense of exhaustion and apathy which she observed in the colliers, she feels Skrebensky 'overcoming her life and energy, making her inert'.[343] Exhaustion is thus not only a reaction against the toxic environment of extraction zones, but is also a condition of women's struggle for autonomy in a patriarchal society, as Ursula asks herself: 'Why must she be bound, aching and cramped with bondage, to Skrebensky and Skrebensky's world? […] [I]t became in her feverish brain a compression which enclosed her. If she could not get out of the compression, she would go mad'.[344] Having broken their engagement however, Ursula realises she is pregnant and retreats to nature only to find refusal of the peace or security she seeks.

Unlike her ancestors, whose regenerative capacity is wholly tied to their engagement with the environment, Ursula's experience is decidedly anti-pastoral in tone as she is confronted by a stampede of horses: 'They were blocking her back. She

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[341] On this subject, F. R. Leavis was the spokesperson for a generation of critics. Consequently, the ending of *The Rainbow* has attracted a variety of interpretations from being 'a fitting emblem of personal achievement' in H.M. Daleski's analysis, through its expression of Lawrence's 'revolutionary optimism' as Mark Kinkead-Weekes argues, to its role as a symptom of Ursula's 'schizophrenic delusion', in Elizabeth Fox's view. See, H.M. Daleski, *The Forked Flame: A Study of D. H. Lawrence*, (London: Faber, 1965), p. 125; Mark Kinkead-Weekes, 'The Marriage of Opposites in *The Rainbow*', *D. H. Lawrence: Centenary Essays*, ed, by. Mara Kalnins (Bristol: Bristol Classical Press, 1986) pp. 21–39, p. 38; Elizabeth Fox, 'Closure and Foreclosure in *The Rainbow*', *New Casebooks: The Rainbow and Women in Love*, eds, by. Gary Day and Libby Di Niro (Basingstoke: Palgrave, 2004) pp. 75–91, p. 84.

[342] Lawrence, *The Rainbow*, p. 439.

[343] Ibid, p. 297.

[344] Lawrence, *The Rainbow*, p. 455-6.

knew that had gathered on a log bridge over the sedgy dike, a dark, heavy, powerfully heavy knot. […] And tense, and more tense became her nerves and her veins'.[345] The natural world in this moment is one without the reassurance, fixity or security experienced by generations of the Brangwens, suggesting that because Ursula is out of touch with blood-intimacy of her forebears, she can no longer rely on nature as a place of rest, recovery and regeneration. Instead, the surrounding world mirrors Ursula's own sense of restlessness and she feels 'very wet and a long way from home, far enveloped in the rain and the waving landscape. She must beat her way back through all this fluctuation, back to stability and security'.[346] For Ursula, then, the natural world holds no sense of familiarity or comfort reflecting the changing attitudes of her generation towards humanity's relation to the land itself. In other words, she no longer sees herself as part of the natural world.

Considered in the larger environmental and cultural conditions of England in the early twentieth century, the chaotic and hostile landscape Ursula finds herself in speaks to the exhausting and exploitative conditions of modern life which has leached into the natural world. As Kalaidjian notes,

> The notion that 'nothing is at rest' is a defining tenet of modernity going back to the Copernican revolution; however, a crisis of restlessness leading up to and following the WWI signalled a growing awareness of western culture's exhaustive exploitation of a thoroughly inhabited world.[347]

Refused the escape she so desires from the forces of modernisation; Ursula is forced to return home to confront them directly. As a result of the stampede, she suffers a miscarriage. Yet, the miscarriage does not signify the end of all hope, but allows her to see new possibility in not only the life she creates for herself, but also for the shared life she sees in others:

> She knew that the sordid people who crept hard-scaled and separate on the face of the world's corruption were living still, that the rainbow was arched in their blood and would quiver to life in their spirit, that they would cast off their horny covering of disintegration, that new, clean, naked bodies would issue to

[345] Lawrence, *The Rainbow*, p, 454.
[346] Ibid, p. 452.
[347] Kalaidjian, *Exhausted Ecologies*, p. 3.

> a new generation, to a new growth, rising to the light and the wind and the clean rain of heaven. She saw in the rainbow the earth's new architecture, the old, brittle corruption of houses and factories swept away, the world built up in a living fabric of Truth, fitting to the overarching heaven.[348]

The closing lines of the novel underscore Ursula's new vision of a future to which she looks forward, and guides her to see hope even in the colliers' difficult lives. In witnessing the arc of a rainbow, Ursula is optimistic, the rainbow reflecting the 'new architecture' of the earth, expelled of soot and debris by the new rain. The suggestion, then, is that renewal and regeneration require a more progressive vision of social inclusion; one that includes those suffering from the exhausting and exhaustive capacities of industrial modernity. Moreover, in imagining the 'brittle corruption' of the 'houses and factories swept away', Lawrence may also have in mind a notion of social accountability. Future recovery and regeneration, the novel suggests, cannot come from the natural world, since it requires modern subjects who believe themselves to be separate from their human and nonhuman surroundings, to 'cast off their horny coverings' and become susceptible, immersed and engaged with their environment: 'to the light and the wind and the clean rain'. In other words, renewal must come from the cultures/societies themselves that have mined the regenerative capacity of nature to exhaustion.

The open ending of *The Rainbow*, while optimistic, also strikes a note of ambiguity. Ursula's vision of the rainbow does not offer a dynamic break with the past, but rather offers the potential for new growth. Considered within *The Rainbow*'s larger mythological framework of death and rebirth, the novel's open temporality thus points towards the idea of 'concentric temporalities', insofar that it conveys a critical awareness of the continuous, and continually incomplete, process by which we shape our encounters with natural world. It thus works to unsettle the perceived inevitability of modernity's exhaustive trajectory, suggesting that generative forms of reconstitution and recovery are indeed possible. The interweaving of history and myth in *The Rainbow*, therefore, ultimately serves to illustrate that human culture wields a real, but unstable and limited, power of appropriation over different forms of time.

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[348] Lawrence, *The Rainbow*, p. 459

If narrative, as Ricoeur suggests, is the primary mechanism for ordering and comprehending time, then texts, like *The Rainbow* and *The Mill on the Floss*, that contemplate the flow of time through mythopoeia, history and the accumulative changes in the environment are imperative for redefining an epoch of exploitation that continues to guide twenty-first century global economics and power distributions. Taken together, these texts form the prehistory of the flood narratives that I shall explore in the next section. Reading *The Mill on the Floss* and *The Rainbow* for their *syuzhet* or structure, I have shown how both novels employ the open temporality of the biblical flood myth to offer an alternative to linear conceptions of time associated with the forward march of industrial progress and prevalent ideas about the future in light of industrialisation. Floods are portrayed in each as the unintended consequences of the ever-accelerating frenzy of industrial capitalism, and as metaphorical ruptures to the ecocidal status quo. As such, they form a direct link with the ways in which the biblical flood myth is reclaimed and reimagined in the climate novel that I will discuss in the remaining chapters.

CHAPTER THREE: APOCALYPSE AND THE FLOOD NARRATIVE[349]

George Turner's 1987 novel *The Sea and Summer* begins a thousand years in the future with 'The Autumn People', a community living in the highest reaches of the Dandenong Ranges above the drowned 'old city' of Melbourne. Floating above the 'old riverbed' of the Yarra, the pilot of a boat used for tours of the 'sunken city' surveys its 'drowned ruins', which 'had reached its swollen maximum of population and desperation a thousand years before'.[350] Looking back at the cultural history of the 'long summer' of the twenty-first century, the pilot remarks that 'they and those like them ruined the world for all those who came after […] they *denied* history'.[351] *The Sea and Summer* presents a future world defined by overwhelming environmental and sociopolitical breakdown. By the middle of the twenty-first century the global population has exceeded the ten billion mark, a significant rise in sea levels has resulted in the inundation of the world's coastal regions, and the global economy has collapsed due to expensive geoengineering projects that have failed to alleviate the crisis. Australia struggles with mass unemployment, social schism and draconian governmental control, while the sea engulfs Melbourne's bayside suburbs, slowly submerging the high-rise tower blocks where the 'Swill', the city's poor, have been consigned. Beyond the submerged zone of the 'Swill' live the affluent 'Sweet' communities, safe from the floodwaters on higher ground.

Turner achieved early accolades for *The Sea and Summer,* winning both the Commonwealth Writers' Prize Best Book Award for the South East Asia and South Pacific Region and the Arthur C. Clarke Award for best Science Fiction (SF) novel published in Britain in 1988. Yet, the book received marginal critical attention until its recent reissue in 2013 as the first Australian title to be included in Victor Gollancz's list of 'SF Masterworks'. It has enjoyed a small upsurge in interest in recent years, doubtless due to its seemingly prophetic vision of climate crisis in the twenty-first century. As one of the earliest novels to depict climate crisis as a consequence of

[349] This chapter is a lengthened version of a chapter, entitled 'Apocalypse repeated: the absence of the Indigenous subject in George Turner's *The Sea and Summer* (1987)' that features in *Imagining Apocalyptic Politics for the Anthropocene,* eds, by. Earl T. Harper and Doug Specht (London: Routledge, 2022)
[350] George Turner, *The Sea and Summer* (London: Gollancz, 2013) p. 3.
[351] Ibid, p. 7.

unfettered anthropogenic global warming, *The Sea and Summer* offers an apocalyptic vision of environmental collapse via deluge that predates similar representations of climate crisis in the twenty-first century. Flood and deluge have proven a pervasive source of inspiration for apocalyptic portrayals of climate and environmental crisis, and remains a saturating presence in the popular imagination; breeding a host of film and novel adaptations. However, as Andrew Tate has observed in his study of apocalyptic fictions, '[t]he peculiar contemporary resonance of the biblical flood, one that seems to anticipate the destructive consequences of climate change, might seem counterintuitive' as a narrative with which to imagine the end of the world 'since the first book in the canon is associated in the popular imagination with a narrative of creation'.[352] The interweaving of these flood and apocalyptic Judeo-Christian narratives in contemporary fiction, therefore, requires further consideration for the ways in which they are used to articulate the devastating potentials of climatic disaster.

Apocalyptic rhetoric has long been thought of in ecocritical theory as a primary, and perhaps necessary, element in environmental discourse, 'capable of galvanising activists, converting the undecided and ultimately, perhaps, of influencing government and commercial policy'.[353] Yet, the genre of environmental apocalypse also remains highly problematic with respect to climate crisis, not least because the apocalyptic imaginary, as Bruno Seraphin has observed, 'speciously universalises a set of environmental anxieties that is in fact particular to white settler society'.[354] In this chapter, then, I focus on *The Sea and Summer* as an early example of the ways in which climate novels rework the foundational Judeo-Christian mythologies of flood and apocalypse to critique environmental injustices of the present. At the same time, my reading is offered in response to emerging scholarship in Indigenous, decolonial and environmental studies which highlight the need to recognise the obscured histories of colonial violence recurrent in the genealogy of the apocalypse genre. As such, my exploration of environmental apocalypse in *The Sea and Summer* points to the ways in which the plot mirrors certain aspects of Australia's colonial-settler history.

The chapter is thus split into two halves: First, I offer a brief overview of current scholarly discussion around the literary genealogy of environmental apocalypse in relation to the flood narrative. Second, I focus on Turner's depiction of the community in the Swill Enclaves who suffer repeated apocalypses due to their

352 Andrew Tate, *Apocalyptic Fiction* (London: Bloomsbury, 2017) p. 25.
353 Greg Garrard, *Ecocriticism* (Oxford: Routledge, 2004) p. 104.
354 Bruno Seraphin, '"The Hoop" and Settler Apocalypse', *The Trumpeter* 32 (2016) 126-146, p. 144.

imaginative and physical marginalisation from the State. I argue that an imaginative gap exists between the novel's seeming forgetfulness of the violence and illegitimacy of white settlement and the violence of the social caste system depicted. Furthermore, in addressing the notion of dispossession and '*denied* history', I contend that Turner's narrative echoes the forms of colonial violence endured by Australia's Indigenous communities for centuries previous, such as economic crash, environmental collapse, displacement and cultural disintegration, without explicit mention. In this way, my aim is to complicate Turner's novel as a challenge to twenty-first century narratives of environmental apocalypse that offer ahistorical presentations of environmental collapse.

3.1 The Problem with Apocalyptic and Eschatological Narratives

Visions of the end of the world are integral to most world religions: Zoroastrianism, Buddhism and Hinduism, for example, all have distinctive forms of eschatology. However, in the West, Christianity continues to give shape to narratives of catastrophe and particularly those fictions of destruction that portend to the end-of-the-world-as-you-know-it. A plethora of twenty-first century novels draw from apocalyptic and eschatological visions of deluge to portray environmental collapse, including, among others, Geraldine McCaughrean's *Not the End of the World* (2004), Maggie Gee's *The Flood* (2004), Jeanette Winterson's *The Stone Gods* (2007), Sam Taylor's *The Island at the End of the World* (2009) and Stephen Baxter's *Flood* (2008), as well as those discussed later in this thesis, such as *Clade* and *A Children's Bible.* At the beginning of *The Flood*, for example, the spectral voice of Gee's unidentified narrator, speaks from the other side of apocalyptic deluge, from a 'city hovering over the darkness. Above the waters that have covered the earth'.[355] While in *The Island at the End of the World*, a father and his children are presumed the only survivors to be living 'since the Great Flood seven springtimes ago'.[356]

A similar insurgence has been underway in cinematic representations of global collapse. Various late twentieth and twenty-first century blockbusters envision global deluge to rival the flood in the biblical text, from the flood that flattens New York in the Hollywood blockbuster *The Day After Tomorrow* (2004), to the 2007 British

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[355] Maggie Gee, *The Flood* (London: Saqi Books, 2004) p. 1.
[356] Sam Taylor, *The Island at the End of the World* (London: Faber & Faber, 2009) p. 3.

production *Flood* in which a sudden change in weather patterns causes a flood that breaches the Thames Flood Barrier, causing untold devastation in London and across England. Meanwhile, on the other side of plausible, a tsunami of ice devastates Rio De Janeiro in *Geostorm* (2017) after a global network of satellites tasked with controlling the planet's atmosphere goes awry. While many of these late modern examples appear ignorant of the religious significance of apocalypse as a theological category, they display a continued popular fascination with the imaginative possibilities of biblical ways of addressing the end of the world.

Apocalyptic narratives involve speculative thinking, which as Jesse Oak Taylor reminds us, is important for how we begin to respond effectively to climate and environmental crisis. Indeed, the linkages between the steam powered mill of Eliot's novel and the coal mine of Lawrence's, the obsolete cars of *The Sea and Summer* and melting glaciers of Bradley's *Clade*, discussed in Chapter Five, are distributed through a vast network of human and nonhuman actors that challenges experiential comprehension. Whereas flooding is immersive and immediate, climate as an aggregation of weather patterns cannot be experienced first-hand. Speculative thinking thus provides a useful conceptual medium for reassessing the distributed agencies and actions of anthropogenic climate change as they have accumulated across time and space. The flood story enters into these environmental apocalyptic narratives as one that generates an instantly recognisable iconography of loss and suffering as the direct result of environmental devastation. Popular climate fiction often revisits flood and deluge as a site with which to warn of the horrors of unrestricted carbon emissions. In these instances, anthropogenic climate and environmental crisis acts as an eschatological device, with the deluge performing as a symptom and synecdoche of global environmental collapse.

However, as the ecocritic Greg Garrard observes, the language of eschatology 'escaped the discipline of theology long before the twentieth century'.[357] Novels such as *The Sea and Summer* can also be seen to be indebted to earlier representations of the biblical flood; a tradition we see dating back to the seventeenth century artistic preoccupation with the theme of deluge in paintings such as Nicolas Poussin's *L'Hiver ou Le Déluge* (1660–64). In his study of the biblical flood in Victorian culture, Vybarr Cregan-Reid notes that deluge paintings reached pandemic proportions between 1790 and 1850 when there were more than fifty painterly versions exhibited in Britain and

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[357] Greg Garrard, *Ecocriticism*, p. 104.

Europe.[358] In these cases, deluge painters did not dwell on the biblical flood as a creation narrative, but chose to focus instead on the apocalyptic horror of those that were drowned. Similarly, Trexler traces a correlation between apocalyptic renderings of deluge in the climate novel and those in the post-Second World War novel that used the deluge to address fears of nuclear holocaust and technocratic governmental control. In these instances, as Tate observes, apocalypse broadly functions as 'a kind of classy synonym for spectacular destruction, death on a vast scale and the collapse of all that society might hold dear'.[359] Yet, this conception overlooks the primary meaning of apocalypse as a form of revelation or disclosure, from the Greek *apokálypsis* (uncovering) and *apokalyptein* (to uncover). In other words, apocalypse simply means to uncover something that has been hidden, which is why Saint John's millenialist prophesy is termed 'Revelation' in the English translation.

In *Dancing with Disaster* (2015), Kate Rigby notes that the earlier prophetic books of the Hebrew Bible express a form of revelation that differs from the later Jewish and Christian apocalyptic tradition in that it offers a

> prophetic vision that might be seen as 'counterapocalyptic' to the extent that it seeks to disclose the potentially catastrophic consequences of the track that society has taken, in the hope that a different path might yet be chosen and the worst averted.[360]

It is of little surprise that Turner has been designated a prophetic voice for the challenges of the twenty-first century. Graham Sleight, for example, writes in his introduction to the novel that Turner's scope of 'vision has an encompassing power that is as compelling as prophesy'.[361] Similarly, Andrew Milner's comprehensive analysis of the novel finds that 'Turner's predictions have often proven surprisingly close to the mark'.[362] Whilst Turner correctly imagined the future effects of anthropogenic climate change to include the increasing likelihood of flooding, rising

[358] Vybarr Cregan-Reid, *Discovering Gilgamesh and the Historical Sublime in Victorian Culture*, p. 75.
[359] Andrew Tate, *Apocalyptic Fiction*, p. 12.
[360] Kate Rigby, *Dancing with Disaster: Environmental Histories, Narratives, and Ethics for Perilous Times,* (Charlottesville and London: University of Virginia Press, 2015) p.18.
[361] Ibid, p. xiii.
[362] Andrew Milner, 'The Sea and Eternal Summer: An Australian Apocalypse', *Green Planets: Ecology and Science Fiction*, ed, by. Gerry Canavan and Kim Stanley Robinson (Middletown: Wesleyan University Press, 2014) pp. 115- 126, p. 121.

sea levels and heatwaves, his novel speaks more to the growth in scientific knowledge about the greenhouse effect in Australia during the 1970s and 1980s.[363] In this way, the prophetic voice of *The Sea and Summer* attempts to remind the reader to be cognisant of the destructive effects of society's dependence on a fossil-fuel-based infrastructure. Indeed, writing his postscript to the novel, Turner observes that

> It is unlikely that we will have definite information on the extent of [the greenhouse effect] before the turn of this century. […] We can only be sure that enormous changes will take place in the next two or three generations, all of them caused by ourselves, and that we will not be ready for them.[364]

Turner's prophetic role in this respect represents a significant innovation in the secular use of religion, where apocalyptic expectation arises from environmental science and sociopolitical inaction, rather than from the fear of angry divinities and supernatural disasters.

In other ways, *The Sea and Summer*'s narrative framework aligns with the idea of apocalypse not as the end of the world, but 'the end of *a* world, which is to say the end of a particular practice, or set of practices, or *world-making*'.[365] This is because the apocalyptic devastation of the 'Long Summer' of the twenty-first century is recalled historiographically from the distant future perspective of the 'Autumn People' who have overcome many of the socioeconomic inequities that overwhelmed the twenty-first century. Moreover, the reader of *The Sea and Summer* is torn between the dread of death that stalks the Swill class of Turner's waterlogged urban landscape, yet are safe in the knowledge that total annihilation is deferred, at least until the 'Long Winter' of the impending global Ice Age that looms in the background of the framework narrative of the 'Autumn People'. In this way, the narrative structure of *The Sea and Summer* mirrors the apocalyptic narrative, as Michael Wheeler observes, in that 'the end-time and the inauguration of a new world order, is held in tension with wisdom teaching, which assumes that the world will continue'.[366] Similarly, in her reading of the apocalyptic dimensions of *The Flood*, Sarah Dillon observes that biblical apocalyptic narratives 'both confront and diffuse the threat of total

[363] Ruth A. Morgan, 'Imagining a Greenhouse Future: Scientific and Literary Depictions of Climate Change in 1980s Australia', *Australian Humanities Review* 57 (2014) 38-55.
[364] Ibid, p. 364.
[365] Rigby, *Dancing with Disaster*, p. 19.
[366] Michael Wheeler, *Ruskin's God* (Cambridge: Cambridge University Press, 1999), p. 263.

destruction, since they describe, reveal, or predict cataclysmic events but only and always with the structural guarantee of a postcataclysmic continuance'.[367] Thus, according to Dillon, apocalyptic narratives offer a way in which 'literature can carry out its necessary self-reinvention in a time of terror […] and produce narratives that challenge and critique our world'.[368] Portrayals of environmental apocalypse, therefore, can be seen not as end of the world narratives, but as revelatory narratives that aim to disclose the potentially catastrophic consequences of our current trajectory and produce an ongoing revelation that transforms the collective mindset. In so doing, the legacies of Jewish prophetic and Christian apocalyptic thought garnered from Genesis and Revelation might be considered valuable in environmentalist rhetoric for providing a space in which to prompt the reader to imagine a 'countermodel to the visions of exploitation and devastation they describe'. [369]

However, many authors do so in large part without acknowledging the histories of imperialism and (settler) colonialism that, as Kathryn Yusoff emphasises, 'have been ending worlds for as long as they have been in existence'.[370] It is also worth recalling here that both Jewish prophetic and Christian apocalyptic writing was itself anti-colonial – pitched against the depredations of the Babylonian and Roman Empires respectively, both of which had invaded Judea and oppressed its – and other – peoples. In the context of this selective perspectivism, Indigenous scholar and activist Kyle P. Whyte has called for researchers in the environmental humanities and beyond to 'discuss how [such] concepts of finality would be received by Indigenous persons who see their societies as already having endured one *or many more* apocalypses'.[371] Whyte's criticism speaks to a growing body of scholarship that directly challenges the ways in which narratives of crises, dystopia and apocalypse often work to obscure ongoing oppression against Indigenous peoples and other groups. Mabel Gergan, Sara Smith and Pavithra Vasudevan, for example, explore how particular apocalyptic and catastrophic engagements with climate crisis deploy a 'temporal sleight of hand' which works to 'escape specific culpability (for instance in processes of colonialism,

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[367] Sarah Dillon, 'Imagining Apocalypse: Maggie Gee's *The Flood'*, *Contemporary Literature*, 48 (2007) 374-397, p. 376.
[368] Ibid, p. 387.
[369] Ursula K. Heise, *Sense of Place and Sense of Planet: The Environmental Imagination of the Global* (Oxford: Oxford University Press, 2008) p. 142.
[370] Kathryn Yusoff, *A Billion Black Anthropocenes or None,* (Minneapolis: University of Minnesota Press, 2018) p. xiii.
[371] Kyle P. Whyte, 'Indigenous science (fiction) for the Anthropocene: Ancestral dystopias and fantasies of climate crises', *E Nature and Space* 1:1 (2018) 224-242, p. 236.

capitalism, or imperialism) and instead centre a universal human frailty that ends with triumph, a clear moral, and a clean slate'.[372] While the environmental humanities scholar April Anson notes, '[w]hen environmental apocalypse narratives do not explicitly deal with the history of the genre, they are in danger of reinforcing the anthropocentric CO_2lonialism at the root of climate change's attendant apocalyptic realities'.[373] A genealogical reading of the apocalypse genre is necessary to establish the ways in which apocalyptic portrayals of environmental crisis often fail to acknowledge the violent dispossession of Indigenous peoples, whose lands continue to be appropriated by ongoing extractive economies under the auspices of 'development' and 'economic growth'. As an Australian novel, *The Sea and Summer* offers a distinct portrayal of environmental apocalypse that is uniquely ascribed to Australia's colonial history. In the next section, therefore, I provide a brief review of the genre in relation to its Australian context in the hope that it will help us navigate the violence of the social caste system depicted in Turner's novel alongside the violence and illegitimacy of Australia's white settlement.

3.2 A History of Australian Apocalypse

According to Roslyn Weaver, the apocalypse genre, 'forms one important strand in the overall fabric of [Australian] cultural identity'.[374] Yet, the historicity of the genre uncovers a narrative of Indigenous erasure and land dispossession, stretching back to pre-colonial European conjecture about *terra australis incognita*, or the unknown southern land, as a place that paradoxically inspired both new world hope, or horror and dystopia.[375] On the one hand, the 'perpetual and persistent speculation' about the continent, Weaver notes, 'established an apocalyptic map of Australia before colonists even experienced the land, and has resulted in a tradition of imagining the nation in

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[372] Mabel Gergan, Sara Smith and Pavithra Vasudevan, 'Earth beyond repair: Race and apocalypse in collective imagination', *Environment and Planning D: Society and Space* 38 (2018) 91-110, p. 91.
[373] April Anson, 'American Apocalypse: The Whitewashing Genre of Settler Colonialism', *Academia.edu* <https://www.academia.edu/34949190/American_Apocalypse_The_Whitewashing_Genre_of_Settler_Colonialism> [accessed 23 April 2020] n.p.
[374] Roslyn Weaver, *Apocalypse in Australian Fiction and Film: A Critical Study*, (Jefferson: MacFarland & Company Incorporated, 2011) p. 3.
[375] Ibid.

apocalyptic terms ever since'.[376] As Weaver's historiography shows, apocalyptic discourse not only directly correlates to a subjective colonial experience of Australia, but also facilitated the culturally destructive processes of colonial European advancement and absorption by representing the country as *terra nullius*, 'a blank slate upon which one might inscribe any image'.[377] Early European explorers of Australia thus inscribed the land with themes and images which came to influence the experiences of British colonisation and settlement in the eighteenth and nineteenth centuries. Of these, the leitmotif of dispossession forms a recurrent strand in the Australian environmental apocalyptic imaginary, betraying an ambivalence about belonging and possession that is endemic to Australian settler society.

Moreover, Australia's isolated position 'on the edge of the globe' in the European imagination not only excluded it from the world and its advantages, but also protected the country as a utopic space free from any sense of global disaster. Yet, later twentieth century apocalyptic fictions such as Turner's *The Sea and Summer* suggest that hopes of a new world, a safe and abundant place in the southern land, are unjustifiably complacent and demonstrably false. As Weaver asserts, such texts:

> reveal that a utopian belief in Australia's position at the edge of the world and the protection isolation offers is dangerous and misplaced, for the country cannot escape the disasters occurring in the rest of the world, ultimately disproving the hopes for a new world.[378]

Similarly, Milner's essay on *The Sea and Summer* emphasises Turner's sense of Australia's isolation as central to the 'social geography of an Australian dystopia'.[379] However, he argues that dystopian Australian fictions, such as Neville Shute's *On the Beach* (1957) and *The Sea and Summer*, continued to 'make use of Australia's self-contained isolation' to promote 'implicit utopian warnings' about the global threat of nuclearization and global warming, respectively.

Other critics have commented on the recurrence of the theme of dispossession running throughout Australian environmental apocalyptic fictions. Writing on the

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[376] Roslyn Weaver, 'At the ends of the world: apocalypse and Australian speculative fiction', (unpublished doctoral thesis, *University of Wollongong Thesis Collection,* 2007) <https://ro.uow.edu.au/theses/1733/> [accessed 28 September 2022] p. iii.
[377] Ibid, p. 52.
[378] Ibid, p. 111-112.
[379] Milner, 'The Sea and Eternal Summer: An Australian Apocalypse', p. 119.

conventions of apocalypse films such as the *Mad Max* (1979) franchise and *Dead End Drive-In* (1986)*,* Claire Corbett argues, '[t]he trauma of Indigenous dispossession is both personal and political. It continues to reverberate nationwide, a stark example of how the past is never past, present and future cannot be disentangled'.[380] Corbett's analysis invokes psychoanalytic theory to examine the ways in which Australia's colonial history is both remembered and deliberately forgotten through the apocalyptic imaginary that is 'dislocated from the past to the "future" and thus in effect to a timeless, ever-present or ever-recurring time'.[381] Corbett relates the experience of repetition compulsion, understood by Freud as a symptom of post-traumatic stress disorder. Repetition compulsion causes the sufferer 'to repeat the repressed material as a contemporary experience instead of [...] remembering it as something belonging to the past'.[382]

In the context of the traumatic legacy and 'deep forgetting' of Australia's dispossession of Indigenous peoples, Corbett views the Australian apocalyptic imaginary as enacting a simultaneous remembering and not remembering. 'Some of these images' she writes, 'seem to be like the "flashbulb" memories associated with PTSD, intruding into awareness and vanishing or sometimes encoded within other story elements, leaving traces'.[383] Corbett's invocation of memory and trace is interesting in relation to the ways Australia's history of colonial violence continues to repeat across its apocalyptic literature. As I will show, the trace of Indigenous presence and absence similarly haunts Australia's environmental apocalyptic imaginary in *The Sea and Summer.* While Turner's novel can be seen to have simply erased any notion of Australia's Indigenous history, its depiction of the state's imaginative and physical dispossession of the Swill class, I argue, can be read as simultaneously evoking Indigenous experience under the auspices of ongoing colonial (settler) violence. In the remainder of this chapter, I extend the critical analyses previously outlined to focus on how environmental apocalypse functions in the novel as a trace of colonialism and its legacies, nationalism and corporate capitalist globalization.

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[380] Claire Corbett, 'Nowhere to run: Repetition Compulsion and heterotopia in the Australian postapocalyptic – from 'Crabs' to *MadMax Beyond the Thunderdome*', *Science Fiction Film and Television* 10 (2017) 329–51, p. 339.
[381] Ibid, p. 329.
[382] Sigmund Freud, *Beyond the Pleasure Principle*, eds, by. Ulrike May and Michael Schroter, *Psychoanalysis and History* 17 (2015) 151–204, p. 161.
[383] Corbett, 'Nowhere to run', p. 338.

3.3 Apocalypse Repeated: The Absence of the Indigenous Subject in *The Sea and Summer*

In his often-quoted study, *From Apocalypse to Way of Life,* Fredrick Buell argues that by the 1980's, environmental collapse was not represented as a future apocalyptic disaster, as seen in environmental thought and writing from the 1960's and 1970's, but as a 'way of life', or a 'domestication of' or 'dwelling within' environmental crisis.[384] *The Sea and Summer* can be seen to reflect these broader changes in depictions of environmental and climate crisis, where characters live in a world in which past prefigurations of unbridled carbon emissions have already been exceeded. Comprised of two interchanging narratives, Turner's novel has a counter-chronological approach, beginning and ending in 2061, but also weaving in and out of the 2040s and 50s in time with the characters' memories. The first provides a framework for the main narrative and is told from the distant future perspective of the Autumn People. While this future has eliminated poverty and hunger from the world, it is by no means utopian. Indeed, the characters frequently discuss the effects of the impending global ice age, or 'Long Winter', presumably due to accelerated effects of anthropogenic warming on the world's glacial and interglacial cycles.

The second narrative, which forms the main body of the novel, features as a 'Historical Reconstruction' of the development of the Greenhouse Culture through the years 2044-2061. Also entitled *The Sea and Summer*, it has been written by Professor Lena Wilson of the Autumn People, a historian specialising in the collapse of the Greenhouse Culture in Australia. The narrative is polyphonic, tracing the lives of the Conway family (Alison Conway and her two sons, Francis and Teddy), as they are forcibly relocated away from the Sweet colonies due to the father's job loss and subsequent suicide. Without an income, but with some savings, the Conways are relegated to the Fringe - a suburban area existing between the higher grounds of the Sweet and the drowning enclaves of the Swill. Alison Conway employs the aid of Billy Kovaks, a small-time 'tower-boss', to keep her family safe from the supposed violence of the Swill communities. The rest of the narrative continues to elaborate on

[384] Fredrick Buell, *From Apocalypse to Way of Life: Environmental Crisis in the American Century* (New York: Routledge, 2003) p. 173, 205.

the environment of the enclaves and the sociopolitical class divisions actively encouraged by the State in order to 'preserve an economically manageable status quo', and concludes with the State-induced introduction of a virus to decrease the population that is smuggled into the enclaves via an addictive drug called 'chewy'.[385] *The Sea and Summer*'s non-linear approach to time suggests that the linear approach offered by conventional narratives is insufficient to capture the vast spatiotemporal scales of environmental time. Furthermore, both the main narrative and the framework narrative conclude with open endings, illustrating environmental apocalypse as a recurrent and evolving phenomenon. Turner's narrative framework can thus be seen to undermine the traditional notion of apocalypse as a catastrophe to be encountered in the future. By placing apocalyptic narratives in different temporal settings, it places emphasis on history not only as a written record of the past, but as a living force that participates in the ideological functions and social practices responsible for anthropogenic climate change.

Having 'started a sequence which had to run its course in unbalancing the climate', the novel's characters dwell in the all-pervading motion of climatological and environmental breakdown.[386] Yet, while *The Sea and Summer's* characters struggle with the daily realities of environmental collapse, they often psychologically distance themselves from climate crisis by perceiving it as an end-of-the-world future scenario. Seen through the eyes of Francis Conway, the youngest son of the Conway family, environmental collapse exists as 'a whining voice at the back of my mind', which 'insisted that while the greedy ocean rose, year by year, the real catastrophe was yet to come. Behind that again was the cowardly whisper of humanity in all ages: "Please, not in my time"'.[387] Even as the novel's representation of climate change resonates with Buell's notion of a postmodern 'domestication of environmental crisis', Francis Conway's doom-laden language shows how the popular appeal to apocalypse as the end-of-the-world may distance or undermine the reality of a crisis that is already occurring, thus problematising the role of the apocalyptic narrative in interpreting the current state of the world.

Climate and environmental collapse are depicted in the novel through the breakdown of the environmental conditions that have fostered the growth and spread of consumer-driven capitalism. It focuses, for the most part, on the gradual

[385] Turner, *The Sea and Summer*, p. 157.
[386] Ibid, p. 14.
[387] Ibid, p. 180.

deterioration of the urban cityscape, where the disintegration of capitalist infrastructures has produced a chaotic apocalyptic space, wrought by deep socio-political divisions. The absence of cars, coffee, technology, and even books, comes to represent the collapsing state of consumer culture, and accordingly projects the 'end of the world' as the end of capitalism. In place of consumer plenty and liberal freedoms, Turner depicts a world where all remaining resources are controlled by those with remaining capital in alliance with state power, while the rest of humanity struggles for mere survival. 'Nine of every ten of Australia's population were Swill', one of the protagonists explains, 'and many other countries were in worse case. Living familiarly with such knowledge, the horror of it passed us by; it was the normal condition of the world'.[388] As many environmental scholars have argued, depicting the "normal condition" of the post-apocalyptic world after the death of capitalism as one without order, access to food, water and healthcare, detaches the reader from the fact that these conditions describe the past and present realities of many people. Claire Colebrook, for example, notes in her investigation of Anthropocene culture: 'What post-apocalyptic texts depict as the end of the world are counter-factual thought experiments of a humanity that has defined itself through the liberal privileges and favourable conditions that have drawn upon and depleted the worlds of others'.[389] In this respect, *The Sea and Summer* exemplifies the highly problematic propensity for contemporary apocalyptic narratives to overlook the connection between the conjoined processes of capitalism, colonialism and imperialism with the experience of environmental collapse. Indeed, the novel frames the wilful deafness regarding public knowledge of the history of the Greenhouse Culture as a problem of narrative.

In the framework narrative of the Autumn People, Lena intends her historical reconstruction of the Greenhouse era to function as a correction to 'the public idea of what our ancestors were like. All they have is folklore and guesswork and idiotic popular plays that can't get so much as the clothing right'.[390] As such, she repeatedly emphasises the legitimacy of her work as a 'true story' because it is based on 'records on tape and in data banks […] descriptions, even pictures and police records providing detail'.[391] To some extent, Lena's concern about correcting the public idea or story of Australia's past mirrors the ways in which the dominant narrative of white-settler

[388] Turner, *The Sea and Summer*, p. 24.
[389] Claire Colebrook, 'Anti-catastrophic time', *New Formations* 92 (2017) 102-119, p. 103.
[390] Turner, *The Sea and Summer*, p. 16.
[391] Ibid, p. 106.

history in Australia has repressed and silenced Indigenous perspectives. Bruce Pascoe's much-discussed recent book *Dark Emu, Black Seeds: Agriculture or Accident* (2014), for example, highlights the settler colonial inability and refusal to recognise Aboriginal land-use practices as farming, thus feeding into the 'terra nullius' myth. Yet, while Lena highlights the socio-economic tensions in her historical reconstruction of Melbourne in the Greenhouse era in terms of class, her overall response to the global climate crisis presents disturbance and risk as a constant for the majority.

Lena's interjections consistently highlight state oppression as an accidental, and even necessary, reaction to environmental collapse. 'With the collapse of trade and all essential industry the Swill became a burden on the economy', she explains at one point, '[they were] easier and cheaper to support if […] concentrated into smaller areas'.[392] Similarly, when Andra, attempting to grasp the social inequalities of the Greenhouse era asks: '*How did this division arise? Why no revolution?*', Lena suggests that the 'rise of the Tower Bosses' helped to run 'small states within the State' and therefore allowed the Swill 'a measure of contentment […] by letting them run their own affairs'.[393] In suggesting that the Swill not only accepted their oppression, but were complicit in such oppression, Lena undermines the reliability of her narrative as a comprehensively accurate history, her characters appearing as ventriloquial, dramatised embodiments of her own assumptions about the Greenhouse years as the meta-authorial voice of the text.

As such, Lena's apocalyptic narrative could be seen to be functioning as a neoliberal discourse of adaptation, which, as Greg Bankoff explains, accepts disaster as an endemic condition of climate crisis while also obscuring 'questions about the role of power and culture in society, and about whose environments and livelihoods are to be protected and why'.[394] The history of the Greenhouse Culture is thus rendered suspect with its conflation of fact and circumspection, suggesting that, despite best intentions, Lena's narrative is unreliable. This is further compounded when Andra is forced to abandon his theatrical adaptation of the work due to his continued lack of comprehension of the Greenhouse years. 'It is too easy to fall into the trap of seeing history in terms of human movement, as though all else is ancillary, as though *we*

[392] Turner, The Sea and Summer, p. 106.
[393] Ibid.
[394] Greg Bankoff, 'Remaking the world in our own image: vulnerability, resilience and adaptation as historical discourses', *Disasters,* 43 (2019) 221–239, p. 234.

make history' he observes.[395] Clearly Andra's difficulty in imagining the history of environmental collapse is not so much due to his incapacity to imagine a temporality beyond the human, but more to do with how he imagines the *'we'* of humanity. As Sylvia Wynter has argued, the conceptual category of the 'human' often refers to a particular 'ethnoclass (i.e., Western bourgeois)' that 'overpresents itself as if it were the human itself' in narratives about the Anthropocene.[396] This is a problematic facet of the environmental apocalypse genre, which extends an idea of a homogenized humanity based on Western assumptions while deprivileging others. We can see this at work throughout Lena's conversations with Andra when she explains, '[i]n the twentieth and twenty-first centuries the entire planet stood with its fingers plugging the dykes of its own creation until the sea washed over their muddled status quo'.[397] Again, Lena describes humanity of the mid-twenty-first century as equivalent in regard to its impact on the planet, yet this perspective appears rather unjust towards the majority-world which didn't cause the damage.

At the same time, the unreliability of Lena's narrative is repeatedly signalled, as she explains to Andra, there is no end to her study of the Greenhouse Culture because '[d]ivers find new and strange things, new study techniques demand constant scrutiny of the artifacts, fresh interpretations demand wholesale re-examination of the buildings'.[398] The lack of consistent physical evidence surviving from the Greenhouse years leads to an uneven history that has been integrated into an imaginary of the Autumn People's origins, suggested by the Pilot's accusation that the Greenhouse era denied them a history. That Turner chose flooding to illustrate the effects of climate change is interesting in this regard given that floods and water serve as a material link to the submerged histories of the Greenhouse era, which continue to haunt the present of the Autumn People. Yet, the fluidity of the water also implies a sense of unanchored memory which is tied to Lena's consternation that she 'doesn't know the important thing [about] how its members thought from moment to moment. We can extrapolate – meaning, guess'.[399] In drawing attention to a sense in which the histories of the Swill tenements have been submerged and fractured, the novel raises questions about the

[395] Greg Bankoff, 'Remaking the world in our own image', p. 361.
[396] Sylvia Wynter, 'Unsettling the coloniality of being/power/truth/freedom: Towards the human, after man, its overrepresentation—An argument', *CR: The New Centennial Review,* 3 (2003) 257-337, p. 260.
[397] Turner, *The Sea and Summer*, p. 16.
[398] Ibid, p. 8.
[399] Ibid, p. 10.

ways in which historical events are shared and collectively remembered even while it enacts its own form of historical obfuscation.

This is most explicitly addressed in relation to the representation of the Swill throughout the novel as 'dirty, criminal, ignorant', 'animals' and, at times, 'monsters'.[400] The dichotomy between Sweet and Swill is set up early on in the core narrative when Francis explains that 'we kids were born to the knowledge that Sweet had jobs and income while Swill lived on State charity. Even servants could look down on Swill. Actually, very few Sweet kids of the day had ever seen a Swill person'.[401] The novel succinctly highlights the double challenge the poor face as invisibility and amnesia. While they might constitute the majority of the populace, the Swill have been forcibly marginalised in terms of visibility by being placed away from the Sweet suburbs where they are presumably out of sight and out of mind. They also endure a form of public forgetting, rarely seen or spoken of by Sweet society, as Francis explains '[t]he Swill enclaves were not much mentioned in polite society; you knew of them and that was enough'.[402] Their representation as repugnant and offensive to 'polite' Sweet society is furthered by the image of Swill as violent criminals in sensationalist television programmes where 'brave policeman or brave young scientists or brave and muscular foot-ballers rescued beautiful girls held captive [in the Swill tenements] for purposes not fully understood'.[403] In being dehumanised and criminalised, the Swill are blamed for their own 'monstrous' conditions, even while these conditions are shown to be part of a collective government failure to address the socioeconomic crisis resulting from climate breakdown.

In his discussion of monstrousness and climate disaster, Andrew Baldwin reminds us that disasters amount to the 'materialisation of values on the world', 'symptoms of other phenomena that we would do well to ponder', and monsters are the *sign continua* of the disaster: the enduring effects of disaster that warn us to query the values that materialised the disaster.[404] As markers of and in being marked by disaster, Baldwin argues,

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[400] Turner, *The Sea and Summer*, p. 150, 170.
[401] Ibid, p. 24.
[402] Ibid, p. 27.
[403] Ibid, p. 40.
[404] Andrew Baldwin, 'Postcolonial Futures: Climate, Race and the Yet-to-Come', *ISLE: International Studies in Literature and Environment,* 24 (2017) 292-305, p. 296.

> monsters emerge from disastrous landscapes as a warning: disasters are the manifestation of a crisis of values, a crisis forged in the crucible of historical time, a man-made crisis that is a crisis of social relations in which humanity comes to know itself only through the oppressions and violent repudiations of its perceived others. [405]

Yet, it is often the case that monsters are not received as a signifier of the disaster, but come to be blamed for their own collective inability to respond to the crisis properly, instead of being victims of a set of social conditions that has ensured their imperilment in light of the disaster. Baldwin uses the example of the racist depictions of 'black bodies criminalised in the wake of Hurricane Katrina […] blamed for their "monstrous" condition, even while this perceived condition owes more to a collective failure to address the crisis of race in America'.[406] The appalling treatment and socio-environmental conditions of those driven into poverty in *The Sea and Summer* are similarly reminders of a broken system that is ill-equipped to respond to the displacement effects of climate change. In this sense, the Swill represent a future-orientated classism that is specific to the Anthropocene in the form of the climate migrant. Yet in other respects, the figure of the Swill as the criminalised and dispossessed Other in *The Sea and Summer* resonates powerfully with the long history of discrimination and injustices against Indigenous peoples and non-white immigrants that continues to haunt Australia as a nation.

When visiting the Swill tenements for the first time, Alison Conway is struck by the "monstrousness" of the tower blocks, describing each tower as 'a blunt shaft assaulting the sky and around its base, like a dancer's skirt, spread 100 meters of concrete desert'.[407] The representation of the tenements as an urban desert plays into historic Australian anxieties concerning the desert as a place of desolation, which stretches back to early European descriptions of Australia as *terra nullius* that characterised the desert as a 'hideous blank'.[408] As Weaver has observed, profoundly negative constructions of the Australian outback appear throughout colonial texts, and have been perpetuated in apocalyptic fictions to present the contrast between the

[405] Ibid.
[406] Ibid, p. 296-7.
[407] Turner, *The Sea and Summer*, p. 169.
[408] Roslynn D. Haynes, *Seeking the Centre: The Australian Desert in Literature, Art and Film* (Cambridge: Cambridge University Press, 1998) p. 36.

power of the hostile landscape and the vulnerability of 'civilised' humanity. Within these constructions, the centre of Australia, she notes, is often referred to as the country's heart or its red centre, and 'the negative version of this has been the "dead centre", or the red heart, the "never-never" and nothingness, a cursed place of punishment while hope for the future is away from the interior'.[409]

Indigenous Aboriginal people were driven by the expansion of settlement from Australia's coastal regions to the desert, where it was ceded to them until it began to acquire commercial value for mining and as a nuclear test site. In being forced to an area that remained inimical to European settlement and characterised as a 'hideous blank', Indigenous peoples were effectively banished not just from their lands but from the imaginative view of the nation.[410] The physical and imaginative erasure of Indigenous people's presence from the national landscape is straightforwardly characterised by the idea of 'unimagined communities', taken up by Rob Nixon in *Slow Violence and the Environmentalism of the Poor* (2011) to describe the intimately entangled processes of forced removal and imaginative expulsion of particular groups of people in relation to the development of the modern nation state.[411] As Nixon explains, the imaginative work of expulsion typically predates the direct violence of physical eviction that 'creates and sustains the conditions for administered invisibility'.[412] The result is termed by Nixon as

> spatial amnesia, as communities, under the banner of development, are physically unsettled and imaginatively removed, evacuated from place and time and thus uncoupled from the idea of both a national future and a national memory.[413]

In *The Sea and Summer*, Australian citizens are likewise forced into the marginalised areas of the Swill enclaves where they are deemed invisible to the public eye. This is reflected in the language used by Alison, who on moving to the Fringe is forced to confront 'the bogey of [her] upbringing, the *unimaginable presence* of the Swill'.[414] I

[409] Weaver, 'At the ends of the world: apocalypse and Australian speculative fiction', p. 128.
[410] Haynes, *Seeking the Centre*, p. 34.
[411] Rob Nixon, *Slow Violence and the Environmentalism of the Poor*. (Cambridge: Harvard University Press, 2011) p. 150.
[412] Nixon, *Slow Violence*, p. 151.
[413] Ibid.
[414] Turner, *The Sea and Summer*, p. 169 (my italics)

have used the desert as one example of the trace of Indigenous presence in Turner's novel, yet it is also not much of a stretch of the imagination to read into the scenes of displacement and forced occupation a subliminal reminder of Australia's historic creation of Aboriginal reserves, where many Aboriginal people were forcibly taken in the late nineteenth century.

The reserves were withheld from sale or lease by the Crown, and occupied by Indigenous people without any rights to property, or security of tenure. In most cases, the reserves were managed by government officials or church authorities. The enforced movement of Aboriginal and Torres Strait Islander people onto reserves enabled an administratively convenient concentration of populations, allowing the Australian government to intensify legal controls over First Peoples under the false doctrine of *terra nullius* until the 1992 High Court ruling in *Mabo v Queensland (No 2)*. Moreover, Melissa Nursey-Bray and others have observed in their study on Australian Indigenous peoples and climate change, that the exposure of Indigenous Australians to environmental changes occurring across Australia is 'compounded by existing socio-economic disadvantages such as inadequate health and educational services, insufficient infrastructure and limited employment opportunities linked to colonial and post-colonial periods'.[415] In this sense, the extended allusion to Swill dispossession and sociopolitical deprivation speaks to the violent oppressions experienced by Indigenous peoples excluded from the text.

The recurring theme of sea level rise problematises spatial issues relating to imaginary borders between classes, cultures and nations to illustrate the country's very real struggles with discrimination, separatism and racism. The movement of the Sweet away from the city towards Melbourne's suburbs is akin to the processes of 'white flight', described by Carolyn Merchant as a recent example of how race has organised land use and power distribution in North America. Merchant observes how African Americans, who had once been associated with the 'wilds' of Africa or the rural south, became symbols of decaying cities. 'Sublime nature', Merchant writes, 'was white and benign, available to white tourists; cities were portrayed as black and malign, the home of the unclean and the undesirable'.[416] The idea of 'white flight' is reflected in

[415] Melissa Nursey-Bray, R. Palmer, T. F. Smith & P. Rist, 'Old ways for new days: Australian Indigenous peoples and climate change', *Local Environment*, 24 (2019) 473-486, p. 473.
[416] Carolyn Merchant, 'Shades of Darkness: Race and Environmental History', *Environmental History*, 8 (2003) 380-394, p. 385.

a similar way when Alison visits the Swill tenements for the first time. Recoiling at the sheer amount of people she sees on the tenement streets, Alison explains:

> Across the width of the roadway, it stank of sheer dirtiness and sweat. […] I saw without immediately understanding that in the packed desert of flesh a sort of territoriality rules. On the featureless concrete, bodies sat or lay, for the most part browned and half-naked to the heat. […] Through and around them others walked tracks that by mysterious consensus remained open; the penned herd seethed with its own impenetrable order.[417]

It is clear that Alison's language upon viewing the amassed poverty on the streets is racially charged, and therefore requires some unpacking. On the one hand, the language works to reinforce the horror of the overcrowded, disease-stricken conditions of the enclaves. Yet, on the other, Alison's response is obviously predicated on notions of Otherness. Not only are the people dehumanised by their association with livestock, they are also presented as featureless 'browned and half naked bodies', and a 'packed *desert* of flesh', reinforcing the association between the imagined hostility of the desert and its inhabitants. Alison's racialised anxieties about the desert are transferred on to the flesh of a homogenised poor, who are subsequently dehumanised.

As she moves through the crowd, she thinks that 'if one of these ragged dwellers touched me […] I would scream out in panic'.[418] Moreover, here and throughout the novel the Swill are described as dark, dirty, unwashed and related to the floodwater that clings to their clothes and seeps through their apartments. This performs as another racial invocation of Indigenous presence. As Toni Morrison has argued, in the white imagination, African Americans and Indigenous peoples are conceptually stained with dirt.[419] Dirt, in the form of polluted floodwater, is therefore not considered a concern of the state, but maintains the marginality of the Swill, in part, by what Mike Davis terms 'the dialectic of ordinary disaster', whereby disaster is incorporated into history and rendered forgettable specifically because the burden

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[417] Turner, *The Sea and Summer*, p. 169.
[418] Ibid, p. 170.
[419] Toni Morrison, 'Introduction', *Race-ing Justice, Engendering Power: Essays on Anita Hill, Clarence Thomas and the Construction of Social Reality*, ed, by. Toni Morrison (New York: Random House, 1992) p. vii–xxiii.

of risk falls unequally on the disregarded poor.[420] Disasters in the novel, such as the incursion of annual flooding, are equally framed by a ready dismissal from the state and obscured by the media. We are told of Swill communities starving through 'computer error when Deliveries provided tonnes of salt instead of reduced protein, or some such stupidity, by the newscasts reported only the odd comic mix-up that had no serious consequences'.[421] Similarly, when winter flooding hits the Swill tenements and engulfs the Fringe 'carrying branches and bottles and dead animals and clutches of nameless flotsam. Probably sewerage overflow' through the abandoned streets of South Melbourne, the news report only highlights 'rain in the hills'.[422] In these instances, Turner exposes the fatal bigotry of the government and media that operates by off-loading the risks of recurring environmental disaster onto the 'backward' communities of the enclaves that are barely visible in the public eye.

It is striking how these brutal images in *The Sea and Summer* reproduce aspects of settler-colonialism and its impact on Indigenous Australians. Yet, while I have argued that the trace or haunting of Indigenous presence in Turner's novel offers a means of reconceptualising the veiled histories of colonial trauma in environmental apocalyptic fiction, it is also important to highlight the ways in which the text mirrors the relationship between the Australian state and non-white immigrants. In the novel, a third of Australia is set aside for Asian population relocation in 2033. The process leads to the collapse of the already deteriorating national infrastructures as dispossessed and uncompensated Australian landowners are pushed into overcrowded urban areas, adding to the drastic rise in unemployment levels and pressure on state subsistence. Meanwhile, a desperate effort to make two thirds of Australia's uninhabitable land habitable again through geoengineering projects causes a chain of unintended environmental consequences that ultimately brings the economy to bankruptcy. The events of the 'Asian Relocation' are told dispassionately by the narrator; however, its racial terminology reproduces the nationalistic logic of White Australia[423], while also connoting an older anxiety over Australia's fragility as an 'island nation' at threat of invasion from other non-European countries:

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[420] Mike Davis, 'Los Angeles after the storm: The dialectic of ordinary disaster', Antipode, 27 (2006) 221-241

[421] Turner, *The Sea and Summer*, p. 83.

[422] Ibid, p. 66.

[423] The White Australia policy is a term encapsulating a set of historical racial policies that aimed to forbid people of non-European ethnic origin, especially people from Asia and the Pacific Islands, from emigrating to Australia, beginning in 1901. Subsequent governments of Australia progressively dismantled such policies between 1949 and 1973. For further information, see David Robert Walker,

> The Swill who believed that things could only get far worse before they failed once and for all to get better. Few had ever seen the countryside, let alone the outback. Desert, drought and flies, wasn't it? So, let the Veets, the Chinks and Indons have it. No place for the white man. Not much of a place for the yellow man, either; two-thirds of Australia has been uninhabitable through millennia, and to that area we admitted him.[424]

The vision of the outback as 'Australia's empty hectares' that have been uninhabitable for millennia repeats the notion of Indigenous absence, writing Aboriginal people out of the historical record. Moreover, the outright indifference shown by the Swill illustrates the closed system of this post-apocalyptic settler Australia, where even the marginalised and maligned communities of the Swill enclaves reinforce the selective inclusion and exclusion in the remaining space of the settlement. The attitude of the Swill speaks to the increasingly restrictive attitudes of the Australian public towards Vietnamese refugees, Australia's first officially labelled 'boat people', of the mid to late 1970s. The historian Nancy Viviani has observed the exaggerated anxieties of politicians and bureaucrats over the first boat arrivals of refugees from Vietnam to show that, contrary to the hyperbolic inflation of numbers in political rhetoric during the period, only 2,059 people arrived by boat from Vietnam, out of a total of 57,770 Vietnamese refugees settled in Australia between the years of 1975 and 1982.[425] As such, the 'Asian Relocation' process in *The Sea and Summer* can be viewed as a satirical comment on the increasingly xenophobic tensions in the public and political arena in recent historical purview of the novel's publication.

From a present-day perspective it is impossible to read this section and not be reminded of the human rights disaster that unfolded on Manus Island in Papua New

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Anxious nation: Australia and the rise of Asia 1850-1939 (Brisbane: University of Queensland Press, 1999); Riccardo Armille and Bruno Mascitelli, 'From "White Australia Policy" to "Multicultural" Australia: Italian and Other Migrant Settlement in Australia', *Living in two homes* (Bingley: Emerald Publishing Limited, 2017) pp. 113–134.

[424] Turner, *The Sea and Summer*, p. 33.

[425] Regarding the historical moment of Turner's novel, it's important to add that the White Australia policy was brought to an end in 1973 by the Whitlam government and the official encouragement of Vietnamese immigration. For further information, see Nancy Viviani, *The Indochinese in Australia 1975-1995: From Burnt Boats to Barbecues* (Melbourne: Oxford University Press, 1996); and, *The Long Journey: Vietnamese Migrations and Settlement in Australia* (Melbourne: Melbourne University Press, 1984).

Guinea (PNG), as a more recent example of the negligence of the Australian government towards refugees and asylum seekers.[426] Moreover, the debates taking place at present (2022) between the UK and Rwanda. *In The Sea and Summer*, the brief mention of the 'Asian Relocation' is the last we hear about the climate refugees, who, having gone to desperate and risky lengths to survive, become an obstruction to the nation's future, and therefore, we assume, are left to fend for themselves in the desert. The scene connects to Australia's broader history of violence as a settler colonial nation. Such is the longstanding racial disparity found in Australia's migration histories that the historian Ann Curthoys' has called for the country's histories of migration to be framed as histories of colonisation in acknowledging how entangled these histories are.[427] While these evils long postdate the publication of the novel, the imaginative and physical expulsion of the climate refugees continues to resonate with the invisibility of refugees in Australia's public sphere, which as Ruth Bailint and Zora Simit suggests is 'an invisibility partly imposed by the secrecy surrounding their treatment by official agencies, and partly because they are often living on the margins of Australian society or out of sight in immigration detention centres [and] offshore processing centres'.[428] The reference to these human rights abuses happening 'out of sight and out of mind' points, once again, to the deep forgetting of Australian history involving the oppression of Indigenous peoples and non-white immigrants that is uniquely tied to its apocalyptic imaginary.

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[426] As part of the Australian government's efforts to deter the arrival of asylum seekers by boat to Australia in 2001, Prime Minister John Howard's Coalition government established the offshore processing of refugee claims. Called the Pacific Solution, this policy included an agreement with Nauru and Papua New Guinea's Manus Island for asylum seekers arriving to Australia by boat to be transported to either of these islands where they would wait in camps while their refugee claims were processed. The Manus Island detention centre was found to be illegal by the Papua New Guinea supreme court in 2016 and forcibly shut the detention centre a year later. According to a recent article, in 2021, more than seven years after the last asylum seeker was sent offshore, 235 refugees and asylum seekers remain held within Australia's offshore processing regime. For further information, See Ben Doherty and Tess McClure, 'Discussions are happening to resettle refugees from Australia's offshore regime in New Zealand', 3 June 2021 <https://www.theguardian.com/australia-news/2021/jun/04/discussions-are-happening-to-resettle-refugees-from-australias-offshore-regime-in-new-zealand> [accessed 23 September 2022]; and Rachel Sharples, 'Disrupting State Spaces: Asylum Seekers in Australia's Offshore Detention Centres', *Social Sciences,* 10 (2021) < https://doi.org/10.3390/socsci10030082>.

[427] Ann Curthoys, 'An Uneasy Conversation: Multicultural and Indigenous Discourses', *The Future of Australian Multiculturalism: Reflections on the Twentieth Anniversary of Jean Martin's the Migrant Presence*, eds, by. Ghassan Hage and Rowanne Couch (Sydney: Research Institute for Humanities and Social Sciences, 2006) p. 277.

[428] Ruth Bailint and Zora Simic, 'Histories of Migrants and Refugees in Australia', *Australian Historical Studies*, 49 (2018) 378-409, p. 404.

Amongst other histories therefore, *The Sea and Summer* can be seen to form a dialogue with ongoing traumas related to the resurgence of constrictive nationalisms and closure of borders in face of migratory and refugee flows. As Lester R. Brown and others have observed, a defining characteristic of our time is and will continue to be the flow of environmental refugees: peoples displaced by sea-level rise, ever more-destructive storms, desertification, water shortages and dangerously high levels of toxic pollutants in the environment.[429] In relation to Turner's homeland, the 2014 IPCC Climate Change Report on 'Impacts, Adaptation, and Vulnerability' paints an eerily familiar picture, estimating that 'climate change has the potential to change migration flows within Australasia, particularly because of coastal changes (e.g., from the Torres Straits islands to mainland Australia)'.[430] The report predicts that 'the impacts of climate change in the Pacific may contribute to an increase in the number of people seeking to move to nearby countries […] and affect political stability and geopolitical rivalry within the Asia-Pacific region'.[431] By tracing the connection between the public and political response to refugees of the late twentieth century and now, I hope to have shown the deeper historical currents of colonial-settler violence replete in the Australian environmental apocalyptic imaginary. It is disturbing how such images, traces and references appear in *The Sea and Summer* only to be used and effaced at the same moment, suggested by the fleeting glimpse of Asian climate refugees in the novel's overall narrative. While this might gesture to the horror of such human rights abuses amidst the throes of climate breakdown, it also conveys how, to borrow Corbett's phrasing; 'the past is never past, or how past, present and future cannot be disentangled'.[432]

Environmental apocalypse in *The Sea and Summer* is represented through the recurrent and evolving phenomenon of sea level rise, which comes to frame the broader conditions of environmental and socioeconomic collapse. The flood also helps the reader to navigate the novel's rather complex temporal shifts between the two interchanging narratives. Throughout the novel the rising floodwaters indicate the temporal setting, yet also gesture towards the deep-time of environmental collapse.

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[429] Lester R. Brown, *World of the Edge: How to Prevent Environmental and Economic Collapse* (New York: W.W. Norton & Company, 2011) p. 72.
[430] IPCC: *Climate Change 2014 – Impacts, Adaptation and Vulnerability: Part A: Global and Sectoral Aspects: Working Group II Contribution to the IPCC Fifth Assessment Report* (Cambridge: Cambridge University Press, 2014) p. 1410.
[431] Ibid.
[432] Corbett, 'Nowhere to run' p. 339.

Andra's difficulty at the end of the novel in representing the complex effects of environmental collapse can be seen to mirror contemporary debates in environmental humanities scholarship on the challenges of imagining environmental crisis in narrative terms.

As Andra suggests, this is partially to do with the scale of the environmental crisis, which '[i]n the enormous stretch of history to come the Greenhouse years will rate as little more than an unseasonably hot day'.[433] Andra's comment speaks to the difficulty, or indeed impossibility, in uniting the enormous spatial and temporal scales of climate and environmental change with that more suitable to human comprehension. Timothy Clark argues that the Anthropocene 'enacts the demand to think human life at much broader scales of space and time' than previously offered in conventional narrative form.[434] Clark suggests ecocritical analysis should interpret narratives on the global scale as well as at the personal and local. Following Clark's suggestion, the thousand-year time-frame in *The Sea and Summer* places the human time-spans of the Conway family within a much broader narrative history that incorporates the vastness of planetary and climatic change. However, as Andra's incomprehension of the environmental crisis affirms, such colossal time-scales may also create a feeling of dislocation in the reader. This sense of dislocation is echoed by Andra upon first seeing the ruins of the Swill tenements, where,

> he had been deeply affected by the towers and the sense of an immense past thirty or forty meters below the keel, brought face to face in his creative imagination the vastness of changes that had metamorphosed a planet as mindlessly as cosmic eruptions destroyed and created stars.[435]

Andra's comments and the framework narrative of the Autumn people more generally, demonstrate the difficulties of imagining planetary deep-time on a human scale. While the 'sunken city' presents the reader with a not-so-subtle admonition against the destructive practices of neoliberal capitalism, the passage also evokes environmental collapse as an evolving phenomenon that exists beyond the purview of the human species in the vastness of universal deep-time. The passage further subverts the 'end of the world' narrative as Lena goes on to admonish Andra's view of the impending

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[433] *The Sea and Summer*, p. 361.
[434] Timothy Clark, *Ecocriticism on the Edge*, p. 13.
[435] Turner, *The Sea and Summer*, p. 14.

ice age as a 'second Dark Age', responding, 'Don't be dramatic about history. We're very well equipped to endure a million years of cold. […] An Ice Age is no great tragedy – it is in fact the normal state of the planet'.[436] Lena presents the coming ice age as not the end of the world, but as a condition of the earth's natural cycle, echoing Andra's thoughts on the vastness of the planet's environmental and climactic metamorphosis over millennia.

In this way, *The Sea and Summer* presents a dichotomous narrative that, on one hand utilises the apocalypse genre to warn against the current course of action in the reader's world in pointing towards a clear linear causality. On the other hand, the novel also proposes a nonlinear temporality in which the earth exists in ongoing and self-organising transformation. As such, Turner puts forward a planetary framework that adheres to a conceptualisation of space and time that extends beyond the strictures of the Anthropocene. Indeed, Wai Chee Dimock describes 'planetary time' as 'temporal length joined with spatial width'.[437] It is 'both cumulative and nonsequential' and bears markers of every moment in history concurrently.[438] Moreover, as Kelly Frame suggests

> [t]he macrocosmic scope of a planetary framework reasserts the importance of ecological history (and futurity). […] [T]his 'big picture' approach to history observes the fundamental interconnectedness between people, societies and cultures, without eliding the predatory and exploitative nature of some of these interactions.[439]

From this perspective, the Autumn People's concept of the planetary would see them struggle to understand the exploitative logics of capitalism, with its insistence on ever-expanding production, consumption and profit, that led to environmental collapse in the twenty-first century. At the same time, Turner's conceptualisation of deep-time and the planetary establishes a clear connection between the Autumn People and a quasi-Indigenous notion of time, which is predicated on a dialogical folding that shows forward motion to be unpredictable and uneven. This is further explicated when we

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[436] Ibid.
[437] Wai Chee Dimock, 'Planetary Time and Global Translation: 'Context' in Literary Studies', *Common Knowledge* 9 (2003) 488-507, p. 492.
[438] Wai Chi Dimock, 'Literature for the Planet', *PMLA* 116 (2001) 173-188, p. 182.
[439] Kelly Frame, "'The Last Place": The Uncanny Australia of David Mitchell', *Antipodes* 31 (2017) 4-15, p. 4.

learn that Andra has an unmistakable 'strong Aboriginal strain', and that 'his dark skin made it necessary […] to use a heavy Caucasian makeup for most roles'.[440] This fleeting and singular explicit mention of Indigenous presence in the novel underscores a racialised inscription of Indigenous peoples, which we also see in reference to the 'dark skin' of the Swill characters. It is interesting that the novel's only explicit description of Australian Aboriginal Indigeneity is repressed with white Caucasian makeup even in the future idealised state of the Autumn People, suggesting that colonial oppression continues to mask Indigenous presence despite the fact that Aboriginality is connoted positively within the context of the Autumn People as a sustainable and resilient survivor society.

I have attempted to show how the absence of Indigenous presence in *The Sea and Summer*, in which instances of dispossession, forced relocation and imaginative works of community expulsion, feature as reminders of the continuation of settler-colonial rule. Yet, *The Sea and Summer* remains conspicuously white, suggesting the same sense of historical amnesia which has furthered colonial-settler privilege in the environmental apocalyptic imaginary. Whyte speaks directly to the non-Indigenous writer of apocalyptic fictions when he asserts that '[d]etachment erases the fact that Indigenous peoples everywhere have been through repeated apocalypses'.[441] While it is possible to ascertain the trace of imperialism and settler colonialism in the violence endured by the Swill, *The Sea and Summer* ultimately conforms to the problematic notion of repeated apocalypse. I hope in addressing the instances of concealed Indigenous dispossession in the depiction of the social caste system in *The Sea and Summer,* I have posed a challenge to twenty-first century environmental apocalypse narratives to be attentive to the veiled histories of settler colonial capital replete in the genre.

These veiled histories also work to muddy the tensions between the apocalyptic and prophetic tendencies of Turner's novel, suggesting that past, present and future cannot be extricated from one another. Within this perspective, the emergence of the more sustainable, if not utopian, world of the Autumn People in the wake of the collapse brought about by climate change does not function as a bold new start for humanity. Yet, neither does the depiction of near future environmental

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[440] Turner, *The Sea and Summer*, p. 5.
[441] Whyte, 'Indigenous science (fiction) for the Anthropocene: Ancestral dystopias and fantasies of climate crises', p. 238.

breakdown, social injustice and authoritarian governance function as a prophetic warning when placed against the future anterior position of the Autumn People. Rather, hints of what we as readers would consider epoch making events have become part of an accumulative temporality which includes the Autumn People's own time. These tensions are never resolved within the novel itself, however the veiled histories of settler-colonialism *The Sea and Summer* point to the effects of climate change as just one of the many interrelated calamities to be suffered by Australia's Indigenous citizens, which readers would do well to acknowledge. Such an acknowledgment however, also entails an acknowledgement and reckoning with the collective trauma of ecological loss and dispossession that haunt the environmental past, present and future. In the next chapter therefore, I turn to the resonance and relevance of the flood narrative in contemporary climate fiction in terms of how it conveys and shapes ecological grief.

CHAPTER FOUR: ECOLOGICAL LOSS AND GRIEF IN THE FLOOD NARRATIVE

‘Only if you love something will you inconvenience yourself to work on its behalf’.
Barbara Kingsolver[442]

The protagonist of Barbara Kingsolver’s *Flight Behaviour* wakes one morning to realise that the butterfly species she has sought to protect may have perished overnight. An unprecedented cold snap has brought snow to her Appalachian homestead where the last vestiges of the monarch butterfly species have settled. As she begins to accept the possibility that the butterflies might not survive the snow, she is overcome with an anticipatory grief.[443] Her grief metamorphoses pages later into an actual or imagined flood that engulfs the homestead. In its imagined instance of inundation, *Flight Behaviour* evokes the collective trauma of ecological loss and dispossession that flow from climate crisis. While floods are often represented as the consequences of climate crisis in contemporary ecologically engaged fiction, they are also used in metaphorical explorations of ecological grief and mourning, as I’ll explore in this chapter.

Indeed, the escalating scale of the climate crisis and its attendant losses presents severe impacts to global mental health.[444] ‘We are entering a time when ecologically based mourning seems likely to occupy more and more of our experience’, Ashlee Cunsolo and Karen Landman observe in their introduction to *Mourning Nature* (2017).[445] Thinking through the complexities of ecological grief, they ask: ‘How do we even register the grief, and how do we accept what we have

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[442] Lidija Haas, ‘Barbara Kingsolver: “It feels as though we’re living through the end of the world”’, *The Guardian*, 8 October 2018 <https://www.theguardian.com/books/2018/oct/08/barbara-kingsolver-fells-living-through-end-of-world> [accessed 13 May 2020].
[443] Barbara Kingsolver, *Flight Behaviour* (New York: Harper Collins, 2012) p. 571.
[444] See following for discussion on climate crisis and mental health:
Katie Hayes, G. Blashki, J. Wiseman, S. Burke, L. Reifels, ‘Climate change and mental health: risks, impacts and priority actions’, *International Journal of Mental Health Systems*, 12 (2018) 1-12;
Susan Clayton, Christie Manning and Caroline Hodge, ‘Beyond Storms and Droughts: The Psychological Impacts of Climate Change’, *American Psychological Association and ecoAmerica* (2014); Lawrence Palinkas and Marleen Wong, ‘Global climate change and mental health’, *Current Opinion in Psychology*, 32 (2019) 12-16; Glen Albrecht, ‘Chronic Environmental Change: Emerging ‘Psychoterratic’ Syndromes’, *Climate Change and Human Well-Being: Global Challenges and Opportunities,* ed, by. Inka Weissbecker (New York: Springer, 2011) pp. 43–56.
[445] Ashlee Cunsolo and Karen Landman, *Mourning Nature: Hope at the Heart of Ecological Loss and Grief*, eds, by. Ashlee Cunsolo and Karen Landman (Montreal: McGill-Queen's University Press, 2017) p. 6.

done and for which we are responsible?'.[446] A necessary part of rethinking grief in response to anthropogenic climate crisis involves the ways in which grief and loss are narrativized and expressed through story-telling. Since stories, as the affective narratologist Patrick Colm Hogan puts it, 'are fundamentally shaped and orientated by our emotion systems', they are ideally suited for helping us navigate the complex spatiotemporal scales of ecological grief.[447] Therefore, a clearer understanding of the ways flood metaphor and imagery is used and how it works to shape emotional experience is necessary to evaluate the efficacy of the flood narrative from a perspective of environmental concern. More specifically, I want to examine how an affective reading of the flood narrative might communicate and foreground the connections between environmental and social justice that are needed to reach across ideological, scalar and species boundaries in order to find common ground in this new geologic epoch.

In this chapter, I focus on the relationship between flooding and grief in two ecologically engaged contemporary novels: Kingsolver's *Flight Behaviour* and Mireille Juchau's *The World Without Us*. I argue that floods feature as literal consequences of climate and environmental crisis, but also come to shape the environing mood and affective structure of the texts as they illustrate the impacts of ecological loss on communities and familial environments. As I explain in the following section, this chapter draws on the interdisciplinary field of affect theory to ascertain the emotions that circulate around environmental issues in our contemporary moment, and to investigate the role environments themselves play in shaping affective experience. The affective turn in ecocriticism draws on contemporary studies in the emotions and affect to understand and respond to environmental crisis. In particular, Raymond Williams' term 'structures of feeling' is often cited a foundational moment in affect studies.[448] Williams referred to this phrase to facilitate an historical understanding of the 'affective elements of consciousness and relationships: not feeling against thought, but thought as felt and feeling as thought' in response to the cultural moods that circulate in a given era and are primarily accessible, or palpable,

[446] Cunsolo and Landman, *Mourning Nature*, p. 6.
[447] Patrick Colm Hogan, *Affective Narratology: The Emotional Structure of Stories* (Lincoln: University of Nebraska Press, 2011) p. 1.
[448] Williams first coined the term in *Preface to Film* (1954), but developed a fuller explanation in *Marxism and Literature* in 1977. For further information on the term in relation to affect theory, see Kyle Bladow and Jennifer Ladino, *Affective Ecocriticism: Emotion, Embodiment, Environment* (Lincoln: University of Nebraska Press, 2018).

through its literature and art.[449] While affect theorists have tended to prioritize affect within and in relation to bodies, new scholarship in the environmental humanities has focused on the environment's role in shaping affect and the complex ways in which the influence our emotional lives.[450] In line with this recent scholarship, I shall utilise an affective ecocritical approach to think through the roles of physiology, environment and metaphor in producing emotional experience. I explore the ways that *Flight Behaviour* and *The World Without Us* draw upon the affective nature of floods (engulfing, immersive, volatile, overwhelming) to reflect the intensity of grief as an embodied experience. In this way, both novels reveal the ways in which human emotions are deeply embedded within and shaped by nonhuman ecologies. As such, I argue that *Flight Behaviour* and *The World Without Us* use flood narratives as a way to visually connect their characters to ecological others, and thus to a sense of shared loss and vulnerability.

In *Thinking With Water* (2013), Cecilia Chen, Janine MacLeod and Astrida Neimanis observe that the representative meanings of floods accrue from personal and culturally collective experience: 'When I say I am "flooded" with grief, for example, the quality of my sadness gets mingled with the sensual and associative resonances of a submerged dike, levee, or coastline – or perhaps the messiness and mould of an inundated basement'.[451] By relating the emotion of grief to the material properties of flooding, these writers draw attention to grief as an embodied response to sensory stimuli, which is shaped by language as well as personal and collective memory. Yet, the flood metaphor also suggests the intensity of grief in its precognitive state as a force upon the body. Indeed, the affect theorist Eugenie Brinkema observes that the word grief is derived from 'the Latin *gravare* (to cause grief, make heavy) – hence the etymological intimacy of *grief* and *gravity,* both from *gravis* (weighty)'.[452] Grief is characterised, Brinkema asserts, by 'a pressure on the body, dragging the body down to earth like gravity, a vector of invisible force pulling down and down further still'.[453] Grief is thus defined as a weighty force on the body that disrupts or challenges forward motion. The flood thus represents grief in its unnarratable state as an overwhelming,

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[449] Raymond Williams, *Marxism and Literature* (Oxford: Oxford University Press, 1977) p. 132.
[450] See, Kyle Bladow and Jennifer Ladino, *Affective Ecocriticism: Emotion, Embodiment, Environment.*
[451] Cecilia Chen, Janine MacLeod and Astrida Neimanis, *Thinking With Water*, eds (McGill-Queen's University Press, 2013) p. 10.
[452] Eugenie Brinkema, *The Forms of the Affects* (Durham: Duke University Press, 2014) p. 73.
[453] Ibid, p. 73.

violent and largely unpredictable bodily feeling. Similarly, I argue that while floods are one of the predominant ways in which ecological loss is manifested in *Flight Behaviour* and *The World Without Us,* they also work on a metafictional level to visually illustrate the unnarratable force of grief on their characters. Floods can thus be seen to simulate the affective experience of grief that enables the reader to empathetically respond to the novels' depictions of ecological loss.

It is worth noting here that *Flight Behaviour* and *The World Without Us* are not the only contemporary novels to explore ecological loss through the centrality of flood imagery and metaphor. In Maggie Gee's 2004 novel *The Flood,* for example, rising waters in London leave behind 'a great muddle of loss and forgetting'.[454] Similarly, in Natasha Carthew's *All Rivers Run Free* (2018) a girl contemplates the fragility of existence as she floats through a flooded Cornish landscape, seeing '[s]o many trees, living yesterday dead in the water, their trunks coming up mortis'.[455] The continued resonance and relevance of the flood metaphor as a narrative device in contemporary climate fiction deserves further assessment in terms of how it conveys and shapes ecological grief. In what follows; therefore, I will briefly turn to recent research in cognitive linguistics and affect theory to better apprehend the role of metaphor in emotional experience. As neuroscientists have evidenced, we process stories with a cognitive apparatus that is not wholly separate from our bodily feelings.[456] An ecocritical analysis attuned to the cognitive and affective role of reading is thus important for shedding light on the ways readers are cued empathically to imagine and feel a character's sense of grief as they bear witness to losses in the environment. This critical framework provides a means to reevaluate the role of metaphor in the affective transference of emotion from novel to reader.

4.1 FLOODING: A GRIEF METAPHOR

The American historian of science Laura Otis begins her introduction to *Banned Emotions: How Metaphors Can Shape What People Feel* (2019) by drawing on the

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[454] Maggie Gee, *The Flood* (London: Saqi Books, 2004) p. 109.
[455] Natasha Carthew, *All River's Run Free* (London: Quercus Editions Limited, 2018) p. 63.
[456] For further information, see Freedberg, David, and Vittorio Gallese. "Motion, Emotion and Empathy in Esthetic Experience." *Trends in Cognitive Sciences* 11:5 (2007) pp. 197–203. And Currie, Gregory. "Empathy for Objects." In *Empathy: Philosophical and Psychological Perspectives.* Eds. Peter Goldie and Amy Coplan. New York: Oxford University Press, 2011. pp. 82-95.

connections between metaphor, embodied experience and cultural memory. Discussing the latest research in neuroscience and psychology, Otis investigates how emotion metaphors (i.e., metaphors pertaining to specific emotional responses), affect people's emotional experiences as cognitive instruments. In this way, metaphors not only describe reality, but work in a given culture to structure experience. 'By offering tools to structure perception', Otis explains, metaphors 'build the realities that people know'.[457] In order to illustrate this hypothesis, Otis notes how many metaphoric expressions for emotion in English emerge from a central, conceptual metaphor that in almost all cases reflects physiological or embodied experience. 'Close analysis of emotion metaphors' Otis contends, 'promises to reveal how cultures influence emotional experiences. Often these cultural modes affirm physiological ones […] But sometimes the cultural patterns defy biology – as in the striking Western tendency to depict emotion as separate from the self'.[458] Quoting the linguist Zoltán Kövecses, Otis observes that metaphors depicting emotions as natural forces or opponents imply that emotion 'is capable of independent existence from a person' and 'has to be controlled'.[459]

Turning to the Christian tradition for examples, Otis argues that thinking metaphorically about emotions as alien forces appears rooted in cultural teachings that have persisted and adapted as those cultures have evolved. This also raises the question of whether myths, in Christian tradition and elsewhere, can be interpreted as metaphor, as I discussed in Chapter One and Two. If so, does continued allusion to the biblical flood myth in portrayals of climate and environmental crisis assimilate grief as a forcible threat to the body? Does it facilitate a connection with how we think about environmental based grief and mourning beyond the human?

The opening verses to the biblical flood story reveal the flood as material manifestation and consequence of God's grief over the sin of humankind, rather than rage:

> The Lord saw that the wickedness of humankind was great in the earth, and that every inclination of the thoughts of their hearts was only evil

[457] Laura Otis, *Banned Emotions: How Metaphors Can Shape What People Feel* (Oxford: Oxford University Press, 2019) p. 12.
[458] Ibid, p. 22.
[459] Ibid, p. 25.

continually. And the Lord was sorry that he had made humankind on the earth, and it *grieved* him to his heart".[460]

Here, grief is uttered but not communicated through affective language. The flood occurs because God is grieving, leading the reader to associate the emotion of grief with the threat of water to overwhelm, submerge and suffocate. From an ecocritical perspective, Otis's analysis presents a central dilemma to the way the flood metaphor is used to give shape to ecological grief in a time of climate crisis. While the flood metaphor can draw attention to the intensity of grief as an embodied response to sensory stimuli, and therefore highlight affective relationships to the environment, it can also accentuate grief as a separate entity from the self, or as an oppositional and threatening force. As such, careless use of the flood metaphor as a vehicle for ecological related grief may work to undermine the holistic connection between the individual and the environment in the climate novel.

I demonstrated throughout this thesis how the open-ended structure of the biblical flood story is utilised in novelistic depictions of flooding to preserve an open space of undetermined possibility or serve as a challenge for remedial transformation. The flood disrupts the linear, progressive movement of the mythic narrative, allowing the reader a moment of pause to imagine an alternative to the conditions of society already in place. If we interpret the flood myth as metaphor, the affective link between the flood and grief implies the idea that grief has the power to disrupt business as usual. The disruptive force of grief in *Flight Behaviour* and *The World Without Us* is similarly represented by the floods that rupture the progressive movement of the narratives. Floods thus hold readers in a present-continuous state of ecological loss, and invite the reader to empathise with the characters' grief. In this way, the floods in *Flight Behaviour* and *The World Without Us* could be understood as examples of what Timothy Morton defines as 'ecological elegy', insofar that they 'mobilise some kind of choke or shudder in the reader that causes the environmental loss to stick in [the] throat, undigested'.[461] As such, I argue that both novels deploy an intentional, melancholic elegiac register that compels readers to dwell on the unaccountable and unjust losses of the climate crisis in their climactic closing floods.

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[460] King James Bible, Genesis 6:5-7.

[461] Timothy Morton, *Ecology Without Nature: Rethinking Environmental Aesthetics* (Cambridge: Harvard University Press, 2007) p. 256.

In order to foreground the connections between grief and flooding in *Flight Behaviour* and *The World Without Us*, I will turn now to scholarship on affect in ecocriticism and grief studies. In the introduction to their book on the subject, Kyle Bladow and Jennifer Ladino delineate affect theory from an ecological standpoint. Affect theory in this vein 'disrupts both discrete notions of embodied selfhood and static notions of environment', they explain, 'encouraging us to trace the trajectories of corporeal encounters that are intricate and dynamic'.[462] Affect then is defined as ecological 'by nature', because it operates at the confluence of environments, texts and bodies.[463] Affect can be distinguished from emotion therefore, because it resists the structures of narrativization and domestication.[464] Whereas emotion is tied to a subject, remaining embodied and personal, affect is virtual and, as Brian Massumi notes, is also 'infrastructural': 'a real condition, an intrinsic variable of the late-capitalist system, as infrastructural as a factory'.[465] Affect, in other words, is a feeling of the world because it involves 'the transpersonal or prepersonal intensities that emerge as bodies affect one another'.[466] In this way, affect theory helps to demonstrate the role of environments, texts and bodies in producing and shaping affect, which can in turn create a clearer sense of the production of emotion as 'consciously interpreted or narrated affects'.[467] Affect scholars have only in recent years begun to discuss the significance of environments in generating affects, most notably with the contributions made in Bladow and Ladino's edited collection, *Affective Ecocriticism: Emotion, Embodiment and Environment*.

Yet, affect theory was preceded by several decades by the 'ecological aesthetics' of Gernot Böhme, a leading figure in contemporary German ecological thought. Böhme argues that in order to reposition ourselves as allies of the natural world, we must first learn a different type of knowledge premised on recognition, or as Rigby explains in her reading of Böhme, 'a carnal kind of knowing, whereby we come to understand the other, if never fully, on the basis of a relationality that is given in and through our shared physical existence'.[468] Böhme contends that consciously

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[462] Kyle Bladow and Jennifer Ladino, 'Towards an Affective Ecocriticism: Placing Feeling in the Anthropocene', *Affective Ecocriticism: Emotion, Embodiment, Environment*, p. 8.
[463] Ibid.
[464] Brian Massumi, 'The Autonomy of Affect', *Cultural Critique* 31 (1995) 83–109, p. 88.
[465] Ibid, p. 106.
[466] Ben Anderson, 'Affective Atmospheres', *Emotion, Space and Society*, 2 (2009) 77-81, p. 78.
[467] Bladow and Ladino, 'Towards an Affective Ecocriticism', p. 5.
[468] Kate Rigby, 'Gernot Böhme's Ecological Aesthetics of Atmosphere', *Ecocritical Theory: New European Perspectives*, eds, by. Axel Goodbody and Kate Rigby (Charlottesville and London: University of Virginia Press, 2011) pp. 140-152, p. 141.

attuning the body to 'the nature that we ourselves are not' is an essentially ethical task because it entails learning and cultivating a heightened sense of bodily existence.[469] In other words, it means attending to how you feel in the flesh, from moment to moment. As Rigby notes, '[t]he articulation and theorisation of this attentive sensing of one's own bodily existence in the presence of other people, things and places constitutes the core concern of Böhme's ecological aesthetics'.[470] A key concept of Böhme's ecological aesthetics is extended from Hermann Schmitz's 'new phenomenological' work on atmosphere. In his analysis, Schmitz posits that feelings do not originate inside the self; but, are given to experience as 'unlocalized, poured forth atmospheres [...] which visit (haunt) the body which receives them [...] affectively, which takes the form of [...] emotion'.[471] Atmospheres, in Schmitz's reading, are 'affective powers of feeling, spatial bearers of moods', that constitute the 'space of feeling' or 'mood'.[472] In Böhme's ecological aesthetics, however, Schmitz's notion of atmosphere as detached from things and unlocalised in space is overturned.

Drawing on Aristotle's notion of *ekstasis*, that is, how things spread out from themselves and manifest through the perceptions as a particular quality, such as size, shape or smell, Böhme asserts that 'no other is ever fully present to us', yet 'in their "ecstasies", people, things and places "tincture" the environment in which they are perceived, and in doing so, generate "atmospheres"'.[473] Atmospheres are thus apprehended as an 'impression', or affect in the sense that things, environments, people might alter our current mood or disposition, filling us with melancholy, grief, sadness or joy. As Böhme writes, in these instances

> We are most likely to become aware of the spatial dimension of feeling on first entering a place with an atmosphere markedly different from the one we have left ('ingression'), or at those times when a prevailing atmosphere contrasts strongly with our own pre-existing mood ('discrepancy').[474]

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[469] Ibid, p. 143.
[470] Ibid.
[471] Qtd in Gernot Böhme, 'Atmosphere as the Fundamental Concept', trans by David Roberts, *Thesis Eleven* 36 (1993) 113–26, p. 119.
[472] Böhme, 'Atmosphere as the Fundamental Concept', p. 119.
[473] Ibid, p. 122.
[474] Ibid.

By becoming more attentive to our emotional affectedness by an atmosphere, generated by something, someone or someplace, Böhme suggests that we might recognise ourselves as sharing with them a physical existence as a bodily being. Attending to a sense of our own corporeality, we discover that we are ecological selves, existing in shared environments with others by whom or which our psycho-somatic disposition is inevitably inflected. This chapter enters into such discussions by reconceiving the affectiveness of ecological based grief in spatial terms, namely through the form of the flood. Before I continue to discuss the 'affective turn' in grief studies, however, it is worth noting how novels and the act of reading can generate an affective response.

In their analyses of atmosphere, Graig Uhlin and Jesse Oak Taylor both turn to Hans Ulrich Gumbrecht's term *Stimmung* to illuminate the ways literary atmosphere is fundamental both to the sense in which the reader is enveloped by the storyworld, and the work's ability to manufacture corporeal, embodied sensation. *Stimmung* refers to the subjective 'mood' and objective 'climate' of a literary atmosphere, insofar that reading for *Stimmung* 'means paying attention to the textual dimension of the forms that envelop us and our bodies as a physical reality – something that can catalyse inner feelings without matters of representation necessarily being involved'.[475] By distinguishing the affective quality of atmosphere in a novel from mere representation, Gumbrecht suggests rethinking how a literary work 'produces effects upon (and affects within) the reader'.[476] For Uhlin in his reading of cinematic atmospheres of depletion, atmosphere typifies 'the affective quality of environments both internal and external to a text, and the possible relations between them', in a similar way to Böhme's ecological aesthetics.[477] Thinking about the floods in *Flight Behaviour* and *The World Without Us* atmospherically requires attending to the ways in which they cue the reader to empathetically imagine, and thus feel, an affective involvement in loss and ecological collapse. In his paper on 'affective atmospheres', the geographer Ben Anderson develops Böhme's reading of atmosphere as an aesthetic concept to discuss the links between affect and meteorological bodies in the material imagination. Atmosphere as a meteorological phenomenon, Anderson contends, is useful for

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475 Hans Ulrich Gumbrecht, *Atmosphere, Mood, Stimmung: on a Hidden Potential of Literature*, trans, by. Erik Butler (Palo Alto: Stanford University Press, 2012) p. 5.
476 Jesse Oak Taylor, 'Atmosphere as Setting, or, "Wuthering" the Anthropocene', Climate and Literature, ed, by. Adeline Johns-Putra (Cambridge: Cambridge University Press, 2019) pp. 31-44, p. 37.
477 Ibid, p. 280.

thinking about the affective interplay between feeling, sensation and environment due to its 'ephemerality and instability'.[478] As a product of combined environmental, affective, political and other material forces, the concept of atmosphere 'reminds us that intensities remain indefinite even as they effect'.[479] Indeed, by linking the term to a certain material imagination, Anderson argues that 'we reach a first approximation of atmosphere as collective affects that are simultaneously indeterminate and determinate'.[480]

In this way, atmosphere 'marks a crucial point of intersection between the world described by the work and the functional formal properties of the work', as Jesse Oak Taylor explains in another context.[481] For example, *Flight Behaviour* opens with unprecedented and extended rainfall that has flooded the Appalachian region in which the characters live. The narrator describes how rain has upended trees as their roots become waterlogged and caused 'landslide[s] of splintered trunks, rock and rill' throughout the region.[482] The reader is cued to view the rain as weighty as it pushed down all living beings, whether human, plant, or animal to the point of collapse: the 'orchard painstakingly planted by the neighbours', is 'dying under the rain'.[483] The narrator, a young mother and farmer's wife called Dellarobia Turnbow, notes that 'after so much rain upon rain […] massive trees were keeling over in the night to ravage a family's roofline or flatten the car in the drive'.[484] The visual imagery of the unrelenting weather in the novel's opening pages are concrete and makes the reader feel the extent of the disaster by weighing upon both the mind and the body of the reader. Yet, the weather also contributes to the reader's understanding of the protagonist's sense of monotony and claustrophobia in regard to her domestic situation. Indeed, she looks at the sky as a 'dull, stippled ceiling', 'nailed up […] like a lousy drywall', while a collapsed tree signals to her a feeling of desire that is explicitly linked to her longing for escape: 'Maybe she craved collapse, with an appetite larger than sense'.[485]

The atmospheric weather conditions appeal to the sensual perception and embodied cognition of the reader in order to immerse them into the storyworld, and

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[478] Ben Anderson, 'Affective Atmospheres', p. 78.
[479] Ibid.
[480] Ibid.
[481] Taylor, 'Atmosphere as Setting or, 'Wuthering' the Anthropocene', p. 37.
[482] Kingsolver, *Flight Behaviour*, p. 7.
[483] Ibid, p. 2.
[484] Ibid, p. 7.
[485] Kingsolver, *Flight Behaviour*, p. 2.

into an emotional identification with Dellarobia. As readers, we understand the atmospherics of the storyworld because our cognition 'is deeply dependent on features of the physical body as an agent'.[486] Moreover, cognitive scientists such as Vittorio Gallese have suggested these processes of 'embodied simulation' play a crucial role in our engagement with aesthetic response as well as with the physical world. The concept of embodied simulation, Gallese explains, involves 'the activation of embodied mechanisms encompassing the simulation of actions, emotions and corporeal sensation'.[487] This means that reading is a highly embodied activity, which requires our senses in order to perceive what is written on the page, as well as our bodies that act as 'sounding boards' as we mentally simulate the textual world and the characters' perceptions, actions and emotion within it. Thus, while rain denotes an external sense of climactic depression (pressing down), it simultaneously mirrors the internal feeling of depression (feeling down), which we as readers *feel along* with Dellarobia. As cognitive literary scholar Gabrielle Starr reminds us, aesthetic experience always employ the senses (as well as sensory analogues in imagination) and we are not apathetic to that experience. Sensory perceptions merge with emotions, Starr asserts, 'but aesthetic experience also engages personal experience, prior knowledge, and evaluative judgements'.[488] In this way, the visual and motor imagery of a landscape collapsing in on itself by the pressure of unyielding rain in *Flight Behaviour* evokes sensual perception of the heaviness of the rain that most readers will associate with the feelings of depression or feeling down.

Moreover, the first-person perspective allows the reader to share in Dellarobia's subjective experience of the atmospheric conditions, simulating her visual perception of the rain battered landscape, as well as its emotional effect on her. The merging between one's own body and that of another in reading a first-person narrative, is what Freedberg and Gallese call embodied simulation.[489] Novelistic atmosphere, as a 'space of feeling', translated by the reader through embodied sensation, is significant in generating salient emotional responses in the reader, which

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[486] Robert A. Wilson and Lucia Foglia, 'Embodied Cognition', *Stanford Encyclopaedia of Philosophy,* 2021 < https://plato.stanford.edu/entries/embodied-cognition/> [accessed 21 October 2021]

[487] David Freedberg and Vittorio Gallese, 'Motion, Emotion and Empathy in Esthetic Experience', *Trends in Cognitive Sciences,* 11 (2007) 197–203, p. 197.

[488] Gabrielle G. Starr, *Feeling Beauty: The Neuroscience of Aesthetic Experience* (Cambridge: MIT Press, 2013) p. 18.

[489] David Freedberg and Vittorio Gallese, 'Motion, Emotion and Empathy in Esthetic Experience'. p. 197.

has the potential to aid in the formation of ethical orientations and ecosocial praxis. As I discuss in the last part of this chapter, the atmospheres created by *The World Without Us* and *Flight Behaviour,* as an aesthetic experience, expresses a perceptible feeling of loss that encompasses not only the emotional state of the novel's characters, but is part of its storyworld. In the next section, therefore, I turn to the intersections between affect theory and grief studies to examine the potential of the flood narrative as an effective pedagogical strategy for rethinking the ethics of ecological related grief and mourning.

4.2 The Affective Turn in Grief Studies

The 'affective turn' in grief studies takes inspiration, in part, from Jacques Derrida's work on mourning as he moves beyond the psychoanalytic framework Freud put forward in *Mourning and Melancholia* (1917). It is worth noting here that Freud's theory of mourning still underlies many of the discourses on the topic of grief work. Yet, his theory is premised on there being a dichotomy between mourning, as the process of grief over a loss that has the potential to become resolved, and melancholia, defined as mourning that is not 'successful' and has become a pathological condition of the subject.[490] In Freud's view, loss entails the rupture of a libidinal attachment as the beloved object is no longer accessible, or rejects, our love. In an attempt to preserve the object, we integrate it into ourselves, and in doing so internalise the attachment. In disagreement with Freud, Derrida suggests that to internalise someone through memory denies them their autonomy, but he also concedes that to fail to remember them supports the loss of them completely. Derrida contends that through a traditional psychoanalytic understanding of mourning we internalise or else replace the other, and therefore, undergo the process of loss for a second time, while also diminishing the alterity of that which we mourn. As such, Derrida proposes holding on to a sense of the irreclaimable and lost.[491] In this sense, 'mourning is about recognising all we have to give to mourning, to the dead, to what we have lost, is in our own living and our own acts of mourning and remembering'.[492] Mourning in the Derridean sense exposes

[490] Sigmund Freud, 'Mourning and Melancholia', *On Freud's 'Mourning and Melancholia',* eds, by. Laticia Glocer Fiorini, Thierry Bokanowski and Sergio Lewkowicz (London: International Psychoanalytical Association, 2007), pp. 19-34.
[491] Jacques Derrida, *Specters of Marx: The State of the Debt, the Work of Mourning, and the New International*, (London: Routledge, 1994).
[492] Cunsolo and Landman, *Mourning Nature*, p.10.

our affective relations and connections to others through recognition of our shared exposure to loss. In this understanding of mourning, grief becomes a transformative and affecting response to loss. Many scholars in the environmental humanities, such as those I have previously mentioned, have begun to reconceptualise how feelings of grief might be harnessed to alter public perceptions of climate crisis and human relationships with the biosphere. For example, in *Ecology Without Nature* (2007) Morton explores the ethics of a 'politicized melancholy' as an activist and pedagogical approach to environmental justice issues.[493] 'Now is a time for grief to persist, to ring throughout the world', writes Morton in his call to embrace elegiac or resistant mourning practices.[494]

As Patricia Rae points out in her 2007 work *Modernism and Mourning,* such 'resistant' and politicised elegy leaves the work of mourning 'unresolved without endorsing evasion or repression', and in so doing, portrays 'the failure to confront or know exactly what has been lost as damaging'.[495] Rae examines the politicizing potential of 'resistant elegies' of the twentieth and twenty-first centuries, particularly anticonsolatory elegiac responses to the Spanish Civil War and Second World War. These works of public and political mourning, Rae argues, emphasise an insistence on remembering and residing in the pain of excessive loss, in order to ensure that such losses are never repeated. As such, Rae observes that elegiac resistant strategies refuse 'narratives and tropes that would bring grief through to catharsis, thus provoking questions about what caused the loss, or about the work that must be done before it is rightly overcome'.[496] This purposeful sense of mourning is unsettling in its refusal to seek consolation, yet in doing so it attempts to 'prevent a preventable catastrophe from becoming assimilated into the order of things'.[497] Rae's work, while not speaking directly to ecological justice issues, highlights the ethical potential of narrativized grief and mourning to effect social and environmental activism in its refusal to acquiesce to future ecological losses. By provoking questions about what has been lost and the work that must be done to prevent future losses, Rae argues that these works of 'resistant' mourning, 'encourage work for positive social change'.[498]

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[493] Morton, *Ecology Without Nature*, p. 255.
[494] Ibid, p. 185.
[495] Patricia Rae, *Modernism and Mourning* (Lewisburg: Bucknell University Press, 2007) p. 22.
[496] Rae, *Modernism and Mourning*, p. 22–3.
[497] Ibid, p. 18.
[498] Ibid, p. 23.

While empirical studies in psychology and social anthropology have begun to document the mental health impacts associated with climate crisis, many scholars have also suggested the need for a new taxonomy of language to express the complexity of emotional experiences resulting from planetary decline.[499] The philosopher Glen Albrecht, for example, explains that '[a]s the global environment changes at an exponential rate, we need novel Earth-related concepts to give expression to our feelings about such change'.[500] He adds ecoanxiety, nature deficit disorder, ecoparalysis, solastalgia, eco-nostalgia, global dread and climate or ecological grief to an expanding psychoterratic (psyche-earth) typology of Earth-related emotions.[501] As such, the ecological or 'resistant' elegiac mode may have an increasingly strong relevance in our fraught contemporary world as ecological related grief and mourning begin to occupy greater lived experience. Similarly, Morton highlights the importance of an environmental language that accounts for the anticipatory grief arising from ongoing and gradual environmental degradation. Given the 'loss of species, of habitats, of old forms of life,' he writes, '[e]nvironmental language […] speaks elegies for an incomplete process, elegies about events that have not yet (fully) happened […] becoming elegies for the future'.[502] Narrative plays an important role here in giving context to the manifold experiences of ecological loss that will occur at different levels and intensities over the course of a person's lifetime. Stories can thus communicate ecological loss in such a way as to create an affective involvement in the feeling of grief. Citing Jacques Derrida, Thom van Dooren asserts that elegiac or 'storied-mourning' refuses to seek consolatory strategies for recovering from loss, but offers the reader the possibility of mourning as a 'deliberate act of *sustained* remembrance' that requires the reader to 'interrogate how it is that we might "live *with* ghosts"'.[503] This kind of mourning demands that the reader confront the dead and to their unintentional contribution to the escalating suffering, loss, and extinctions caused by climate change.

Extending van Dooren's and Morton's theoretical work on narrativized grief and mourning, I offer *Flight Behaviour* and *The World Without Us* as two novelistic examples that present anticipatory loss and grieving within a resistant, elegiac register.

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[499] Glen Albrecht, 'Solastalgia and the New Mourning', p. 309.
[500] Ibid, p. 309.
[501] Ibid, p. 294.
[502] Morton, *Ecology Without Nature*, p. 254.
[503] Thom Van Dooren, *Flight Ways: Life and Loss at the Edge of Extinction* (New York: Columbia University, 2004) p. 142-3.

In doing so, I hope show how climate novels use flood imagery as a metaphorical and material manifestation of grief in order to convey the collective loss of mass extinction and the diminishment of biodiversity. For example, in *Flight Behaviour*, the protagonist's 'preliminary' or 'proleptic' grief over the butterflies' threatened extinction compels her to defend their new habitat from being destroyed by loggers.[504] Similarly, in *The World Without Us*, grief for the gradual loss of the forest seeps into the novel's concerns about intergenerational justice. In both examples, grief is shown to effect a movement beyond human exemptionalism and exceptionalism towards a deeper consideration of the transcorporeal connections between humans, nonhuman entities and ecologies.

Environmental loss thus leads the characters to recognise their shared vulnerability with other bodies, which is recapitulated in the final scenes of the flood. After having set up the above discussion about the affective overlap in ecocriticism and grief studies, the final part of the chapter will focus on *Flight Behaviour* and *The World Without Us* comparatively to explore the potential of the flood narrative as an affective pedagogical strategy for rethinking the ethics of ecological related grief and mourning. My reading thus aims to explore the question of what impetus for positive social-ecological change might be gained from shared instances of ecological loss and grief as imagined through the lens of the flood narrative.

4.3 Reading the Metaphorical and Material Flood of Grief in *Flight Behaviour* and *The World Without Us*

In *Precarious Life: The Powers of Mourning and Violence* (2004), Judith Butler explains that the process of grieving 'furnishes a sense of political community of a complex order, and it does this first of all by bringing to the fore the relational ties that have implications for theorizing fundamental dependency and ethical responsibility'.[505] Through the 'we-creating' facility of mourning, Butler claims that we are not only made aware of our affective ties to those we grieve for, but also those

[504] 'Prolepsis' is taken in this regard to mean anticipation. It can also refer to 'the representation of a thing as existing before it actually does or did so' (*Oxford American Dictionary*, 2013). See Patricia Rae's chapter, 'Double Sorrow: Proleptic Elegy and the End of Arcadianism in 1930s Britain' in *Modernism and Mourning*, p. 213–34

[505] Judith Butler, *Precarious Life: The Powers of Mourning and Violence* (New York: Verso, 2004) p. 22.

deaths we are not immediately aware of, 'whose nameless and faceless deaths form the melancholic background of [the] social world'.[506] Within this understanding, the work of mourning can act as a form of resistance to the political and ideological forces that underpin current practices of environmental destruction because it is supported by the recognition of a shared vulnerability, especially when grief is extended beyond the human towards other species. *Flight Behaviour* and *The World Without Us* similarly suggest that much is to be gained from a commitment to grieving, particularly because they look for social hope in the face of devastating loss. At the same time, their sustained, resistant melancholy not only guards against false optimism, but suggests that, to use Timothy Morton's words, we are 'radically involved with [our] world, and thus responsible for it'.[507] In this sense, floods not only feature as a plot device in *Flight Behaviour* and *The World Without Us*, but are intrinsic to the melancholic atmosphere that both novels deploy.

The blurring of literal and metaphoric flooding acts atmospherically throughout the novels to encompass its environing mood and affective structure. In *Flight Behaviour* we see how the weather has not only left Dellarobia with a feeling of compression, but also 'boxed in' the people of Feathertown through a succession of poor harvests, leading to an economic crisis. In this way, the sustained climatological depression or low-pressure system that generates extended rains in Dellarobia's county, is also shown to be affecting the social climate of the county. *Flight Behaviour* thus presents a weighty atmosphere that penetrates and is constituted by the characters depicted. Water is brought to the foreground of the novel in rain and flood to become a central affective feature of its plot. The same can be said of the weather in *The World Without Us*. Juchau's third novel depicts the environmentally destructive consequences of mining operations in a rural Australian township through the eyes of a family grieving the loss of their youngest daughter, Pip, to leukaemia. The Müller family keep a small-holding and apiary on the edge of a small-town, north of Sydney. Here we meet the eldest sister Tess, who has become selectively mute in the six months since her sister's death and her younger sister Meg, who is overrun with worry over the deforestation happening in the mountain ranges surrounding her home. Meanwhile, their father, Stefan, watches for signs of 'colony collapse disorder'

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[506] Ibid, p. 46.
[507] Morton, *Ecology Without Nature: Rethinking Environmental Aesthetics*, p. 186.

in his beehives while self-medicating with whiskey, as his wife and the girls' mother, Evangeline, is seen frequenting the town with an empty pram.

The family's grief is not limited to internal psychology but extends to how they come to read the weather as an affective trigger to emotional response. 'Since our subject is Landscape and Identity, I want you to write about your particular weather', Tess's teacher tells her, '[h]ow is it connected to your family? How is the atmosphere part of who you are?'[508] The teacher's question identifies weather as an influential force or catalyst to identity, but also suggests that particular weather states can be embodied. Indeed, he presses on to say, 'We can't exactly avoid the climate, can we? [...] When it's unpleasant, when it's raw, dirty, clammy, how do we get through?'.[509] Weather and climate, the teacher suggests, cannot be separated from subjective state, but are integral to the ways in which people feel and operate. The novel's emphasis on weather departs from mere representation, and invites the reader to attend to the ways in which meteorological phenomena produce tangible and embodied, yet highly subjective effects. This is intimated moments later as Tess relates her teacher's lesson to her particular inner turmoil: 'A cold tremor passed through her. [...] How could her teacher know her mind...?'.[510] In this instance and throughout the novel, grief is interpreted atmospherically as an assemblage of effects produced upon, within and between bodies. Weather refers here not only to something existing outside the body, but also to the notion of shared emotional states of being in a manner that dramatises the entanglement between climate, atmosphere and story-telling. This is rendered most explicit when, encouraged by her teacher, Tess begins to write about her 'particular weather' through short stories. Interspersed throughout the main body of the narrative, each short story connects a memory of Tess's late sister to a particular weather event: 'Hail', 'Glories', and 'Closing In'.

In each case, the story sheds light on the force of grief as an affect through the visual and temporal form of weather. In 'Glories', Tess recalls how her father put a tick next to each cloud he'd seen in a second-hand encyclopaedia of cloud formations called *The Weather Book.* The recollection shifts into another memory of her mother attempting to console her after Pip's death:

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[508] Juchau, *The World Without Us*, p. 83.
[509] Ibid.
[510] Ibid.

> …you did not understand why some people said Pip was now of the earth and heavens. After the funeral came some mighty storms. […] All the lines between things became blurry. Meg worried at night about the coffin in all that rain. […] But Pip, you knew, was wholly here among the curtains, chairs, carpet and table. Pip was part of the weather inside.[511]

Here, affective meteorological phenomena constellate around Tess's sense of loss as all-encompassing. The weather blurs the lines between inner feeling and exterior climate, but also public and private space. Thus, while Tess tries to see a reflection of her sister in the clouds, her grief adopts the 'dynamic, kinetic qualities' of the rain outside by pulling Pip back down to earth to dwell as a spectral presence in her everyday surroundings.[512] At the same time, Pip's haunting absence from the house is conveyed through a sense of the uncanny: 'Each empty room contracted around [her] fear. What was a chair, what was a couch, what was a home without her in it?'.[513] Postulated by Freud as the re-emergence of the repressed, the uncanny signals a reminder of the ways in which grief renders the familiar strange. Tess's felt experience of the house is encapsulated through an uncanny sense of the changed atmosphere or 'inside weather' of the house after the death of Pip. She remembers, 'how the house felt when they returned from St. Catherine's. […] How the bedroom felt after the night after Pip's death, even though she'd been away from it many other times'.[514] Robin Lyndenberg frames the uncanny as an experience when 'what is most intimately known and familiar, is […] divided within by something potentially alien and threatening'.[515] Francesco Ricatti, meanwhile, expands on the influence of the uncanny, which 'lets us experience the familiar from a new and unexpected perspective'.[516] Juchau's novel shows how the familiar features and conditions of place are rendered strange and unfamiliar through loss, but also by the knowledge of that loss; of what has passed and what will become.

By focusing on weather as a pattern of atmospheric events that affect and are profoundly affected by human interaction in these instances, *The World Without Us*

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[511] Juchau, *The World Without Us*, p. 141.
[512] Anderson, 'Affective Atmospheres', p. 80.
[513] Juchau, *The World Without Us*, p. 91.
[514] Ibid, p. 84.
[515] Robin Lyndenberg, 'Freud's Uncanny Narratives', *PMLA* 112 (1997) 1072–86, p. 1073.
[516] Francesco Ricatti, 'The Emotion of Truth and the Racial Uncanny: Aborigines and Sicilians in Australia', *Cultural Studies Review* 19 (2013) 125–49, p. 130.

also shows the uncanny implications of climate breakdown. On her bike ride to school for example, Meg Müller passes twenty active wells, 'topped by towering metal rigs and five ponds of chemical waste', where she notices dead 'frogs and birds' and 'kangaroos […] trapped by the steep-sided banks, […] their fur seeped in mud and toxic run-off'.[517] The horror of such ecological devastation is punctuated here by its seeming banality, where anthropogenic environmental degradation has become the new normal for the inhabitants of the Bidgalong Valley. At school the children learn about 'cleared streams, agro-toxins, increased UV radiation', while on the front page of the local newspaper a local fisherman is pictured with a two-headed bass he caught while fly-fishing: 'That's from the chemical run-off, say the townspeople, from the macadamia farms. It's the Carbendazim. It's the rain, washing poisons from the gas mines downstream'.[518] As Julieanne Lamond writes in her review of the novel, '[t]hese kinds of exchanges capture the spooky sense that personal losses are linked to environmental ones in ways that are not easy to untangle or understand'.[519] At the same time, there is a tacit sense of culpability to the losses depicted throughout the novel. Indeed, such toxic entanglements reveal how human bodily existence and consumption – whether it be of fuel, food, or specific consumer products – affects other intertwined human bodies, animals, ecosystems and habitats in unthought of, and often unnoticed, ways. There are hints throughout the novel that toxic run-off from the fracking and mining operations around the town may have infiltrated the groundwater and poisoned several people in the community, including Pip. Tess recalls her mother telling a social worker to test the water by the old well field, 'believing [Pip had] become contaminated from drinking there years back. Five other kids in town had developed leukaemia'.[520] As such, the collapsing state of the bee colonies and Pip's death are indicated as possible casualties of anthropogenic environmental degradation, but they are not explicitly pursued. Elsewhere Tess notes how her father once told her that '[s]ome sufferings must go unheeded', listing the day 'he put their Kelpie down, the night the old mare died with its head in their mother's hands. The time he shot the poisoned wombat' in the same breath as her sister's

[517] Juchau, *The World Without Us*, p. 43.
[518] Ibid, p. 34.
[519] Julieanne Lamond, 'The Atmosphere We Live In: *The World Without Us*', *Sydney Review of Books*, 9 October 2015 <https://sydneyreviewofbooks.com/review/the-world-without-us-mireille-juchau/> [accessed 22 September 2021).
[520] Juchau, *The World Without Us*, p. 84.

passing.[521] By making a subliminal connection between Pip's death and Bidgalong's numerous ecological and animal losses, the novel appears to transcend anthropocentrism and extend grievability to all deaths.

While the absence of Pip haunts the domestic setting, the novel also foregrounds the characters' feelings of loss and mourning through 'pathetic fallacy', as Tess recalls: 'After the funeral came some mighty storms. In the wet it was hard to tell what was river, what was rain, when the dry earth turned to mud. All the lines between things became blurry'.[522] Although the trauma over losing Pip is clearly reflected by the violent extreme of the storm after her funeral, the co-mingling of rain and flooded river also appear to disorientate and dissolve the sisters' connectivity with the landscape. As such, grief and the flood operate as twinned forces in their capacity to bewilder the characters' sense of place and home. In this way, *The World Without Us* signals a particular feeling of loss that the environmental philosopher Glen Albrecht terms 'solastalgia'.[523] Defined as the psychological distress that results when one's home or familiar environs are subject to transformation or devastation, solastalgia involves the homesickness that arises from losing a homeland one nevertheless cannot leave.

In an interview for *Outspoken* in 2016, Juchau claims that she had the concept of solastalgia in mind while writing the novel, and intended to focus on 'what happens to our sense of belonging when our homelands have become unrecognisable' and 'what does that do to our sense of feeling at home'.[524] As with *Flight Behaviour*, flooding in *The World Without Us* visually connects the reader to the experience of solastalgia through the destruction of the domestic space. Much like the storm after Pip's funeral, wild weather at the end of the novel produces a flood that engulfs the Müller farmhouse, transforming it into a 'dark cube on a lake that was once a field'.[525] The farmhouse is rendered uncanny via its description as an amorphous cube missing the particular features that make it familiar to the Müller family. Yet, the flood also explicitly links the destruction of the family home in *The World Without Us* and *Flight Behaviour* to the destruction of the environment, and thus extends an understanding of place-based grief and mourning beyond human habitation.

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[521] Ibid, p. 16.
[522] Ibid, p. 141.
[523] Glen Albrecht, 'Solastalgia and the New Mourning', p. 311.
[524] Mireille Juchau, 'Mireille in conversation with Mark Newman', Outspoken, 2 July 2016 <http://www.outspokenmaleny.com/podcasts> [accessed 13 October 2021].
[525] Juchau, *The World Without Us*, p. 250.

Elsewhere in Juchau's novel, the gradual loss of the forested ranges on the Ghost Mountains behind the Müllers' farm feature as a mnemonic device to create an intense feeling of solastalgia that replicates the sense of absence felt in relation to the farmhouse after the death of Pip. Where once the forest functioned as a place of reflection and solace for the Müller family, it now acts as a reminder of past, present and potential future losses. At one point, Tess 'runs an eye along the Ghost Mountains […] and sees the great bald patch down the westward flank' to reflect: 'If you don't keep track, things can disappear entirely'.[526] Similarly, Meg looks out the window one day to see 'three great patches on the east and west flanks of the mountains,' thinking that '[o]ne day she'll find a barren brown mound strewn with the bones of northern blue box, blackbutt candlebark, nightcap oak. The trees giving way for new mines'.[527] By condensing the unfolding events of environmental crisis to a child's view from her window, the novel connects the vulnerability of the child with the environment she grieves for. The repeated utterance of 'one day' points to some unspecified point in the future when the native trees have all been torn from the ground to make way for the mines. The Müller's tragic, silent lament for the ongoing and future deforestation of the mountain range offers an example of Morton's call for an environmental language that can form 'elegies about events that have not yet (fully) happened' and 'fuse elegy and prophecy, becoming elegies for the future'.[528] The proleptic (full) loss of the mountain range warns the reader in this instance against the kind of absences that will be mourned in the future should present environmental devastation and injustices, such as deforestation and extractive industries, be allowed to continue.

At the same time, the type of resistant or ecological elegy Morton denotes, also raises questions about the social determinants that repress collective memories of past losses. While the fact that the novel's Australian setting means that it implicitly takes place on colonised land, Juchau connects the solastalgic experience of her characters with Indigenous dispossession without explicit mention to Indigeneity or Indigenous characters. As Jim Parker, Tess's teacher, walks the trails of the Ghost Mountains surrounding Bidgalong Valley he 'realises the fey place names – Rainbow Hill, Naiad Gorge, Moonbeam Falls – had replaced all the Indigenous names, and were absurd'.[529] Juchau relates the feeling of solastalgia explicitly to the dispossession of Australian

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[526] Ibid, p. 33-34.
[527] Ibid, p. 138.
[528] Morton, *Ecology Without Nature*, p. 254.
[529] Juchau, *The World Without Us,* p. 4.

Indigenous peoples; yet in the novel the only reference to Indigenous experience is in the renaming of the Valley's placenames. I would argue that the absence of Indigenous presence is not an oversight of the novel, however, but is a critique of 'the engulfment of native sovereignty that renders the resultant wildness recuperable for white fantasies of surrogation, adoption and transplantation',[530] as Tavia Nyong'o has written in another context. Even while highlighting the absurdity of the altered placenames, Jim enjoys buying into its pretence:

> This morning he'd set out early, following the river to a tapered ridge, pausing at a creek to scoop and gulp the water, glorifying in the wild-man spectacle of his thirst. He could pretend, in the surround sound of wind, water, leaf and bird, that the forest was pristine, that he was born to it and belonged.[531]

Jim's cognitive dissonance points toward his environmental privilege, insofar as his 'wild-man' revelry wilfully ignores the history of genocide within the landscape, as well as the continued presence of ecological destruction through mining and deforestation. In this sense, *The World Without Us* clearly illustrates how the knowledge of brutality is concealed; disguised through disassociated placenames, as well as the enduring 'wilderness' aesthetic Jim adheres to. Jim's sense of the forest emerges as an unconscious attempt to stabilize place against a backdrop of unavoidable change. Indeed, the growing absence of the forest comes to disrupt Jim's perception of his surroundings. Having returned from one of his walks, Jim returns to his cabin to hear, '[s]omewhere on the mountain, axed wood start[sic] groaning and splintering: his floor shudders when trunks fall. He'll sometimes imagine the very sap in the wood stiffening in empathetic horror'.[532] While Jim's response to the felled trees along the mountain range registers with him on an emotional level, he immediately distances himself from this connection by transferring his feelings to the wood of his cabin. The ghostly reanimation of the sap in the wood of his cabin however, suggests that it is not simply an inanimate building material in this moment, but exists as part of a complex web of actions, relations and associations that should not be disentangled from one another. In this way, the cabin exists as a biological and social artefact of the

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[530] Tavia Nyong'o, 'Little Monsters: Race, Sovereignty, and Queer Inhumanism in *Beasts of the Southern Wild*', *glq: A Journal of Lesbian and Gay Studies,* 21 (2015) 249–72, p. 264.
[531] Juchau, *The World Without Us*, p. 4.
[532] Juchau, *The World Without Us*, p. 92.

forest and a material reminder of the continued extractive pattern of settler-colonial occupation. Jim's experience of the forest is thus entangled within an exchange of noisy silences and heaving absences that motion to the hauntings of particular passings; where the material traces of past lives (both human and nonhuman) within the extractive and extracted landscape speak of the absent and the disappearing.

While deforestation in *The World Without Us* reveals traces of exploitation and extraction in the landscape, it features in *Flight Behaviour* as a focal point in the novel's exploration of climate denial. At the beginning of the novel the Turnbows contemplate logging the forest behind the farm as a solution to their financial deficit. Dellarobia's husband, Cub, tells her that his father is 'fixing to sign a contract with some loggers', which will yield a lot of money to clear their debts.[533] Yet, Dellarobia is unconvinced, warning him that 'They'll make it look like a war zone', 'a trash pile. Nothing but mud and splinters'.[534] Her fears correlate with the combined impacts of local unsustainable logging and the increasingly wild weather wrought by climate crisis throughout the region. Commenting on another Appalachian family's farm, she exclaims to Cub: 'It looks like they blew up bombs all over it. Then all these rains started and the whole mountain is sliding into the road. […] I bet I've seen that six times since July'.[535] Dellarobia's concerns at the beginning of the novel foreground the cause of floods that hit her home at its conclusion. Yet, they also highlight the role poverty plays in ecological damage, as the Tunrbow family are forced to take desperate action to keep outstanding debts at bay.

Trees become a source of contention in terms of the community's climate denial as Dellarobia notes that even as the landslides cause resounding shock throughout the community, they are emphatically understood as 'the Lord's business' rather than a consequence of anthropogenic exploitation of the environment.[536] From this perspective, weather and climate float free from cultural, economic and political processes, despite the community's dependence on the health of the biosphere for their lands and livelihoods. The kind of climate denial described in the novel is closely associated with the reality of the Appalachian region where Kingsolver lives. In an interview in 2012 with *Time Magazine,* Kingsolver describes Appalachia as infamously conservative and denialist despite hard evidence of the ecological impact

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[533] Kingsolver, *Flight Behaviour*, p. 51.
[534] Ibid, p. 54.
[535] Kingsolver, *Flight Behaviour*, p. 55.
[536] Ibid, p. 261.

of climate change wrought on the region. In southern Appalachia, she explains, 'the people most affected by climate change already are people among whom I live: rural conservative farmers. And it strikes me that these are the same people who are least prepared to understand and believe in climate change and its causes'.[537] Similarly, in their analysis of *Flight Behaviour*, Christopher Lloyd and Jessica Rapson note that the limited understanding of the climate crisis in the region is largely based on restrictions placed upon the education sector. Specifically, Lloyd and Rapson point to the fact that 'teachers are legally bound to present climate change to students as controversial' and 'as a subject about which there is no scientific consensus' following the default passing of Tennessee's House Bill 368 (Senate Bill 893).[538]

The limited education on climate change is discussed throughout *Flight Behaviour* as Dellarobia steps between the 'territorial divide' of her family and the scientists who come to observe the butterflies.[539] An epistemological outlook of hyperseparation, taken mainly by Dellarobia's in-laws and husband in the novel, enables their dismissal and denial of the climate crisis. Dellarobia notes in her frustration with respect to her efforts to persuade her husband of the reality of climate crisis that,

> People […] couldn't close out the world, maybe, but they could sure find something on the TV or radio to put scientists or foreigners or whatever in a bad light. […] If they played their channels right, they could be spared from disagreement for the length of their natural lives.[540]

Kingsolver suggests how climate denialism of the Appalachian communities is reinforced through education, religious conservatism, and the heteronormative structure of power dominant in the region's agricultural and economic systems; as for example, the widely held view that 'a wife working outside the home is a reflection

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[537] Bryan Walsh, 'Barbara Kingsolver on Flight Behaviour and Why Climate Change Is Part of Her Story', *Time Magazine*, 8 November 2012 <http://entertainment.time.com/2012/11/08/barbara-kingsolver-on-flight-behavior-climate-change-and-the-end-of-doubt/> [accessed 8 May 2020].
[538] Christopher Lloyd and Jessica Rapson, 'Family territory' to the 'circumference of the earth': local and planetary memories of climate change in Barbara Kingsolver's *Flight Behaviour*', *Textual Practice*, 31 (2017), 911-931, p. 914.
[539] Kingsolver, *Flight Behaviour*, p. 289.
[540] *Flight Behaviour*, p. 233.

on the husband'.[541] *Flight Behaviour* provides an effective depiction of the ways in which climate denial is intimately entwined with emotional denial.

Kari Norgaard's study on climate change denial argues that people tend to ignore climate crisis on the grounds that acknowledging the role of human culpability in the devastation of the planet drenches us in feelings of fear, guilt, despair and hopelessness.[542] Climate denial, therefore, takes the form of evasion via a socially organised process whereby individuals collectively distance themselves from the information through adherence to social norms and cultural scripts. It is important to note the difference between the type of ignorant denial shown in Kingsolver's novel, and the knowing evasion in Norgaard's study (i.e., accepting climate science but not acting in accordance with that knowledge). Yet, the optimism and avoidance of Cub and Dellarobia's community with respect to the unsavoury realities of everyday life on the forefront of climate change can be seen in conjunction with Norgaard's conception of individual and social mechanisms for suppressing feelings of fear, guilt and powerlessness. That being said, the poverty-stricken farming communities surrounding Feathertown in the novel also represent a marginalised and underprivileged public that have little control over the political landscape. Climate change denial thus operates as a form of pseudo-optimism insofar that the novel's characters bury their heads in the sand as a way of avoiding the truth of their reality. Dellarobia notably frames societal and economic pressure as an affective force on the body. Speaking to her friend, she wonders how to explain the 'great slog of effort that tied people like her in the day-to-day'.[543] She expands on her description of the affective properties of emotion to consider the effect of her own loss, 'that infected every step forward': 'Even now, dread still struck her down sometimes if she found herself counting on things being fine. Meaning her now-living children and their future, those things'.[544] The novel suggests that fear and avoidance of loss is equally important to harmful, self-destructive and non-functioning approaches to the world. As Dellarobia frequently claims, her culture has taught her to consider 'loss [as] the enemy'.[545] However, her interaction with the monarch butterflies represents the ability to move beyond these paralysing effects of fear and avoidance.

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[541] *Flight Behaviour*, p. 216.
[542] Kari Marie Norgaard, *Living in Denial. Climate Change, Emotions, and Everyday Life*, (Cambridge, MA and London: MIT Press, 2011)
[543] Kingsolver, *Flight Behaviour*, p. 320.
[544] Ibid.
[545] Ibid, p. 428.

Having been thrown off their migratory course by increasingly wild weather events, the monarch butterflies are forced to overwinter in Appalachia rather than their customary destination of the Michoacán highlands in Mexico. The spectacle of the butterflies, a sight Dellarobia mistakenly interprets at first as a forest fire, causes her to abandon her tryst and return to her family. Her mother-in-law greets the occurrence as a miracle and shares her conviction with the rest of her God-fearing Southern Baptist community, attracting the notice of local and national news crews, and later, a scientific team wanting to investigate the abnormal migratory behaviour of the butterflies. The presence of the scientists alerts Dellarobia and her family to the revelation that not only deforestation but the onset of a cold winter could decimate the entire colony. The sight of the butterflies provides the first mention of flooding: 'Whatever had gained purchase on her vision up there felt violent, like a flood, strong enough to buckle the dark roof and square white corners of home and safety'.[546] Such vision marks a violent atmospheric shift from Dellarobia's state of torpor at the beginning of the novel. While Dellarobia sees that '[n]ot a thing on God's green earth had changed', the emotional impact of witnessing butterflies makes her feel that 'everything had'.[547]

Dellarobia's astonishment and 'wonder' at the butterflies capture their affective nature as 'carriers of energy', to use Teresa Brennan's words.[548] In *The Transmission of Affect*, Brennan emphasises the transpersonal nature of affect to contend that '[t]here is no secure distinction between the "individual" and the "environment"'.[549] In Brennan's understanding, negative affects deplete energy because they require persistent application of pressure (repression), whereas positive affects, such as wonder, awe or love, energise. The potency of these affects are enhanced, Brennan notes, when they are 'projected outward'; individuals invest in objects outside themselves and are thus relieved of the blocked energy.[550] Dellarobia's encounter with the butterflies does appear to relieve her of the profound physiological weight she has been carrying. She feels '[f]lung from complacency as if from a car crash', and is able to 'come down the mountain in less than half the time it took to climb'.[551] At this point in the narrative, Dellarobia can only comprehend the

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[546] Ibid, p. 23.
[547] Ibid, p. 23.
[548] Teresa Brennan, *The Transmission of Affect* (Ithaca: Cornell University Press, 2004) p. 34.
[549] Ibid, p. 6
[550] Ibid, p. 32
[551] Kingsolver, *Flight Behaviour*, p. 23.

manifestation of the butterflies as a sign of divine intervention, presented through repeated biblical allusion in reference to 'a lake of fire'.[552] Yet in the Bible, the 'lake of fire' is negative in its association with final judgement in Revelation[553]. This could suggest that even while she initially greets the butterflies as a marvel, and something positive, her language betrays a sense that something is not right. Put another way, the occurrence of the butterflies is an 'apocalyptic' sign pointing to human culpability for the climate crisis that has sent the insects off-course, and potentially foreshadowing an ecological reckoning, or 'judgement day', to come.

Dellarobia's affective immersion in the encounter relates to a kind of baptism that evokes an intensity of emotion previously kept in check. When Dellarobia returns later with her husband and in-laws to show them the butterflies, the spectacle induces an experience close to rapture:

> In every inch of the air they were moving down-mountain along this path, tumbling, a rush of air, a river in flood […] The people, she and the others here, were human boulders in the butterfly-filled current. They had waded into a river of butterflies and the flood gave no heed, the flood rushed on to the valley, answerable to naught but its own pull. […] Looking down at her feet made her dizzy, because of the butterfly shadows rolling around like pebbles along the floor of a fast stream. The illusion of current knocked her off balance. She raised her eyes to the sky instead. […] Together they saw the light streaming through glowing wings. Like embers, she thought, a flood of fire, the warmth they had craved for so long. She felt vocal exhalations she couldn't contain. The sounds coming out of her veered towards craziness.[554]

The language of the passage presents the butterflies as a profound mystery to Dellarobia and her family, and thus conveys a regard for the natural world that cannot be fully known or appropriated, and therefore supports an attitude of humility. Indeed, Dellarobia's apprehension and anxious exhilaration upon witnessing the monarchs is articulated through the metaphysical flood, which is 'answerable to naught' and gives 'no heed' to the onlookers, who are dehumanised as 'boulders' in the current. As

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[552] Ibid.
[553] See *King James Bible*, 'Revelations', 19:20, 20:10-15, and 21.8.
[554] Kingsolver, *Flight Behaviour*, p. 76-77.

Adeline Johns-Putra comments, the butterflies appear to possess 'an ability to flourish that is oddly superior to that of humans'.[555] However, their very magnitude appears to overwhelm and decentre the interlopers, evoking an aesthetic experience close to sublime feeling. Moreover, the powerful, dizzying and tumultuous flood of butterflies marks a distinct contrast to the tranquil and harmonious image of butterflies commonly articulated in aesthetic discourse. In this way, *Flight Behaviour* renders a complex relationship between humans and the natural world arising out of a strongly affective experience. Foregrounding the force of the flood in the conclusion of the novel, the flood of butterflies offers Dellarobia the impetus to let go of self-destructive and non-functioning attachments to the world, namely in seeking 'loss and wreckage as the alternative' to her current state of existence.[556] Yet, it is only upon learning about the near extinction of the species that she is compelled into action.

The arrival of an entomologist called Ovid Byron and his team of researchers open Dellarobia's eyes to the painful reality of the butterflies' presence. Byron explains to her how the changing environmental and climactic conditions affecting the Michoacán mountainsides where the butterflies historically overwinter, have drastically disrupted their usual migration pattern. Dellarobia therefore comes to learn that their presence is an indicator of extensive anthropogenic planetary damage, rather than an act of divine intervention. From her discussions with Ovid and other lessons on extinction and climate, Dellarobia becomes attuned to planetary patterns of migration, which she imagines as a 'living flow, like a pulse through veins'.[557] Ovid explains that the Monarch species (Danaus plexippus) journeys thousands of miles between Mexico and Canada each year. Beginning in Canada, Ovid explains, they then proceed to Mexico to overwinter due to their vulnerability to the cold. They then continue to Texas for the milkweed plants that feed their larvae. The hatched butterflies will journey further northward to Canada to repeat the process.

The 'complicated system' that charges successive generations with the innate capacity to follow the Monarchs' migratory passage and return to the same trees in which their ancestors roosted, is disrupted in the novel through a combination of factors. Changes in seasonal patterns due to a warming climate, including drought and the northward spread of fire ants, together with increased pesticide spraying, and high

[555] Adeline Johns-Putra, *Climate Change and the Contemporary Novel* (Cambridge: Cambridge University Press, 2019) p. 161.
[556] Kingsolver, *Flight Behaviour*, p. 23.
[557] Kingsolver, *Flight Behaviour*, p. 202.

infection rates from parasites, further limit the Monarchs' flying ability and disrupt the butterflies' migratory pattern. Thus, while the beauty of the butterflies ruptures Dellarobia's inertia, the comprehension of their imperilment brings a sense of grief to the fore: 'She tried to hold on to anger but felt it being swamped by a great sadness that was rising in her like the groundwater in her yard. Why did the one rare, spectacular thing in her life have to be a sickness of nature?'.[558] This returns the reader to the 'lake of fire' image as unknowingly disclosing the butterflies appearance as a sign that the world is off kilter and foreshadowing further climate disruption as a form of judgement.

Axel Goodbody and other critics have suggested that the narrative lends itself to the characteristic structure of the 'green *Bildungsroman'* genre*,* as the encounter triggers 'an inner journey from ignorance and absence of concern to scientific understanding of the processes and possible risks from anthropogenic change'.[559] In extension of these arguments, I contend that Dellarobia's sense of proleptic or anticipatory mourning for the butterflies highlights 'an acute and stubborn […] sense of responsibility for the loss', to use Rae's words, that motivates her willingness to save them, and therefore take up the assistant position offered by Ovid Byron in his study of the Monarchs disrupted migration.[560] It is clear from the outset that part of Dellarobia's connection to the butterflies and anguish over their imperilment is deeply personal. Their beautiful orange colour reminds Dellarobia of her first child, stillborn with 'fine hair all over its body that was red like hers'.[561] Thus, the butterflies become entwined with Dellarobia's grief for a child and past she has never fully come to terms with. The connection is made all the more explicit when her son's friend Josephina, whose father once worked as a guide at the monarch roosting sites in Michoacán, explains to Dellarobia the Mexican belief that the Monarchs are the souls of dead children. She later tells her son that 'one of those [butterflies] is ours' while they watch the roosting site.[562]

As Johns-Putra argues in her reading of Kingsolver's novel that Dellarobia's belief in the monarchs as the souls of dead children connects her first child with the

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[558] Ibid, p. 135
[559] Axel Goodbody, 'Risk, Denial and Narrative Form in Climate Change Fiction: Barbara Kingsolver's *Flight Behaviour* and Ilija Trojanow's *Melting Ice*', *The Anticipation of Catastrophe: Environmental Risk in North American Literature and Culture,* eds, by. Mayer, Sylvia and Alexa Weik von Mossner (Heidelberg: Universitätsverlag Winter, 2014) p. 48.
[560] Rae, *Modernism and Mourning*, p. 229
[561] Kingsolver, *Flight Behaviour*, p. 14.
[562] Ibid, p. 583.

Michoacán children who tragically died in the mudslides caused by excessive rainfall and deforestation. The novel thus 'identifies the butterflies with all children, including Dellarobia's surviving children, and potentially with the children of the future', to establish Dellarobia's concern for the Monarchs within an ethical context of parental care, and therefore, suggests a purely anthropocentric interest in the future.[563] I would argue however, that the butterflies also act as a mnemonic device, causing Dellarobia to reflect on past, present and potential future losses in a present-continuous state of grief. The empathetic space opened by Dellarobia's anticipatory grief for the butterflies reminds her of their shared vulnerability within a biotic community, and therefore expands her ethical orientation to include ecological others. In this way, the novel's persistent strain of melancholia echoes Judith Butler's question of what might be gained from 'tarrying with grief [and] remaining exposed to its unbearability' in returning Dellarobia to a sense of collective responsibility for the physical lives of others.[564]

Both *Flight Behaviour* and *The World Without Us* connect floods to the dynamic flow of insects. In the novels, floods of water and floods of insects are presented as catalysing affective events. Floods in this respect cue the reader to empathically imagine, and thus to feel, the shock and awe that the characters feel upon witnessing such astonishing 'natural' forces. They also portray solastalgic distress about what is in the process of being lost. In Juchau's novel the impoverished local bee colonies feature not only as an atmospheric element but also inform the narrative structure of the novel, indeed excerpts from Maurice Maeterlinck's 1901 study of bee sociality *The Life of the Bee* appear at the start of each of the four parts of the novel. Bees are cultivated by the Muller family for their honey, propolis and beeswax. However, bee-sociality also influences the lived experience of the characters beyond livelihood. The bees loosely inform the biopolitical structure of Evangeline's old commune up in the hills, which was destroyed by a fire but whose ideas about the natural world continue to shape those who survived it. A type of bee biopolitics also compels Jim to move away from the city to the Bidgalong Valley in his fantasy of a type of utopian pastoral regeneration, despite his allergy to bee stings.

At the same time, the bees function as narrative agents to reveal the characters' shared exposure to and participation in climate and environmental breakdown. Stefan

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[563] Johns-Putra, *Climate Change the Contemporary Novel*, p.148.

[564] Judith Butler, *Precarious Life: The Powers of Mourning and Violence* (London: Verso, 2004), p. 30

relates the multiple colony deaths to Colony Collapse Disorder (CCD), even while he admits that he is not sure of the particular combination of parasites, pesticides or breeding practices that have caused the die-offs. The novel elaborates on the sense of alarm the bee deaths are causing the apiary community, when a hive 'had swarmed, and then were found flightless as worms, three fields away', as Stefan notes, 'The beeks [bee geeks] were talking like doomers now, calling it the Bee Rapture, discussing Colony Collapse Disorder, electromagnetic field, radiation, fracking'.[565] The reader gathers a pervasive sense of unease through Stefan's narrative perspective, learning that he has lost fifty colonies, that the farm is failing and is running into debt, and that he is falling into alcoholism. Moreover, Stephan's grief is conveyed through allusion to the bees, as he recalls: 'Pip, his youngest, his little house bee'.[566] Like the Monarchs in *Flight Behaviour*, the bees play a multifaceted role in *The World Without Us* in this respect. They are at once a reminder of loss, an indicator of planetary decline, and an enabler of human determination and hope despite failing odds. As Lamond notes, 'the bees act atmospherically, as bellwether and synecdoche of environmental disaster and human vulnerability'.[567]

Nevertheless, the bees, like the Monarchs, are shown to possess a mystery of their own that is incomprehensible to humans. When Tess stumbles upon a wild colony ironically situated on the remains of what used to be The Hive, she is astonished by their ability to flourish in resistance to human intervention:

> As her eyes adjust Tess sees what's hanging from the ceiling and jutting like lichen in thick, creamy layers. They protrude from the walls and fan from the corners. They garland the roof beams. Great waxy chandeliers lit with yellow bees. A massive natural hive.[568]

As with the flood of butterflies in *Flight Behaviour*, the surprising profusion of bees in *The World Without Us* is comparable to the later scene of the flood as a challenge to an anthropocentric reading of the novel. Like Dellarobia, Tess shows a drastic shift in empathy towards the bees, whose survival is presented as miraculous. Although she 'can hardly guess [the hives'] worth' to Stephan, she understands the importance of

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[565] Juchau, *The World Without Us*, p. 19-20.
[566] Ibid, p. 19.
[567] Lamond, 'The Atmosphere We Live In: *The World Without Us*'. Online.
[568] *The World Without Us*, p. 161-162.

her discovery and therefore does not communicate it to anyone until she is certain that they will be left alone, placing the survival of the wild bee colony over the financial viability of the farm. In doing so, *The Word Without Us* reveals the bee as a vulnerable and, more importantly, grievable species. In their focus on the 'devalued and ungrievable lives' of the honeybee and Monarch butterfly, *Flight Behaviour* and *The World Without Us* thus foreground human connection with nonhuman entities that usually blend into the background of our natural environs.[569] Furthermore, the connection between the loss of the butterflies/honeybees and the loss of Dellarobia's baby/Pip allow both novels to highlight their joint concern over the ecological security of future generations. As Dellarobia explains in the course of *Flight Behaviour*: 'If Ovid Byron was torn up over butterflies, he should see how it felt to look past a child's baby teeth into this future world he claimed was falling apart'.[570] While highlighting fears over intergenerational justice in a time of climate crisis, the novels also demonstrate a deliberate proleptic or ecological elegiac mode to warn the reader against the kind of absences we could come to grieve should present losses continue on the same trajectory.

The floods that feature at the end of the novels effectively communicate the catastrophic consequences of anthropogenic environmental degradation left unheeded. That having been said, the flood at the end of *Flight Behaviour* has perplexed many of its critics. In Linda Wagner-Martin's deeply negative reading, the flood suggests that Dellarobia 'like the butterflies, has no more choices'.[571] For Sylvia Mayer however, the flood 'can be ambiguously read: either as a sign of destruction, or as a sign of cleansing and renewal'.[572] Meanwhile, Johns-Putra argues that 'the novel ends on an insistently ecocentric note' insofar that it shifts from an ethics of care that centres on the parental actions of Dellarobia to 'a critically reflective spectatorship in appreciation of the monarch's flourishing'.[573] Johns-Putra's eloquent reading of the flood divorces the narrative focus from Dellarobia's perspective to inform an ecocentric understanding of the text. In this way, she sees the startling conclusion as

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[569] Judith Butler, *Frames of War: When Is Life Grievable?* (London: Verso, 2009) p.22.
[570] Kingsolver, *Flight Behaviour*, p. 320.
[571] Linda Wagner-Martin, *Barbara Kingsolver's World: Nature, Art, and the Twenty-First Century.* (New York: Bloomsbury, 2014) p. 197.
[572] Sylvia Mayer, 'Explorations of the Controversially Real: Risk, the Climate Change Novel, and the Narrative of Anticipation', *The Anticipation of Catastrophe: Environmental Risk in North American Literature and Culture.* eds, by. Sylvia Mayer and Alexa Weik von Mossner (Heidelberg: Universitätsverlag Winter, 2014) pp. 21–37, p. 31.
[573] Johns-Putra, *Climate Change and the Contemporary Novel,* p. 163.

a turn from the 'stubbornly anthropocentric' sympathies held throughout the majority of the novel to argue that the flood marks a shift from the human to nonhuman, and as such, 'shocks the reader out of an emotional connection with Dellarobia' to align them '[w]ith the monarchs' survival'.[574] In doing so, Johns-Putra maintains that

> it is less that we progress towards a tragic sympathetic understanding of our embeddedness in the biosphere and more that we are dropped abruptly into the revelation of the insignificance of our place within it.[575]

I agree that the revival of the butterflies in this final scene does pose a challenge to a purely anthropocentric reading of the novel. However, rather than rupturing the reader's emotional connection with Dellarobia, I argue that the flood disrupts the narrative opportunity to bring grief through to catharsis. As such, the novel leaves the work of grief unresolved, forcing the reader to confront the horror and politics that accompanies the awareness of anthropogenic climate change.

In the last chapter, Dellarobia finds the courage to separate from her husband and enrols into college, with the intention of developing her role as a field ecologist. As she and Ovid take down the make-shift laboratory they have fashioned in one of the Turnbow's disused barns, Dellarobia contemplates how, '[i]n such a short time he had relieved her of a lifetime of illusions, and already she missed them. Noah's Ark and better days ahead'.[576] The urgent proleptic loss of the butterflies have compelled Dellarobia to reconfigure her state of being-in-the-world, as she admits that her life 'won't ever go back to how it was'.[577] While the butterflies appear to have altered Dellarobia's 'flight path', the novel is careful not to celebrate them as anthropocentric wish fulfilment.[578] As Johns-Putra points out, '[s]uch a dénouement would turn the fate of the monarchs into a metaphor for a happy ending of human triumph'.[579] Instead, Dellarobia wakes one morning to see a return of the cold snap that she believes will kill the monarchs off for good. Her grief is registered as 'waves […] throbbing against her initial good spirits' in an obvious foreshadow of the flood to come.[580] Indeed, the

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[574] Johns-Putra, *Climate Change and the Contemporary Novel,* p. 163.
[575] Ibid, p. 163.
[576] Kingsolver, *Flight Behaviour*, p. 581.
[577] Ibid, p. 591.
[578] Ibid.
[579] Johns-Putra, *Climate Change and the Contemporary Novel,* p. 146.
[580] Kingsolver, *Flight Behaviour*, p. 594.

unprecedented snow and weird weather that has dominated the atmosphere of the novel thus far results in catastrophic flooding across the country. Dellarobia leaves her house to see '[a]n ocean, stippled and roiling in waves over submerged rocks and rill' where there once was pasture.[581] She climbs a steep embankment just in time to watch her house give way to the force of the waters: 'One corner of the house appeared to tilt as she watched, shifting the structure a scant but perceptible few inches on its foundation'.[582] The inundation of the familiar and intimate setting of the family house in *Flight Behaviour*, as well as *The World Without Us,* brings the vast scale of climate crisis closer to home. The scene also reflects the fallibility of what we think of as 'permanent' structures, suggesting that nobody is safe from the devastation of climate crisis despite how well they believe they are sealed-off from the elements.

While Dellarobia's fascination over the scene appears to 'transcend[sic] ordinary fear and safety', the language used to describe the flooded homestead conveys a palpable sense of solastalgia. Dellarobia recalls planting hyacinths, now drowned in '[t]he inundated, the gone, the somewhere-else-now yard', the sudden absence of the yard rendered uncanny as the familiar domestic setting is made unfamiliar in the flood.[583] At the same time, Dellarobia hears about flood events taking place simultaneously across the world: 'The radio had churned all morning with strange accounts, regardless of station. Floods and weather warnings, disasters. Something beyond terrible in Japan, fire and flood'.[584] Repeated allusion to the 'flood of fire' links the flood with the flood of butterflies Dellarobia encountered at the start of the novel. In this way, the scene also conjures a sense of the apocalyptic, aligning the butterflies as a symbol for renewal and rebirth with the biblical connotation of apocalypse as a form of revelation or disclosure. This is reiterated by Dellarobia as she thinks, 'Man is born unto trouble as the sparks fly upward […] words from the book of Job, made for a world unravelling into fire and flood'.[585]

However, at that moment Dellarobia's fear of the deluge is chiefly transcended by the sight of butterflies emerging from diapause or hibernation to recommence their migration. The moment is not a sign of regeneration however, lest we lose sight of the flood. Neither is it a manifestation of resilience and unqualified optimism, a truth Dellarobia recognises in her reflection that the 'exodus' of butterflies 'would gather

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[581] Kingsolver, *Flight Behaviour*, p. 595.
[582] Ibid, p. 594.
[583] Ibid, p. 594.
[584]Ibid, p. 596.
[585]Ibid, p. 597.

on other fields and risk other odds, probably no better or worse than hers'.[586] Instead, Dellarobia's love for the butterflies appears to embrace nonhuman flourishing over and above the forms of dominant anthropocentrism we have learnt to expect from climate spectacle. The sight of the butterflies taking flight over the flooded lake of the homestead in the final passage of the novel thus looks forward to a new, but uncertain future:

> She was wary of taking her eyes very far from her footing, but now she did that, lifted her sights straight up to watch [the butterflies] passing overhead. […] In the middling distance and higher up they all flowed in the same direction, down mountain, like the flood itself occurring on other levels. […] The shards of wrecked generation had rested alive like a heartbeat in trees, snow-covered, charged with resistance. […] The sky was too bright and the ground so unreliable, she couldn't look up for very long. Instead, her eyes held steady on the fire bursts of wings reflected across the water, a merging of flame and flood. Above the lake of the world, flanked by white mountains, they flew out to a new earth.[587]

The language of this final passage reiterates the language used in Dellarobia's first encounter with the butterflies. Like before, the 'merging of flame and flood' offers an affective experience that overwhelms and decentres Dellarobia to evoke sublime feeling. It is tempting then to celebrate this nonanthropocentric moment of human-animal relationality, yet it is also important to attend to the ways in which *Flight Behaviour* also demonstrates an unnecessarily imperilled present and future for the world's most vulnerable. Like the butterflies, the narrative technique used by the novel is 'charged with resistance' in its attempt to leave the work of grief unresolved, since we can never know if Dellarobia and the butterflies survive the flood. As such, the flood ruptures the narrative opportunity to bring grief through to catharsis, and thus holds the reader in a present-continuous confrontation with anthropogenic ecological loss. In this respect, the 'new earth' of the novel's description is not symbolic of renewal, but is akin to the 'new earth' of the biblical flood story as a compromised world that, as I mentioned in the Introduction, is intended to be overcome through the creation of a more just order in the 'tikkun olam', the repair of the world.

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[586] Kingsolver, *Flight Behaviour*, p. 597.
[587] Ibid.

In *The World Without Us,* the flood is less explicitly a signifier of environmental loss, but marries the novel's intergenerational concerns with its ecological ones. In the final chapters of the book, a storm begins to take shape just as the Mullers are plunged into familial crisis. Tess has hitched a lift out of town upon learning that Stefan is not her biological father. Meg is caught out on her search for Tess and has had to take shelter from the storm in a neighbouring house. Stefan, unaware of his daughter's departure, watches the storm rage from his apiary on the hill. Meanwhile, Evangeline rushes through the neighbourhood in desperation for her daughters. She arrives home only to realise her waters have broken and is forced into premature labour. The novel's description of childbirth mimics the surge of the floodwaters that surround the Muller residence, as Evangeline's 'pain was tidal, ebbing and surging, with an undercurrent of wrecked and ruined things. Barely a minute now between contractions. From the roof, the unceasing buckshot of rain'.[588] The language here gestures at the crisis going on beyond the domestic intimacy of the narrative in the tidal ebb and surge, and the unceasing rain, but also relates the moment of birth to the losses that have preceded it, in its association with 'the wrecked and ruined things'.

Lamond notes that childbirth and motherhood are thus presented in the context of a much larger difficulty, asking 'how do we live through the losses we know are going on all around us, a sense of calamity that is new to our age which is newly pervasive of our atmosphere, the earth under our feet?'.[589] In this way, Lamond relates the overall themes of the novel to those 'that have long circulated in Australian fiction: about the human and the natural, the natural and the feminine'.[590] While it is not possible to discuss the novel's gender concerns within the limits of this chapter, I argue that the flood renders a sense of immediacy to the novel's intergenerational and interspecies concerns that are demanded by environmental crisis. Indeed, the moment of labour appears to share an affinity with the storm outside, as 'the next contraction' is compared directly with 'more flotsam dragged up in the wave'.[591] Similarly, the language used to describe childbirth in the novel implies a link to nonhuman nature. In the pain of birth, Evangeline is described as producing 'creaturely sounds', while her body becomes 'husk-like'.[592] However, the novel is careful not to attach any

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[588] Juchau, *The World Without Us*, p. 248.
[589] Lamond, 'The Atmosphere We Live In: *The World Without Us*'.
[590] Ibid.
[591] Juchau, *The World Without Us*, p. 248.
[592] Ibid.

essentialist maternal identification to its sense of ecological protection and preservation. Rather, in comparing the birth to the storm and flood, *The World Without Us* highlights the significance of ecological loss to future generations who are being born into environmental devastation. The environmental devastation at the conclusion of the novel thus counterbalances any hope that the emergence of new life might offer the opportunity for change and renewal. As Tess infers later from Evangeline after they have been rescued from the flood:

> 'So much has gone,' my mother says again. And I know what she's thinking about, as her eyes search the scarred ridges and crests, the mists or dusts unfurling around the remaining forest trees – I know who. 'Yes, Pip is gone' I say, willing her to turn towards me, 'But we are here. Look, we are here'.[593]

The conclusion is left open-ended, with a daughter's anxious call to her mother for recognition. Yet, the reader is also left with an image of ongoing environmental degradation, as Evangeline looks out to the 'remaining forest trees'. In this way, the characters' grief is extended not only to Pip, the 'sister [the baby] would never meet', but also to the natural world of which they are part: 'to the bees who were struggling each day to do what they were fated to do, flying with their burden of pollen'.[594] The melancholic-elegiac tone of the final chapter then, and of the novel more generally, refuses to console the reader, but offers the potential of mourning as a sustained act of remembrance that requires the reader to interrogate 'how it is that we might live with ghosts'.[595] As such, the atmosphere created by *The World Without Us*, as an aesthetic experience, invokes a perceptible feeling of loss that encompasses not only the emotional state of the novel's characters, but is part of its storyworld.

Floods thus work to rupture the linear narrative progression of *The World Without Us* and *Flight Behaviour* by creating a form of suspended possibility at the novel's closure that refuses a definitive end-point, and thereby avoids the consolation of closure that would bring grief through to catharsis. In leaving the narrative and work of grief unresolved, *Flight Behaviour* and *The World Without Us* purposefully mourn and warn about the kinds of future losses that could arise given the continuation of our

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[593] Juchau, *The World Without Us*, p. 293.
[594] Ibid, p. 275.
[595] Van Dooren, *Flight Ways: Life and Loss at the Edge of Extinction,* p. 142.

fraught relationships with an ecological world in crisis. At the same time, the novels envisage alternative possibilities of co-becoming through the characters' concern for the fate of their home, a sense of home that is expanded to include the numerous flora and fauna that form a crucial part of their world and interrelations. The flood is not merely destructive therefore, but also enabling in that it prompts the recovery of the immediacy and presence of love and grief that exceeds the body, inviting the reader to extend their awareness beyond the limits of the individual towards the broader biotic community of which they are a part.

I have explored in this chapter how the environment is made emotionally salient through the use of narrative perspective and imagery that invites embodied simulation to create a sense of shared vulnerability. Moreover, in focusing on bees and butterflies, creatures that ordinarily form the backdrop to our lives, the novels ask the reader to consider the ways in which the current climate and environmental crisis has affected and will continue to disproportionately affect what Butler has called 'devalued and ungrievable lives'.[596] In bringing such lives into the foreground through the disaster of the flood, Kingsolver and Juchau extend an ethical openness and consideration towards others beyond the human to highlight the potential of narrativized grief and mourning for social and environmental change. This openness is underscored by the novels' open ending which leaves the reader to consider how we might, through care and shared vulnerability, imagine possibilities of co-becoming from and within the disaster of the present. From focusing on a proleptic or future-orientated sense of grief and mourning, my last chapter will focus on the ways in which flood narratives generate concern not only for living entities in the present, but those who have yet to come into being. Specifically, I will consider how imagined forms of survival and environmental futurity operate in flood narratives when they serve as a model for intergenerational ethics.

[596] Judith Butler, *Precarious Life: The Powers of Mourning and Violence*, p. 22.

CHAPTER FIVE: SURVIVAL AND ENVIRONMENTAL FUTURITY IN THE FLOOD NARRATIVE

Throughout this thesis, I have focused on the significance of endings and points of resolution in the flood narrative. In doing so, I have shown how contemporary flood fictions frequently adopt the open-endedness of the biblical flood myth to represent openness in terms of plot and philosophy. In this final chapter, then, I would like to further these discussions to focus on what happens *after* the flood. Specifically, I consider how imagined forms of survival and environmental futurity operate in flood narratives when they serve as a model for intergenerational ethics. If, as Jeremy Davies has claimed, the biblical flood narrative offers a 'mythic vocabulary for the Anthropocene', how does its framing of posterity influence the ways in which we think about future life and survival on a warming planet?[597] In what follows, I read two twenty-first century novels for the ways in which they use the biblical flood myth to explore ideas related to intergenerational ethics and environmental futurity.

The biblical flood myth is alluded to via plot and structure in James Bradley's *Clade* and Lydia Millet's *A Children's Bible: A Novel* to convey the possibility of continuity following ecological calamity. In both novels, concern for the future of the planet is underpinned by the birth or presence of children. The relationship between earthly regeneration and human procreation in the novels, I argue, repeats the model of posterity in the biblical flood myth. At the same time, I contend that both novels interrogate a purely anthropocentric notion of reproduction in relation to the future. In this way, they allude to the broader ecological potential of the biblical flood story as one that emphasises bioinclusivity and the multispecies entanglements that are evident in Noah's extension of hospitality to nonhuman others aboard the ark. In order to show how the versions of posterity in the biblical flood myth and modern intergenerational ethics intersect in contemporary flood fiction, I draw on insights and methodologies from environmental and social justice studies, as well as queer theory and ecocriticism. I am interested in how the metaphorical structure of posterity acquired from mythic flood tradition operates in representations of survival and futurity in contemporary climate narratives and intergenerational justice debates. How the future survival of the

[597] Davies, 'Noah's Dove: The Anthropocene, the Earth System and Genesis 8:8-12', p. 342.

planet's diverse ecosystems and species is articulated is important to how we might combat the kind of business-as-usual mindset that allows capitalism, among other things, to continue unabated. I suggest that thinking through the ways that myth involves metaphorical and symbolic structures, allows us to interrogate some of the unhelpful ideologies that have evolved from the biblical flood myth into debates surrounding environmental futurity. To that end, I shall begin this chapter by investigating the link between the biblical flood myth's vision of reproductive hope and futurity with pro-reproductive representations of posterity in contemporary intergenerational justice debates. I will then focus on how these conceptualisations of posterity are reflected on and questioned in *Clade* and *A Children's Bible*.

5.1 Reproductive Hope and Futurity in the Biblical Flood Myth

In the biblical flood myth, the renewal and restoration of the natural world after the destruction of the flood is shown to be ontologically dependant on Noah's progeneration. Noah is instructed, upon disembarkation from the ark, 'to keep the seed alive over all the earth'.[598] In the following passage, Yahweh declares, 'Bring forth with thee every living thing that *is* with thee, of all flesh, *both* of fowl, and of cattle, and of every creeping thing that creepeth upon the earth; that they may breed abundantly in the earth, and be fruitful, and multiply upon the earth'.[599] Crucially, the humans in the aftermath of the biblical flood are not situated as stewards of the postdiluvian environment in the immediate, but are called upon to steward it for future generations. Procreation is thus articulated as a hopeful gesture, an investment in the future, and a sign that, while the world proves vulnerable to devastation, certain kinds of endurance, recomposition and continuity are imagined possible in the face of disaster. Indeed, Jeremy Davies demonstrates how procreation is regarded as an ethical responsibility to the earth as a whole in the biblical story. Davies writes that whilst aboard the ark, 'Noah is charged with preserving the sheer potential for life' and 'the capacity of each one for reproduction'.[600] In doing so, 'Noah builds and equips a stockpile of sheer heredity, a sort of floating database or cryogenic

[598] *King James Bible*, 7:3.
[599] Ibid, 8:17.
[600] Davies, 'Noah's Dove: The Anthropocene, the Earth System and Genesis 8:8-12', p. 342.

repository'.[601] Davies points out that the word ark and archive have the same etymological root, and therefore, it is possible to read the ark as 'a biological archive […] where individuals are condensed into specimens. Existence on board is subsumed in the promise of existence to come'.[602] Once the flood waters recede and terra firma is restored, however, the story raises questions about what future individuals, populations, or species take priority in the postdiluvial world. While the promise of posterity appears to be afforded to all species as part of the 'radical hospitality' of the ark, as Kate Rigby posits, it is surrendered immediately in the postdiluvial covenant between Yahweh and Noah.[603]

In the postdiluvial world humanity is not only given a new and extended mandate in reproductive capacity, but is also offered mastery over the animals, as Yahweh tells Noah, 'into your hand they are delivered (*natan*), every moving thing that lives shall be food for you; and just as I give you the green plants, I give (*natan*) you everything'.[604] Thus, while the covenant is clearly made with all living communities, the post-diluvian world is crucially not one of mutually beneficial cohabitation between human and nonhuman, but one that reaffirms the hierarchical relationship of Gen. 1:26-9, with the addition that only now are humans reluctantly given permission to eat other animals, since Yahweh has accepted that they can't control their appetites and have evil proclivities. Moreover, Noah is charged with the directive to multiply, a duty that shows his commitment to the future as one based on the survival of his genetic pool in the sense that he is the sole progenitor of future generations.[605] In this case, the biblical flood myth appears particularly anthropocentric with respect to the posterity of all earth's living creatures.

As a family-structure metaphor, the biblical flood myth introduces a causative link between human procreation and the creation of biotic life on the planet. In her article on the metaphorical structures of myth that have common use in everyday language, Eve Sweetser uses examples from classical Greek mythology to illustrate how progeneration developed as a basic Indo-European metaphor for causal structure and ontological priority. Drawing from the story of creation described by Hesiod, Sweetser notes how the earth and sky in the story are reconfigured as a God and Goddess who copulate to conceive the universe. Sweetser views this myth as an

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[601] Ibid, p. 342.
[602] Ibid.
[603] Kate Rigby, 'Noah's Ark Revisited', p. 174.
[604] *King James Bible*, 9:2-3.
[605] Ibid, 43:1, 5–7.

image-metaphor mapping the physical structure of the earth (understood in the perception earth as flat, rather than spherical) and the sky as a man lying on top of a woman. By viewing this creation myth as a metaphor, Sweetser observes,

> metaphor is not only about creation, but about ontology. The earth and sky's physical configuration is not a one-time past event […] since they remain permanently in the same physical proximity, they are forever copulating, forever re-creating the universe.[606]

The metaphor conveys a causal structure in the sense that humans could not exist without the earth and sky in the same way as children could not exist without parents. Sweetser goes on to illustrate how representations of causal structure are frequently depicted metaphorically in everyday language in terms of physical progeneration. Similarly, the biblical flood myth can be seen as a metaphor for progeneration as an act of creation whereby the fertility of the post-diluvian earth is mapped onto the figure of Noah as progenitor of future humans, and Yahweh as Father of Creation. Indeed, while the flood implies the reversal of creation, Noah's God-given task 'to keep the seed alive over all the earth', aligns his ability to procreate with the potential for new life and growth on the earth. As Davies reminds us, the Hebrew term seed can also mean semen. Thus, the regeneration of the earth and human procreation are shown as mutually contingent.

This causal relationship between progeneration and creation is not limited to the biblical flood myth, but is repeated across many creation or fertility myths that attempt to elucidate essential questions about existence. Flood stories, including the Babylonian and Sumerian *Gilgamesh*, Chinese, Navajo, Pre-Incan and Greek myths all depict the desire for rebirth and renewal following destruction. In this, the desire for the longevity of the human species exists as part of the value placed on environmental futurity. Moreover, Sweetser shows that the causation as progeneration metaphor found in creation myths is manifested in language existing outside the realms of mythology because 'linguistic structure is part of culture and linguistic metaphorical usages are based on broader cultural cognitive structures'.[607] Throughout this thesis, I have explored the ways mythologies involve metaphorical and symbolic

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[606] Sweetser, 'Metaphor, mythology and everyday language', p. 593.
[607] Ibid, p. 592.

structures that evolve across linguistic and cultural communities. If we view mythology as a cultural ontology with a complex metaphorical foundation, the metaphorical structure of reproductive futurity acquired from mythic flood tradition can be seen to operate in environmental narratives which feature the birth of presence of children to highlight the urgency for climate action and the need to create a more sustainable future.

Indeed, the idea that we have a moral obligation to save the planet for the future of our children is a powerful one that packs an emotive punch. For example, Greta Thunberg's speech at the annual United Nations general assembly in 2019, days after millions of young people protested around the globe for emergency action on climate change, excoriated world leaders for their continued 'betrayal' of young people through their inertia over the climate emergency. Thunberg stated: 'The eyes of all future generations are upon you. And if you choose to fail us, I say we will never forgive you'.[608] Her forceful rhetoric is testament to the political power of posterity in the case of climate crisis which has been echoed around the world through youth activism and protests. The ongoing *Juliana v. United States* lawsuit offers one instance: the suit, first filed in 2015, carries a motion against governmental inaction on climate change on the grounds that it represents a violation of the constitutional rights of future adults.[609] A similar case is happening in the EU at present, brought by young activists from Portugal.[610] As these historical events evidence, intergenerational justice provides powerful motivation for climate action, especially when it is sought from our children.

In her book-length study on environmental futurity and the climate novel, Adeline Johns-Putra articulates concern that current discourse on intergenerational justice tend to regard the future of the biosphere as relevant predominantly in relation to human wellbeing and survival. This is problematic for several reasons: firstly, because it excludes the myriad of animal and plant species that rely on a healthy biosphere for their own posterity, and secondly, because in most cases the 'we' of

[608] Oliver Milman, 'Grete Thunberg condemns world leaders in emotional speech at UN' (2019) <https://www.theguardian.com/environment/2019/sep/23/greta-thunberg-speech-un-2019-address> [accessed 16 April 2020].
[609] 'Juliana v. United States' (2022) <https://www.ourchildrenstrust.org/juliana-v-us> [accessed 11 September 2022].
[610] Jonathan Watts, 'Portuguese children sue 33 countries over climate change at European court' (2020) <https://www.theguardian.com/law/2020/sep/03/portuguese-children-sue-33-countries-over-climate-change-at-european-court> [accessed 12 September 2022].

humanity assumes one singular group of peoples, rather than the disparate and diverse panoply of cultures around the globe, each with vastly different needs and priorities according to their geography and ethnography. Moreover, as Johns-Putra argues, the rhetoric of intergenerational ethics often models the moral obligation of present people to future generations on parental care. By fashioning our responsibility to future generations on our duties to our offspring she asserts, 'the terror of sublime infinity' is replaced with 'the sentimentality of parental caring, sheltering, and nurturing'.[611] As such, 'it allows us to convince ourselves that parental care is the obvious and most effective solution to climate change: if we just cared more about our children, we would be motivated to save them and everything would be all right'.[612] Juxtaposing John Rawls's notion of moral considerability for future generations, with Avner de-Shalit's concept of moral sympathy, Johns-Putra's investigation of parental care ethics provides a good starting point with which to think through the ways the biblical flood functions as a mythic counterpart in the western imaginary to contemporary ideas of reproduction and environmental futurity.

Drawing on the works of the moral philosophy mentioned above, Johns-Putra complicates models of intergenerational justice based on care ethics, such as those established in Christopher Groves 2014 work, *Care, Uncertainty, and Intergenerational Ethics*, to expose its inherent anthropocentrism as well as its exclusionary identity politics. On this, John-Putra's analysis reveals the heteronormative politics of what Lee Edelman terms 'reproductive futurity' as a characteristic aspect of parental care ethics. For Edelman, the figure of the child is symbolised in this oft quoted line as 'the perpetual horizon of every acknowledged politics, the fantasmic beneficiary of every political intervention'.[613] Edelman reads the child as a figure often used in political discourse and elsewhere to exploit the desire for dynastic stability and continuity. This, he argues, promotes intrinsically heteronormative ideals that invest in politically conservative notions of gender, sexual orientation, race, and economic privilege.

Edelman's critique of 'reproductive futurism' and its attendant phenomenon of 'pro-natalism' made crucial intervention into U.S. queer theory, however, it does not easily translate into Indigenous and environmental justice critiques, which often

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[611] Adeline Johns-Putra, *Climate Change and the Contemporary Novel* (Cambridge: Cambridge University Press, 2019) p. 4.
[612] Ibid, p. 5.
[613] Lee Edelman, *No Future: Queer Theory and the Death Drive* (Durham, NC: Duke University Press, 2004) p. 3.

posit a sense of ethical obligation towards all future life: human, animal and plant. Nevertheless, Edelman's critique of reproductive futurism is helpful in revealing the exclusionary biases of identity politics that lead to a narrow concept of posterity as genetic survivalism, thus undermining the expanded position of care needed to tackle the climate crisis as a global and trans-species affair. Scrutinising the image of the child used in environmental campaigns, Nicole Seymour echoes Edelman to suggest that 'concern for the future qua the planet *can only emerge, or emerges most effectively*, from white, heterosexual, familial reproductivity'.[614] Seymore notes that the sentimentalised rhetoric used by such campaigns, she cites the logo of the World Health Organisation Europe which features a mother and child-like image with the words 'The Future for Our Children', discloses an essentialised set of experiences that sit comfortably with westernised notions of the nuclear family unit, as well as heteronormative constructions of family.

A similar use of parental care as a rationale for environmental ethics can be seen across recent nonfiction accounts of climate crisis. In *The Uninhabitable Earth* (2019) for example, David Wallace-Wells argues that having children offers new-found hope in our collective ability to act: 'Each new baby arrives in a brand-new world, contemplating a whole horizon of possibilities. […] We live in that world with them – helping make it for them, and with them'.[615] Likewise, Mark O'Connell makes a comparable comment in *Notes from an Apocalypse* (2020) when he asserts that, for him, 'parenthood has meant a radically increased stake in the future' as an 'investment in the world […] of the future as a fertile realm of possibility'.[616] While Wallace-Wells and O'Connell emphasise parenthood as a transformative experience that can lead to a deeper investment in environmentally friendly ways of living, recent studies have shown that, indeed, the opposite is true of most parents in high-consumption economies. A 2020 study conducted in Sweden found that parents in high-consumption economies have a higher carbon footprint because the pressures of parenting justify high-carbon choices such as driving to facilitate being in more

[614] Nicole Seymour, *Strange Natures: Futurity, Empathy, and the Queer Ecological Imagination* (Urbana: University of Illinois Press, 2013) p. 7; original emphasis.
[615] David Wallace-Wells, *The Uninhabitable Earth: A Story of the Future* (New York: Penguin Random House, 2020) p. 203.
[616] Mark O'Connell, *Notes from an Apocalypse: A Personal Journey to the End of the World and Back* (London: Granta, 2020) n.p.

places in one day, compared to taking public transport or biking.[617] Although having children might be transformational on a personal level, the study concludes that becoming a parent does not necessarily cause people to automatically become greener than those without children. Notwithstanding such findings, climate novels continue to use the birth or presence of children to stress environmental concern and hope for the future. In Megan Hunter's *The End We Start From* (2017), the unnamed narrator seeks hope for collective survival in a flood-ravaged England with the birth of her son. As touched upon in the previous chapter, Barbara Kingsolver's *Flight Behaviour* and Mireille Juchau's *The World Without Us* grieve the proleptic loss of particular environments and species in concurrence with the deaths of children. In David Mitchell's *Bone Clocks* (2015), meanwhile, the protagonist is crushed by the burden of guilt at the harms inflicted on her grandchildren for which she holds her generation responsible.

On the other side of the debate, Naomi Klein in *This Changes Everything* (2014) points to parental care as having the potential to jeopardise ethical agency by shoring up conservative norms in the political and cultural sphere. Klein notes that as a woman without children she 'couldn't help feeling shut out' by expressions of parental care made by other environmental activists:

> If caring about the future was primarily a function of love for one's descendants, where did that leave those of us who did not, or could not, have children? Was it even possible to be a real environmentalist if you didn't have kids?.[618]

As Klein reveals, rhetoric that emphasises familial reproductivity as the only cause for investment in the future can also create an exclusionary framework of parental care when it translates to the public realm of environmental concern. Klein's personal observation, alongside those I have mentioned above, points to the complex and entangled relationship between regeneration and reproduction in relation to public discourses on environmental futurity that recalls metaphorical structure of the biblical flood myth.

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[617] Jonas Nordström, Jason F. Shoegren and Linda Thunström, 'Do parents counter-balance the carbon emissions of their children?', *PLOS ONE* 15 (2020), <https://doi.org/10.1371/journal.pone.0231105> [accessed 20 February 2023].
[618] Naomi Klein, *This Changes Everything* (New York: Simon & Schuster, 2014) p. 43.

Given the increasing rates of species extinction and climate-related threats to precarious human communities, there is an ever urgent need to think 'more broadly about reproduction', as Neel Ahuja asserts, and to recognise that 'bodies and atmospheres reproduce through complex forms of socio-ecological entanglement'.[619] Considered in this light, all humans are engaged in reproductive processes, whether they are cognizant of them or not. An expanded conception of reproduction beyond the anthropomorphic and gendered understanding of the term, Ahuja writes, includes those reproductive forces of planet: 'minerals, mosquitoes, settlers, gases, solar rays and other bodies' that 'share in reproductive metabolisms crossing scales, species and systems'.[620] From this vantage, the reproduction of the everyday activities of carbon-dependant industrial living connects one's bodily consumption and waste to a shared atmosphere that is slowly threatening other far-off bodies, both human and nonhuman.

As discussed in previous chapters in relation to the rise of fossil-fuelled capitalism, the effects of the shared atmosphere of extraction-based life kill mellifluously through the deep time and circuitous space of 'slow violence' and 'largely unintentional ecocide'.[621] Ahuja argues that neoliberal subjects are engulfed by processes linking the reproduction of '[c]arbon-fuelled forms of neoliberal freedom[s]" with the proliferation of "waste and precarity on far-flung bodies'.[622] The reproduction of such suggests a problem of knowledge about agency and causality, for this is human reproduction defined by waste rather than by romantic marks of sentience, emotion or intentionality. In a time of extinctions, Ahuja remarks, 'lateral reproduction' suggests 'a problem of rethinking our casual reproduction of forms of ecological violence that kill quietly, outside the spectacular time of crisis'.[623] Our systemic failure to do so has resulted in what he describes as a 'staggering scale of reproductive failure, human and nonhuman'.[624] By moving away from a critique of reproductive futurity as purely an issue of human procreation and towards a planetary account of reproduction, Ahuja's work queries the xenophobic rendering of

[619] Neel Ahuja, 'Intimate Atmospheres: Queer Theory in a Time of Extinctions', *GLQ* 21 (2015) 365–85, p. 367.
[620] Ahuja, 'Intimate Atmospheres', p. 368.
[621] Rob Nixon, *Slow Violence and the Environmentalism of the Poor* (Cambridge, MA: Harvard University Press, 2009); Kate Rigby, 'Writing in the Anthropocene: Idle Chatter or Ecoprophetic Witness?', *Australian Humanities Review* 47 (2009) n.p.
[622] Ahuja, 'Intimate Atmospheres', p. 368.
[623] Ibid, p. 370.
[624] Ibid.

reproductive futurity in climate discourse and the sovereignty of the anti-relational stance against reproduction in queer theory.

Ahuja's reassessment of reproduction as an ecosocial process is key to how I read the topic of reproductive futurity in *Clade* and *A Children's Bible* in the next section. Indeed, while both novels frame their narratives around what J. Jack Halberstam describes as 'reproductive family time', (i.e., a temporality following childhood to adulthood and death punctuated by rituals of ownership, marriage and reproduction), they also offer an ecology of social reproduction that links bodies, species, technologies, and spaces. In this way, *Clade* and *A Children's Bible* move away from the overarching narrative of 'reproductive family time', and into an ethical system that prioritises Other species and persons who differ greatly from the main characters of the novel. In so doing, the novels invite an ecocentric reading of intergenerational ethics that encourages the reader to move beyond a narrow view of posterity as genetic survivalism, and to have concern with lives that are radically distant to theirs.

5.2 Widening the Circle of Concern in *Clade*

Clade chronicles the lives of three generations following the birth of Summer Leith, the daughter of Adam Leith, an Australian climatologist studying the Antarctica's previous periods of warming. On the surface, *Clade* constructs a vision of posterity that expresses a parochial and paternal view of the future as lineage. The novel's title, taken from the Ancient Greek word for 'branch', refers to the term coined by the biologist Julian Huxley in 1957 to describe a group consisting of an ancestor and all its descendants as a single 'branch' in the 'tree of life'. As the first of his evolutionary 'branch', the focus of the novel on Adam's lineage reframes the idea of planetary posterity in generational terms, thereby repeating the causation as progeneration metaphor I discussed in relation to creation myths. The novel thus aligns concern for the planet with care for one's descendants, and specifically with male, heterosexual, reproductive futurism. Indeed, the name Adam evokes the creation story told in Genesis, making this link explicit. However, the themes of destruction and rebirth incorporated within *Clade* also draw on the biblical flood myth as an intertext. As I shall demonstrate, environmental disasters in the novel occur at several points of

narrative dénouement, which break the linear narrative trajectory from one generation to the next and extend the novel's focus out from the Leith family to consider external perspectives tangential to the Leiths. Through this widening narrative frame, I argue that Clade begins to consider a more expansive vision of ecological ethics within and toward the future.

Divided into ten chapters, *Clade* projects the chronological trajectory of the novel forward to end in the first decade of the third millennium. By structuring the novel via three generations of the Leith family, Bradley intended to map the non-human dimensions of climate change onto the human scale, as a means 'to talk about a whole series of questions about time and loss and deep time, all of which are absolutely central to the book as a whole (and indeed any discussion of climate change)'.[625] In this way, the intimate connections between family members serve as a model for obligation and action towards the future. However, the generational structure of *Clade* equally runs the risk of simplifying one generation's obligation to future generations of their own lineage. As Johns-Putra has written in another context, doing so, 'potentially limits the view of an unknowable future to a version of the knowable present, at just the point at which an ethical position should be expansive rather than restrictive'.[626] From this vantage, 'parental care ethics is translatable into a limited position of concern that, interestingly, resembles the biological argument for posterity – that is, the perpetuation of the genes'.[627] In other words, the parochialism and paternalism of parental care ethics are shown to be self-gratifying and self-interested when idealised as a disposition towards posterity. As such, it reiterates a conception of intergenerational justice as mere biological survivalism.

The opening chapter to *Clade* frames the novel's central environmental concerns around procreation to question the extent to which having babies is justifiable given the crises their generation will face. Adam is in Antarctica conducting research into the melting of Antarctic permafrost while he while he waits for news on his partner's latest round of IVF treatment. The novel's central concerns surrounding procreation and posterity are disclosed indirectly through connections with the Antarctic setting that exists, Adam observes, 'without reference to the

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[625] Amy Brady, 'How will Climate Change affect your Grandchildren' (2017) <https://chireviewofbooks.com/2017/10/24/burning-worlds-james-bradley-clade-interview/> [accessed 2 September 2022]
[626] Johns-Putra, *Climate Change and the Contemporary Novel,* p. 59.
[627] Ibid.

human'.[628] The polar imagery invites the reader to think beyond their own time and climate in the context of deep history, as Adam laments, '[t]his year the ice has retreated further than ever exposing rock and stone buried for millions of years' Adam observes.[629] At the same time, Adam voices an uneasy uncertainty about the scale of climate crisis on the future, noticing how '[t]o the east and west the glaciers are flowing faster and faster, calving bergs half the size of cities day after day, a process of transformation so vast it is difficult to comprehend'.[630] The palpable environmental decline witnessed by Adam reaffirms his worry that 'the planet was on a collision course with disaster' and heightens her worry that having a child would be 'merely adding to a problem that was already out of control'.[631]

The link established between the Leiths' struggle to bear children and the melting of the Antarctic permafrost, where 'the ice sheets were destabilising, their deterioration outpacing even the most pessimistic of models', aligns the novel's image of the polar environment not only with the precariousness of human life, but also with the questions of climate change. Adam's flashbacks reveal his presence in Antarctica is not only due to work commitments, but part of his desire to retreat from reality, 'to lose himself in something new'.[632] Yet, far from reasserting some 'semblance of ease', Adam finds that the fragility of the Antarctic tundra reaffirms his discomfort with the thought of having children. Indeed, as the severity of the climate crisis begins to weigh heavily on Adam, he worries about his choice to have children, asking: 'What sort of world would [their] child inherit? Were they really doing the right thing by bringing another life into it?'.[633] Despite key differences in emphasis, recent work by Donna Haraway can be placed alongside Adam's argument; Haraway's provocative call to 'make kin not babies' proclaims the need for a massive reduction in the planet's human population. However, Haraway makes clear this call is in the name of humans and other species who face uncertain futures, and even extinctions, in these 'times of burning and extraction called the Anthropocene'.[634] Earth's growing human population, Haraway contends, 'cannot be borne without immense damage to human and nonhuman beings'.[635] By turning away

[628] James Bradley, *Clade* (London: Titan Books, 2105) p. 20.
[629] Ibid, p. 21
[630] Ibid.
[631] James Bradley, *Clade*, p. 18.
[632] Ibid, p. 19.
[633] Ibid, p. 18.
[634] Donna Haraway, *Staying with the Trouble* (Duke University Press: London, 2016) p. 5–6, 90.
[635] Ibid, p. 208.

from 'pro-natalist pressures' on young people and developing 'non-natalist kinnovations [for] individuals and collectives in queer, decolonial and Indigenous' communities, Haraway emphasises the potential of creating a future for all earthly creatures.[636]

At the same time, she insists on the ethical gains of 'staying with the trouble', which requires, in Haraway's words, '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'.[637] *Clade*'s vision of 'staying with the trouble', while not radical like Haraway's, does offer the reader a glimpse into what living and dying on a damaged planet might look like if political calls to action remain unheeded. Adam's indecision whether to have a child or not demonstrates that as individuals come to reenvisage their identity on a more global scale, they have equally come to question their reproductive choices.

Adam's difficult decision to have a child mirrors contemporary debate in recent years about reproductive rights in relation to resource sustainability and carbon emissions. One significant voice to the debate is US congresswoman Alexandria Ocasio-Cortez, who spoke about the environmental considerations being made by many millennials in their decision on whether or not to have children. Speaking at a live-streamed Q&A hosted on Instagram, Ocasio-Cortez said, 'It is basically a scientific consensus that the lives of our children are going to be very difficult, and it does lead young people to have a legitimate question: is it still okay to have children?'.[638] Similarly, the BirthStrike movement, founded by environmental activist and artist Blythe Pepino, offers men and women a supportive platform to share their decision to remain child-free in response to climate breakdown. Their online manifesto states that 'those who have signed up to BirthStrike are raising awareness by saying [climate crisis] is now affecting the human ability and desire to give birth'.[639] Notably, this decision is only just affecting people in high-consumption

[636] Ibid, p. 209.
[637] Haraway, *Staying with the Trouble*, p. 3.
[638] Matthew Taylor, 'Is Alexandria Ocasio-Cortez right to ask if the climate means we should have fewer children' (2019) <https://www.theguardian.com/environment/shortcuts/2019/feb/27/is-alexandria-ocasio-cortez-right-to-ask-if-the-climate-means-we-should-have-fewer-children> [accessed 27 February 2019]
[639] BirthStrike, 'Babies don't make emissions our systems do' [Tumblr] <https://birthstrike.tumblr.com/post/187142622484/babies-dont-make-emissions-our-systems-do-how> [accessed 27 February 2019]

westernised regions as these examples attest, but has been a way of life for many people, women especially, in poorer, colonised regions.[640]

In the novel, Adam's indecision over whether to have a child with Ellie makes a dramatic U-turn towards the end of the first chapter. On an expedition to an ice shelf to the west of the station, Adam suddenly hears 'a deep, geological creaking and groaning that rose and fell and echoed to the horizon', only to realise that the sound 'was the ice shifting beneath them as the entire landscape on which they stood slipped and fell towards the sea'.[641] Rather than returning to the sense of emotional and cognitive crises brought about by the scenes of environmental decline witnessed earlier, the 'implications of what he had heard' conjures 'a kind of elation' in Adam 'as if he had been freed somehow'.[642] The sense of liberation Adam feels upon witnessing first-hand one of the most dramatic indicators of global warming appear at odds with his initial fears. Surely, such a scene would confirm his previous notions that the world is set on a course of disaster. Yet, the flood of ice reveals to Adam that catastrophe is now inevitable, that the future is radically destabilised and unknowable, but that life is still something to be affirmed. Indeed, the experience returns his desire to have a child with Ellie, and affirms 'his sense that they were not wrong to be doing this thing'.[643] Moments later, Adam receives a phone call from Ellie to confirm she is pregnant. In this way, the end of the chapter plays with the conventions of the apocalyptic genre in that it reveals, as Sarah Dillon notes, 'cataclysmic events but only and always with the structural guarantee of a postcataclysmic continuance'.[644] *Clade* thus draws on the mythic structure of the biblical flood narrative in its construction of destruction and rebirth, suggesting that some forms of endurance are possible amidst calamity.

Moreover, the flood of ice collapsing into the sea foregrounds the cataclysmic flood Adam and his grandson experience later in the novel as a 'point of transition' in the narrative from destruction to rebirth.[645] The emphasis on renewal and rebirth characterises both points of narrative dénouement. However, whereas the flood in the

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[640] Linda C. Giudice, Erlidia F. Llamas-Clark, Nathaniel DeNicola, et al; the FIGO Committee on Climate Change, Toxic Environmental Exposures, 'Climate change, women's health, and the role of obstetricians and gynecologists in leadership', *Int J Gynecol Obstet* 155 (2021) 345– 356.
[641] Bradley, *Clade*, p. 22.
[642] Ibid.
[643] Ibid.
[644] Sarah Dillon, 'Imagining Apocalypse: Maggie Gee's *The Flood*', *Contemporary Literature*, 48, 374–397. p. 376.
[645] Bradley, *Clade*, p. 131.

second half of the narrative opens up the possibility of more radical notions of environmental futurity, here the plot underscores the heteronormative politics of Edelman's reproductive futurism. In a similar manner to the causal structure presented in the flood myth, Adam connects the birth of his child with the continuance of the world as life-giving and supporting. 'They will have the child', he thinks, 'and the world will go on, and they will go on, and he will love her and they will see where tomorrow takes them. For what else is there to do, except hang on, and hope?'[646] Here, Adam and Ellie's decision to have a child is principally articulated as a hopeful gesture and sign of their investment in an environmental future, even while he is unsure what sort of future it will be. This rhetorical manoeuvre supports Edelman's view that the figure of the child in literature often supports adults' false and ultimately narcissistic attempts at realising their own desires for the future. Since the child is 'the site of a projective identification of an always impossible future', the birth of Adam and Ellie's daughter, Summer, can be described within Edelman's model as a marker of parental care and future desire.[647]

However, the novel also shows how the physical and emotional pressures of living in a time of environmental collapse place greater strain on children as the objects of parental hope. The image of the vulnerable child preoccupies the novel as they move from signifiers of hope to signifiers of parental fear and anxiety about environmental futurity. Throughout *Clade*, the health of the biosphere is brought into the same frame as sick, disabled or mentally unwell children. For example, in the very next chapter Summer experiences a severe asthma attack as a toddler, the result of decreased air quality from continued occurrence of bushfires close to the Leiths' Sydney home, so prescient of the horrific bushfires in 2019-20. She recovers only to grow into a troubled, suicidal young woman, as her step-grandmother observes '[t]here has always been a ferocity in Summer, a ferocity Maddie knows Ellie fears might turn inward'.[648] Intersecting with Summer's story is her step-grandmother's who equates the rapid bird die-offs with the death of her own son from an undiagnosed form of cancer. Ellie helps a young climate refugee receive hospital treatment for a burst appendix when her parents are denied government assistance. Later in the narrative, we are introduced to Noah, Summer's son, whose sensitivity to storms and extreme weather events is intensified by his autism. Finally, we meet a virtual

[646] Bradley, *Clade*, p. 22-23.
[647] Lee Edelman, *No Future: Queer Theory and the Death Drive.* p. 31.
[648] Bradley, *Clade*, p. 64.

simulation of a young boy who dies in a global AVRS pandemic, alarmingly prescient of Covid-19.

In all these cases, the diminished health and wellbeing of children are shown as a symptom and material reality of environmental collapse. Importantly, this is not a matter of symbolism, but of disclosing the material connectivity that tie the fate of individual humans into that of other species.[649] *Clade* thus relies on the reader's identification with the parental figures in the novel that repeatedly elicit emotions of empathy, sympathy, and care for their children. Suzanne Keen calls this novelistic device 'situational empathy', whereby the reader 'responds primarily to aspects of plot and circumstance' which involve 'less self-extension in imaginative role taking and more recognition of prior (or current) experience'.[650] In this way, a novel invoking situational empathy 'can only hope to reach readers with appropriately correlating experiences'.[651] The vulnerability and victimhood of the child characters in *Clade*, therefore, invite the reader to inhabit the parental role, and by extension active concern expected from such a position. In doing so, the novel promotes the idea that reading 'may participate in the socialisation and moral internalisation required for the transmutation of empathetic guilt into prosocial', or in this case, environmental action by connecting parental care to a feeling of responsibility for environmental posterity.[652] As Keen suggests, however, this kind of situational empathy assumes that the reader has an experience of parenthood, or finds such experiences readily relatable. In doing so, *Clade* leaves itself open to criticism that it 'repeats traditional nuclear family dynamics, and invites the reader to inhabit idealised stereotypes built on heavily gendered norms', as Johns-Putra argues.[653] This echoes Edelman's concern that use of the child in literature almost always adopts suspiciously heterosexist or patriarchal ideological assumptions.

Clade presents the image of the child as a figure of a vulnerable environmental future in need of filial protection and nurture, thus appearing to reiterate the idea that parental care ethics is vital for planetary posterity. Nevertheless, the novel also suggests that the characters' capacity for care is limited, as shown through their anxiety and guilt, and therefore, ultimately unreliable. Indeed, Adam equates his sense of helplessness early in the novel with a wider feeling that 'things are breaking down,

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[649] NB. The virus in *Clade* materialises as a result of the mistreatment of animals, as did Covid-19.
[650] Suzanne Keen, *Empathy and the Novel* (Oxford University Press, 2007) p. ix.
[651] Ibid, p. ix.
[652] Ibid, p. xiv.
[653] Johns-Putra, *Climate Change and the Novel*, p. 49.

spiralling out of control' and that he is 'powerless to do anything about it'.[654] Adam's anxiety leads him to feel that he is at fault for his daughter's suffering since it is he who 'seems unable to adapt to family life, to find an equilibrium that will let him be the parent he knows he should be. It is not that he doesn't want to, just that no matter how hard he tries, it seems to elude him'.[655] Similarly, in a conversation with her step-mother Ellie reiterates her fear for her daughter's mental health saying, 'They seem so closed off, these kids, like they've grown up too fast. It frightens me'.[656] When pressed by her step-mother, Ellie again links her concerns about Summer to her fears about the future: '"…I don't know what kind of future there is for her", [Ellie] said, "for any of them"'.[657] Later in the narrative when reflecting on Summer, Ellie concedes that 'she lurched uncontrollably between anger and regret for her failures as a parent'.[658] In these instances, parental characters struggle to emotionally confront, or indeed, acknowledge the harsh realities of environmental collapse that their children face. *Clade* thus appears to reappraise its vision of parental care when it serves as an ethical model for intergenerational action by suggesting that it is not always productive of certainty and security when it fails to fully apprehend the world the next generation is destined to inhabit. Another possible reading, therefore, could infer that Adam made the wrong decision to have a child and the miserable story of subsequent generations thus conveys the failure of a hopeful vision predicated on reproduction. As we shall see, *A Children's Bible* takes this idea further to explore the intergenerational weight of climate crisis from the child's point of view.

The intergenerational conflict in *Clade* is most notable in the middle chapter, entitled 'Boiling the Frog', in which Adam travels to England in search of his estranged daughter. He finds Summer squatting in a remote cottage in Norfolk, where she is bringing up Noah, alone. Adam is shocked and saddened to learn that Summer has concealed his grandson from him and Ellie for eight years, but comes to blame himself and Ellie for the tensions of their final years of marriage, in the awareness that 'the presence in early childhood of chemicals associated with stress can alter the brain's chemistry for life'.[659] Noah is on the autism spectrum, and is suffering acute anxiety due to the effects of the storms ravaging England. His attempts to elicit

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[654] Bradley, *Clade*, p. 39
[655] Bradley, *Clade*, p. 114.
[656] Ibid.
[657] Ibid, p. 63.
[658] Ibid, p. 152.
[659] Ibid, p. 114.

comfort and reassurance from Summer fall on deaf ears, as Summer, frustrated and angry with her choices in life, refuses to comfort him. Generational conflict is apparent in the breakdown of parental roles, beginning with Adam's aloofness towards Summer, and extending to Summer's lack of care for, and eventual abandonment of Noah, who articulates that the absence of his mother feel 'like a hollow at the centre of him, the feeling so huge, so overwhelming, he was afraid to give into it'.[660] Noah's feeling of overwhelm is manifested in a literal sense with the occurrence of a calamitous flood pages later. In line with the biblical flood narrative, Noah survives the flood and serves to witness 'a liquid hill that moves faster than any of them could run, a wave that does not end but comes and comes and comes'.[661] The flood functions on a narratological level as a point of dénouement that repeats the death-rebirth motif, and becomes 'a point of transition' in the novel that signals the end of the Leith line, and thus the generational structure of the novel.[662] As a point of transition, the flood gestures towards the open narrative structure of the biblical myth as the novel extends its focus out from the Leith family from this point to consider a more expansive vision of ecological ethics within and toward the environmental future in the remaining chapters. The widening structure of *Clade's* narrative focus, then, not only represents a critical intervention into the reader's sympathetic development, but also offers the reader alternative points of view, which, crucially, look beyond the survivalist dimensions of parental care ethics.

The chapter directly after the cataclysmic flood, entitled 'The Keeper of the Bees', widens the narrative focus to include external perspectives tangential to the Leiths. The chapter focuses on Ellie in the months after the flood. Adam has assumed guardianship of Noah, but takes him to see his grandmother on weekends. Having divorced Adam years before, Ellie now lives in the countryside where, on a walk, she happens upon a field with a hive and discovers that it is one of several belonging to Amir, an undocumented refugee from Pakistan. Ellie's fascination with the hives, and desire to make them the focus of a new art project, encourages her to form a relationship with Amir whom she initially regards with suspicion. In doing so, Ellie starts to slowly learn to care for not only the hives, but also the refugee community to which Amir belongs. With the story of Amir and the bees, I argue, the reader is invited to move away from the overarching narrative of 'reproductive family time' as first set

[660] Ibid, p. 275-276.
[661] Bradley, *Clade*, p. 126.
[662] Ibid.

out in *Clade*, and into an ethical system that prioritises Other species and persons who differ greatly from the main characters of the novel.

On her first encounter with the hives, Ellie is struck by the beauty of the bees as they 'circle the hive, crawling in and out, the sound of them frowzy and warm'.[663] As one lands on her sleeve, she notices 'the improbably, clumsy way it moves, legs twitching, wings ready to take off again. It is beautiful, not just as a thing in itself, but for the small wonder of its presence, its strange mixture of the alien and the familiar'.[664] The description creates an immediacy through the use of present-tense and first-person indirect narration to allow the reader to mentally simulate Ellie's experience of the bees. Notably, her affective encounter with bees appears to evoke sublime feeling in a similar manner to the insect encounters discussed in the previous chapter, and, like the characters in *Flight Behaviour* and *The World Without Us*, Ellie's sense of wonder and curiosity towards the bees motivates her compassion for them. Ellie's fascination with the bees inspire her to create a new art installation. As she begins to gather information on their history, she also learns of their impending extinction due to Accelerated Colony Collapse Disorder. Genetically engineered plants, infections and spontaneous events seem to be the contributing factors of the bees' collapse, which in Ellie's thoughts will come to similarly trigger the eventual collapse of human existence, 'causing it to crash as well'.[665] In this way, the bees in *Clade* function as narrative agents to reveal the characters' shared exposure to climate and environmental crisis.

Nonetheless, Ellie's feeling towards the bees as 'something that is not quite wonder, not quite grief, but somehow both', plays an important role in widening the novel's circle of concern from the purely anthropocentric.[666] Here, Martha Nussbaum's extension of moral considerability on the non-eudaemonistic grounds of wonder is highly pertinent. In her 2001 work, *Upheavals of Thought*, Nussbaum puts forward a theory of the relationship between emotions and value judgements. In particular, she draws from the Aristotelian idea of eudaemonia as human wellbeing and flourishing to theorise emotions as 'eudaemonistic evaluations' because they encompass judgements that appraise 'an external object as salient for our own

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[663] Ibid, p. 142.
[664] Bradley, *Clade*, p. 143.
[665] Ibid, p. 166.
[666] Ibid, p. 147.

wellbeing'.[667] Using compassion as an example of an emotion that traditionally is 'taken to provide a good foundation for rational deliberation and appropriate action, in public as well as private life', Nussbaum argues that it functions in significant ways to support ethical assessment.[668] For Nussbaum, compassion has three cognitive requirements, the third of which, '*eudaimonistic judgment'* identifies a 'person, or creature, [that] is a significant element in [the individual's] scheme of goals and projects, an end whose good is to be promoted'.[669] This third belief is significant to ethical assessment, and in particular, the widening of 'the circle of concern' because it instils a sense of shared vulnerability with the one suffering. The prevention or alleviation of the distress or pain of the sufferer, therefore, is inextricably tied to the witness's own sense of wellbeing, because it lessens the sense of their potential for distress or pain. I have discussed the importance of shared vulnerability in regards to the work of ecological grief and mourning in the last chapter, but return to it now for the ways in which it is essential to a broad compassion for different kinds of posterity beyond the human. For Nussbaum, "[t]he recognition of one's own related vulnerability is, then, an important and frequently an indispensable epistemological requirement for compassion in human beings".[670] This is because human beings find it difficult to attach others to themselves except through thoughts about what is already of concern to them. The compassion humans feel for animals, for example, is conceived of, in Nussbaum's view, on a shared basis for suffering, be that physical pain or hunger. "Even when we feel compassion for precisely those aspects of an animal's suffering that are unlike our own," she writes, "it is most often on the basis of a shared vulnerability to pain that we extend our sympathy".[671]

In Nussbaum's conceptualisation of wonder however, the nonhuman is valued not because of its relationship to human development, but because of its inherent complexity. '[T]he non-eudaimonistic element of wonder strongly reinforces or motivates my eudaimonistic concern', writes Nussbaum, 'when I see with compassion the beating of an animal, a wonder at the complex living thing itself is likely to be mixed with my compassion, and to support it'.[672] Likewise, Ellie values

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[667] Martha Nussbaum, *Upheavals of Though: The Intelligence of Emotions* (Cambridge: Cambridge University Press, 2001), p. 4.
[668] Nussbaum, *Upheavals of Thought*, p. 299.
[669] Ibid, p. 321-2.
[670] Ibid, p. 319.
[671] Ibid.
[672] Ibid, p. 321.

the bees because of 'their unknowability', which 'is like a space into which one can fall, a reminder of the presence of otherness in the world, and of the loss of its passing'.[673] The bees' very 'otherness', their 'unknowability', provokes Ellie's non-eudaimonistic sense of wonder, which in turn, informs her compassion and care for the bees.

In emphasising concern and empathy for the bees as they pass into extinction, *Clade* shapes a conception of *eudaimonia* in that it adopts an ethical attitude to non-human animals without relation to the human, but simply 'as the kind of thing it is'.[674] The sense of wonder Ellie feels towards the bees is inspired, in part, through Amir's sympathetic relationship with bees, which he articulates as reciprocal. Having fled the refugee detention camp where his wife and child perished, Amir explains

> I was hurt in my heart, depressed, almost catatonic. […] It is foolish, I know, but the bees helped me. The first time they landed on me, enveloped me, it was as if I was no longer simply me but part of them, as if they connected me to something that went beyond myself.[675]

Amir's connection to the bees not only aligns his suffering as a victim of environmental injustice with that of the bees, but invites the reader to imagine Amir's sense of bodily oneness with the bees that emphasises the dynamic relationship between body, mind and environment. Significantly, it is the intimacy of the touch of the bees as they land on Amir that brings him out of his psychological paralysis; a scene comparable to Dellarobia's experience of monarch butterflies in *Flight Behaviour.* In becoming 'enveloped' by the bees, Amir's sense of being; his self, is absorbed by the bees so that he feels 'part of them'. His communion with the bees is similar to the experience of religious ecstasy Dellarobia feels in Kingsolver's novel. Both moments hinge upon the characters being jolted out of themselves and finding identification and affinity with nonhuman others through their bodily interactions. Crucially, Dellarobia and Amir are re-awakened by their communion with these

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673 Bradley, *Clade*, p. 183.
674 Nussbaum, *Upheavals of Thought,* p. 322.
675 Bradley, *Clade*, p. 165.

diminutive creatures, revealing to themselves and the reader an expanded sense of personhood and 'being in the world' that we might call 'ecological'.[676]

To make this connection obvious to the reader, the chapter interweaves sections on Amir with the construction of Ellie's art installation, which develops 'not just [through] the bees she is thinking of, but Amir'.[677] Through her research she comes to recognise the trauma suffered by climate refugees, whose presence 'filled the media for as long as she can remember, a constant rumble of anger and paranoia', but which 'over the years she [had] learnt to tune […] out'.[678] Yet, as she reads 'the descriptions of the camps, the random harassment by police, the detention and forced expulsion of anyone the government deem[ed] unreliable" she finds herself "assailed by it all over again'.[679] On the one hand, Bradley's stress on colonialism's spatial reproduction of racial disposability provides a noteworthy link to the scenes of class dispossession and sociopolitical deprivation in George Turner's *The Sea and Summer*, which I compare to the relationship between the Australian state and non-white immigrants past and present in Chapter Three. In connecting these novels, I want to emphasise the forms of lateral reproduction both novels depict in reference to Neel Ahuja's 'Intimate Atmospheres' discussed earlier in the chapter. Both *Clade* and *The Sea and Summer* describe ongoing traumas related to the resurgence of constrictive nationalisms and the closure of borders in face of migratory and refugee flows that relate to climate precarity, as well as those deeper historical currents of colonial-settler violence that is uniquely tied to the Australian apocalyptic imaginary. Ellie's concern provokes her active engagement for the disenfranchised community of climate refugees to which Amir belongs. She pretends to be the mother of a little girl of friends of Amir to get her access to hospital treatment, and later fights local enforcement to find Amir when his block of flats is raided by the police. 'How can things have reached a point where people just disappear?' she asks. The chapter thus asks the reader to consider the ways in which the current climate and environmental crisis has affected and will continue to disproportionately affect what Judith Butler has called 'devalued and ungrievable lives'.[680] These lives, *Clade* demonstrates,

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[676] Samantha Walton offers an in-depth analysis of 'ecological selfhood' in relation to phenomology, Buddhism and various indigenous perspectives in her chapter on 'Being', in *The Living World: Nan Shepherd and Environmental Thought* (London: Bloomsbury, 2020) pp. 167-193.
[677] Ibid, p. 167.
[678] Ibid, p. 163.
[679] Ibid, p. 163.
[680] Judith Butler, *Precarious Life: The Powers of Mourning and Violence*, p. 22.

include both animal bodies lost to extinction as well as racialized human lives, like Amir, who are actively marginalised and displaced.

On the other hand, we can read the entangled relationships in 'The Keeper of the Bees' as a gesture towards the recomposition of multispecies social reproduction or the 'making kin' that Haraway encourages.[681] Indeed, Ellie forms an attachment to Amir and the wider undocumented community to which he belongs, becoming a temporary 'mother' to a little girl denied medical treatment. Additionally, Amir and Ellie share an interspecies affinity with the bees that is underscored through their shared sense of wonder, care and hope that the bees will remain a 'continued presence of otherness in the world' despite multiple risks to their 'passing away and out of time'.[682] The chapter thus comes to function as a vehicle for thinking through the slow ruptures and reformations of ordinary family life and anthropocentric social reproduction towards a more generous model of 'kinshipping' that the novel takes into its final chapters.[683]

In the penultimate chapter entitled '1420 MHZ', Noah is an astronomer looking for signs of interstellar communication. He notices an 'anomalous intermittent radio source detected in Sagittarius' and recognises the signal as 'language'. The chapter delves into notions of deep time to emphasise the certainty of biospheric and environmental renewal. The 'language' Noah hears reaffirms his belief that there will be a future for the planet, even while it may or may not support humankind: 'What will be here eons from now?' he wonders, 'the turmoil and destruction of the past century [will be] little more than a spasm, an interregnum in the great cycles of the planet's existence'.[684] While he is doubtful humanity will be one of the species to remain, the prospect extra-terrestrial life gestures prompts Noah to imagine a futural ark that holds 'men and women as different from those ancient people on the plains of Africa; […] spread outward, to the stars, borne there in great ships just as boats bore the first humans across Earth's oceans'.[685] The message from the stars discloses the possibility for an extra-terrestrial kinship that may form the

[681] Haraway, *Staying with the Trouble*, p. 208.
[682] Bradley, *Clade*, p. 182,
[683] The term kinshipping is taken from Niccolini, Zarabadi, and Ringrose demarcation of the term in 'Spinning Yarns', as a process of 'making kin' that disrupts the arboreal thinking of kinship as a property-bearing patrilineal line as traditionally thought of in Western culture 'and calls for an active traffic between the human and nonhuman outside of a patrilineal or even human-centred, kinship line'. Quoted in Alyssa D Niccolini, Shiva Zarabadi, and Jessica Ringrose, 'Spinning Yarns: Affective Kinshipping as Posthuman Pedagogy' *Parallax* 24 (2018) 324–343, p. 331.
[684] Bradley, *Clade*, p. 243.
[685] Ibid, p. 281.

future path for humanity. As with the 'shimmer': 'twisting skeins of green and blue and violet' in the sky that is thought to be caused by the 'poles flipping from north to south', Bradley's telescopic vision in the final pages of *Clade* opens outward to project a sense of non-eudaimonistic wonder that attempts to foster a sense of planetary consciousness in the reader. I am not sure how successful this attempt is. However, in addressing the Anthropocene not only on a global but cosmic level, *Clade* makes an honourable attempt in reminding the reader of the necessity to think beyond the human in imagining potential environmental futures.

5.3 Radical Hospitality Aboard the Treehouse in *A Children's Bible: A Novel*

In opposition to the traditional forms of parental care ethics initially espoused in *Clade,* Millet's *A Children's Bible: A Novel* delivers a sharp challenge to the parochial and paternalistic impulses identifiable in parental care rhetoric. *A Children's Bible* is Millet's thirteenth novel. Her previous novels have explored the crises of extinction and climate change. *A Children's Bible* confronts the intergenerational conflict inherent in climate crisis more directly than *Clade,* the blistering anger of the children's voices throughout the novel's pages challenge the incompetence of their parent's generation who refuse to acknowledge the climate and environmental breakdown happening around them. Told in the first-person perspective of teenage Eve, the story follows a group of twelve children and young adults who have come together to spend a lazy summer holiday with their parents in a rented lakeside manor. With sardonic humour, Eve describes the decadent and hedonistic daily antics of the parental collective, who fill their days with 'wine and beer and whiskey and gin. Also, tequila, rum and vodka', leaving their children to fend for themselves.[686] When a hurricane hits their rented beach house, surrounding it with toxic floodwaters and cutting off the power, the parents drink more and fall into a deep psychological malaise while the children plot and achieve increasingly pragmatic ways to survive.

In a similar vein to *Clade*, *A Children's Bible* evokes the biblical flood myth to explore the possibilities of continuity following environmental calamity. It also offers a depiction of children navigating a devastated and dangerous landscape, and

[686] Lydia Millet, *A Children's Bible: A Novel* (New York: W. W. Norton & Company, 2020) p. 5.

thus points toward the extent to which the image of the child is used to articulate vulnerable environmental futures. In this respect, *A Children's Bible* could be seen to reproduce the sexual and reproductive politics articulated in Edelman's critique of 'reproductive futurism'. However, *A Children's Bible* differs from *Clade* in several crucial aspects. For one, *A Children's Bible* refuses to open up a space in which the reader might identify and sympathise with the parent characters. Eve's perspective is a wholesale failure of care, and, moreover is correlated with the experience of others of her generation. Second, the allegorical contours of the novel produce a distinct politics of environmental futurity that run counter to the anthropocentric and parochial concerns of genetic survivalism in relation to posterity. As we shall see, while the allegorical dimensions of the novel do not digress from its realistic plotline, they offer a supplementary framework that invites the reader to recognise a futurity emptied of fantasies projected from the paternalistic and anthropocentric past, and thus one open to difference and change.

In *Cruel Optimism* (2011), Lauren Berlant discusses two of the Dardenne brothers' films, *La promesse* (1996) and *Rosetta* (1999), which, like *A Children's Bible*, feature the fraught relationship between parent and child as they struggle to survive the precarious conditions of the present. Berlant uses the Dardennes' films as an example of the persistent optimism children demonstrate in forms of sociality that have already proven to be unreliable, in other words, the fact that 'some children reproduce the forms of bad life insofar as they are rooted in the family'.[687] However, unlike the children in the Dardenne brothers' films, the children in *A Children's Bible* appear fully able to detach from the 'bad life' endorsed by their occasionally loving, but frequently negligent parents. From the outset, this detachment mirrors the traditional forms of adolescent rebellion. 'Our parents, those so-called figures of authority,' Eve spits in the first few pages, 'liked to drink: it was their hobby, or – said one of us – maybe a form of worship'.[688] Yet, later on, the real reason for the children's aloofness becomes clear, as Eve observes, it is not that her parents do not believe in climate crisis, it's that they 'insisted on denial as a tactic. Not a science denial exactly – they were liberals. This was a denial of reality. A few had sent us to survival camps. […] But most of them had a simple attitude: business as usual'.[689] The children's resistance and, at times, complete rejection of parental care in the

[687] Lauren Berlant, *Cruel Optimism* (Durham: Duke University Press, 2011) p. 188.
[688] Millet, *A Children's Bible*, p. 4.
[689] Ibid, p. 28.

novel, then, offers a glimpse of an alternative future for the child of Edelman's reproductive futurism. As their current world unravels, beginning with the onset of the hurricane and progressing with a rolling series of environmental disasters, it falls on the children to deal with the reality of their situation.

The aim of Eve and the children's journey, then, is to find a way to survive the new and unpredictable world of environmental collapse, but also to take up their position in the world as parentless children. 'Once we had let them do everything for us – assumed they would' intones Evie, '[t]hen came the day we didn't want them to. Still later we found out that they hadn't done everything at all. They'd left out the important part. And it was known as: the future'.[690] With this realisation Eve, along with her friends, come to accept the loss of their parents and the attendant loss of their parents' world to improvise new forms of sociality and ethics as the novel progresses. It is important to note here, that while *A Children's Bible* is about young adults and children, the novel is not aimed at this age group. It instead situates adolescence, that is the physical, psychological and socially volatile stage in the human lifespan, parallel to the unpredictability of life in the Anthropocene, thus characterising the tumultuous nature of living in the Anthropocentric present.

Moreover, unlike YA literature, *A Children's Bible* does not yield the hopeful optimism commonly associated with children's fiction. However, by placing young people at the centre of the narrative, and more importantly, showing the processes of growth and maturation central to young adulthood, *A Children's Bible* provides an engaging and relatable understanding of how we might grow and change within an Anthropocenic context. In this way, the children in Millet's novel, I argue, not only offer an example of 'staying with the trouble', but also play with the trouble – that is, they make and create myths to construct ways of living and understanding the devolving world around them.[691] In this regard, *A Children's Bible* offers an alternative to Haraway's call to 'Make Kin, Not Babies' in a way that does not exclude the child from conversations about the future. The allegorical framework helps, in this regard, to destabilise the novel's realistic, extrapolative narrative by

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[690] Millet, *A Children's Bible*, p. 171.
[691] The idea of playing with the trouble is borrowed from Lindsay Burton's article on Nnedi Okorafor's *Akata Witch Series*, in which Burton argues that the child characters of Okorafor's novel use magic to 'play with the trouble' of global destruction, see Lindsey Burton, 'Playing with the Trouble: Children and the Anthropocene in Nnedi Okorafor's *Akata Witch* Series', *Fantasy and Myth in the Anthropocene: Imagining Futures and Dreaming Hope in Literature and Media*, eds, by. Marek Oziewicz, Brian Attebery and Tereza Dědinová (London: Bloomsbury Academic, 2022) 28-38.

bringing it into the mythic time. References to biblical allegory are principally made by Jack who becomes captivated by a children's picture book of the Bible given to him by one of his parents' friends. In preparation for the hurricane, Jack takes inspiration from the biblical flood narrative and takes radical action, telling his sister in no uncertain terms 'we have to save the animals. Like Noah did'.[692] Following this, Jack and his friend Shel go about rescuing as many of the bedraggled domestic and wild animals around the manor as they can. Eve finds them both in a treehouse stacked with assorted boxes containing the saved animals: 'I saw two birdcages, fluttering movements inside them. I saw holes punched in one box, two box, three box, four. A furry brown snout poked out the grille of a plastic pet carrier'.[693] Unlike the biblical tale, however, the boys have saved aquatic life too. Eve notes 'a murky terrarium' holding 'crayfish, toads and a salamander' and 'plastic food containers […] full of silty water and minnows, and big, fat fish in a cooking pot'.[694] The industrious boys have even managed to collect a bee hive. The treehouse becomes an ark above the 'toxic soup' of floodwater, which is 'full of oil and sewage', 'bodies […] human and dog and bird and cow, […] pesticides and fertilizers and drain cleaner'.[695] The children shelter in the treehouse during the storm and over the three days it takes the flood waters to recede with the rescued animals. Jack and Shel's rescue and shelter of the animals recognises Noah's task in the biblical story as an act of radical hospitality, in that Noah extends a welcome to more-than-human others at a time when his own home is imperilled.

By invoking the idea of hospitality here, I refer back to Kate Rigby's reading of hospitality aboard the ark in the biblical flood myth that I discussed in the Introduction. In Rigby's analysis, the ark offers 'an alternative utopian horizon' that might be best termed 'counter-utopian' because it relates to means rather than ends, showing 'how we act in catastrophe, rather than the new world that we would like to create in its wake'.[696] Similarly, Jack and Shel instantiate the counter-utopian ethos of radical hospitality by offering refuge from the storm to an impressive array of critters aboard their make-shift treehouse, performing part of the biblical narrative in terms of their compassion and care towards more-than-human strangers. Furthermore, in performing the biblical flood narrative Jack and Shel can be seen to

[692] Ibid, p. 70.
[693] *A Children's Bible*, p. 70.
[694] Ibid, p. 73.
[695] Ibid, p. 72.
[696] Kate Rigby, 'Noah's Ark Revisited', p. 173.

be playing with the trouble, that is of making and saving kin in the midst of catastrophe, while navigating the dangerous flood waters surrounding them.

Throughout the narrative, Jack performs a biblical exegesis by framing the parallels between their current situation and the stories in his book. When they find a 'small man' lying unconscious in a 'blow-up raft snagged in a clump of reeds' by the lake, Jack compares him with Moses.[697] As the children's journey continues Jack identifies similarities between what he witnesses and those in his book: angels, a plague, a Cain and Abel, Bethlehem, a crucifixion, and a deus ex machina all feature. While readers may see, as Astrid Bracke puts it, 'the danger of interpreting the future in terms of the past', *A Children's Bible* combines realistic extrapolation and allegory to produce a distinct politics of environmental futurity.[698] Having been born into a secular family without any form of religious education, Jack utilises the biblical parables and stories to construct a new system for understanding the devolving world. He interprets them as metaphor for what happens when humanity distances itself from nature and science. As such, he only uses his deep curiosity and knowledge of the natural world to 'decode' the mysteries of the Old and New Testaments to finally conclude that 'God's a code word': 'They say God but they mean nature […] And we believe in nature'.[699] Furthermore, if God equals Nature, then, Jesus equals Science, 'And the proof is, there's lots the same with Jesus and science', he tells the group of incredulous teens, 'Like, for science to save us we have to believe in it. And same with Jesus. If you believe in Jesus, he can save you'.[700] In this way, Jack is not converted to the environmental fatalism of evangelical Christianity, but instead reinterprets the Bible into a new mythos for the Anthropocene.

In Jack's reading, the biblical stories offer new insight and hope in the face of disaster. 'Science comes from nature', he explains to the other children, 'It's kind of a branch of it. Like Jesus is a branch of God. And if we believe science is true, then we can act. And we'll be saved'.[701] Jack thus devises a type of ethics that brings humanity into an interactive relationship with the natural world. His interpretation of the biblical text, crucially, affirms ethical regard for nonhuman beings in their own right, and gives a higher priority to nonhuman flourishing, as Evie explains, 'Jack's

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[697] Millet, *A Children's Bible*, p. 82.
[698] Astrid Bracke, *Climate Crisis and the 21st Century British Novel* (London: Bloomsbury Academic, 2018) p. 40.
[699] Millet, *A Children's Bible*, p. 142.
[700] Ibid.
[701] Millet, *A Children's Bible*, p. 143.

worry was the animals. […] The animals needed protection'.[702] Likewise, when the children's rescued goats are threatened by a gang of violent marauders, Jack argues, '[w]e're not supposed to sacrifice the animals. We're supposed to save them. I'd rather sacrifice me'.[703] In the child's point of view, then, the reader is offered an alternative perspective that detaches from anthropocentrism and departs from the exclusionary survivalism of his parents to a more generous bioinclusive ethics.

However, *A Children's Bible* is also at pains to show that the children's resilience is not a justification of the reliance on young and future generations for hope. The rage of the young adults who do not yet have influence over the world's economies, but bear witness to the effects of their elders' negligence, is, at times, viscerally palpable on the page. As Eve explains in the novel's opening:

> At that time in my personal life, I was coming to grips with the end of the world. The familiar world, anyway. Many of us were. Scientists said it was ending now, philosophers said it had always been ending. Historians said there's been dark ages before. It all came out in the wash, because eventually, if you were patient, enlightenment arrived and then a wide array of Apple devices. Politicians claimed everything would be fine. Adjustments were being made. Much as our human ingenuity had got us into this mess, so it would neatly get us out. Maybe more cars would switch to electric. That was how we could tell it was serious, because they were obviously lying. We knew who was responsible, of course: it had been a done deal before we were born.[704]

While it could be argued that the cruel treatment of children in *The Children's Bible*, namely through their neglect, points toward the extent to which a concern for children often structures articulations of environmental futurity around climate crisis, it is important to note that the children have agency. They are not perceived through the lens of a concerned parent, and the reader is not invited to step into the parental role. Indeed, while the reader is encouraged to sympathise with the children's predicament, they are expected to feel *with* the children rather than *for*. The use of Eve's first-person perspective and the general rationality of the children is helpful in this regard.

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[702] Ibid, p. 94.
[703] Ibid, p. 155.
[704] Ibid, p. 27.

As Millet herself confirms, at times they are ‘illogically articulate’, while the adults are collectively objectified and satirised.[705] Throughout the novel, the children exemplify the voice of reason to their parents’ bumbling ineptitude: while the parents determine to stay in the crumbling ruins of their former ‘palatial’ retreat and degenerate into drug and alcohol consumption, the children set off in search of food and shelter. Having found refuge, they are beset by a violent gang, but remain steadfast in opposition to the increased aggression of the gang. Later, they rescue their parents from squalor, when they sicken of dengue fever caused by the floodwaters that surrounds the mansion in the wake of the flood.

Finally, the children improvise a new way of living that meets the unpredictable environmental challenges. ‘[Y]our fitness to maintain order has been undermined’ one of the boys tells the remaining collective ensemble of parents towards the end of the novel,

> So from now until the day when your collective is restored to its baseline competency level, we’d like to take on more responsibility. We’ve drawn up a plan for the property’s self-sufficiency, which is, of course, a work in progress. The situation and the ability of components are dynamic […] resilience will be called for.[706]

On the one hand, Eve and her friends are able to detach from the non-functioning attitudes held by their parents’ generation and acknowledge them as falsehoods. This allows the children sympathy for their parents in recognition that they ‘functioned passably in a limited domain. Specifically adapted to life in their own small niches […] When their habitats collapsed, they had no familiar terrain. No maps. No equipment. No tools’.[707] Having found shelter in another mansion belonging to one of the parents, they remain ‘indignant’ to environmental and societal collapse, telling each other that ‘they were told they had more time’. Despite the obvious luxury of their situation, they ‘sit around in the vast sunken living room of fake Italy, with its

[705] Amy Brady, ‘Young Climate Activists and the Language of God in *A Children’s Bible’* (2020) <https://chireviewofbooks.com/2020/05/26/young-climate-activists-and-the-language-of-god-in-a-childrens-bible/> [accessed 12 September 2022].
[706] *A Children’s Bible*, p. 214.
[707] Millet, *The Children’s Bible*, p. 206.

wall of glass that opened onto the patio and pool' and reminisce about 'the bars they'd been to' in the 'once-great cities of the world'.[708]

Clinging to the past and refusing to admit any accountability, the parents show a deep inability to accept the reality of their devolved world. It is important to note here that this representation of generational planetary responsibility, or lack thereof, has been challenged by recent social research, which showed in a study of environmentally responsible practices across generations in the UK that grandparents were actually behaving more ecologically than their grandchildren.[709] This was due in part to the unecological practices young people were committed to because of the conditions of their work. However, I bring this up to show that Miller's construction of the parental figures in the novel is just that; a construction of middle-class parental identity that form the antithesis to Miller's call for an ecological responsiveness that can be passed on to future generations. Speaking about her characterisation of the parents in an interview with *Chicago Review of Books*, Millet asserts,

> My generation of adults – and those older than us who are still around – has failed, as a collective, to see ourselves as parents, even when we *are* parents. Real parents aren't just producers of younger, newer beings. […] Real parents are those who understand that the future has to be guarded, not only for their own children but for all who come after them. If we're derelict in that duty […] we may as well abandon the idea that we're parents and admit we're nothing more than breeders.[710]

We can draw from Millet's reproachful argument that the posterity-as-parenthood argument certainly wields considerable heft over the emotional and ethical lives of many. The parents exercise a parochial impulse towards survival, placing their own survival above others. 'We heard discussions about hoarding,' Eve recalls, 'and the pros and cons of stockpiling different commodities. What would the best currency be? The parents talked about this for hours'.[711] They hire construction workers to

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[708] Ibid, p. 217.
[709] James Tapper, 'Move over, millennials. Boomers are UK's greenest generation'. *The Guardian*, 2020, <https://www.theguardian.com/environment/2020/nov/22/move-over-millennials-boomers-are-uks-greenest-generation> [accessed 21 September 2022].
[710] Amy Brady, 'Young Climate Activist and the Language of God in *A Children's Bible'*, Chicago Review of Books, May 26 2020 <https://chireviewofbooks.com/2020/05/26/young-climate-activists-and-the-language-of-god-in-a-childrens-bible/> [accessed 23 September 2022].
[711] Millet, *A Children's Bible*, p. 210.

build a fortified wall around the parameters of the house, and 'set things into the ground' to deter trespassers. In this way, the parents' brutal inability to care for anyone but themselves comes increasingly to resemble a selfish and stubborn mission to save material wealth and privilege at the expense of their children. This is epitomised in the final few pages of the book when they simply disappear. Eve imagines them 'walking down the cascading steps of the pool, their fingertips tingling. Down, down and down, to the narrow end of infinity'.[712] The parents' disappearance thus serves as a fantastical allegory for the passing of a set of harmful, self-destructive and ultimately untenable approaches to the world that Eve and her friends have already begun to question throughout the novel.

If the parents represent the attempt to cling to forms of sociality that no longer function in *The Children's Bible*, the children represent the ability to move beyond those archaic models and improvise new, sustainable ways of living in the Anthropocene. Towards the novel's conclusion, they have set up a hydroponic nursery, an indoor garden in an abandoned squash court and have planted apple trees. Yet, for all their industrious activities, the children observe that it can't last. The novel hints that Jack is dying in the last pages in the novel despite Eve's resolve 'one day he'll be all right again'.[713] Jack asks his sister what happens after the end of his children's Bible. If they live in the apocalyptic time of Revelation as a 'chaos time', Jack wants to know what happens '[a]fter the chaos time? It wasn't in my book. But all books should have a real ending'.[714] In response to her brother, Eve develops a distinctly unconventional kind of environmental futurity that simply removes all presence of humanity:

> 'Ok. Slowness, I bet. New kinds of animals evolve. Some other creatures come live here, like we did. And all the old beautiful things will still be in the air. Invisible but there. Like, I don't know. An expectation that sort of hovers. Even if we're all gone.'
> 'But we won't be there to see them. We won't *be* here. It hurts not to know. We won't be here to see!'
> He was agitated.
> I held his hot hand.

[712] Ibid, p. 222.
[713] Ibid, p. 221.
[714] Ibid, p. 222.

‘Others will, honey. Think of them. Maybe the ants. The trees and plants. Maybe the flowers will be our eyes” […] ‘The comets and the stars will be our eyes’, I told him. And I went on. The clouds and the moon. The dirt the rocks the water and the wind. We call that hope, you see.[715]

In a similar way to *Clade*’s ending, *A Children’s Bible* contemplates a version of the future that imagines the long durée of the planet in geological time, and thus cultivate a futural ethics that bridges the scientific and mythic, as well as past and present. In this way, *Clade* and *A Children’s Bible* set out to assure the reader of the earth’s recovery and renewal given the reaches of deep time. However, as Rajender Kaur explains, this perspective of deep time is ambivalent from an ecocritical standpoint. While a representation of ‘the unimaginably vast vistas of the earth’s history, both in terms of time and space […] provide a salutary distancing perspective on contemporary political conflicts and hostilities’ Rajender observes, ‘deep time, with its metaphorical opacity, can also prove to be […] another totalizing master narrative that suppresses material histories of oppression […] in favour of the “long view” that emphasizes human folly’.[716] As such, Kaur concludes that representations of deep time may have ‘the effect of humbling human aspirations, including resistance against exploitation’.[717] In intergenerational justice terms, the concluding representations of deep time in *A Children’s Bible* is fundamentally double-sided.

On the one hand, it is arguable that the novel’s conclusion engenders a scalar shift away from the anthropocentrism that is referenced in both narratives to view posterity in a more ecocentric way. Eve’s directive to ‘Think of them’, (i.e., the organisms that will make up the future world once humans are gone), extends moral considerability to future ecosystems, and indeed, the biosphere, to promote ecocentric flourishing beyond the human. Yet, this ending also appears rather unjust towards the majority-world, which didn't cause the damage, and rather appalling from the perspective of Native American cultures that consider the relationship between land and people as reciprocal and necessary to the health and protection of both. *Clade* likewise emphasises the certainty of biospheric and environmental renewal as the narrator feels herself ‘lifted up and on into a future that may be wonderful or terrible

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[715] Millet, *A Children’s Bible*, p. 224.
[716] Rajender Kaur, ‘Home Is Where the Oracella Are’: Toward a New Paradigm of Transcultural Ecocritical Engagement in Amitav Ghosh's The Hungry Tide’, *Interdisciplinary Studies in Literature and Environment* 14 (2007) 125– 41, p. 126.
[717] Ibid.

or a thousand things in between' to confirm that 'whatever else happens, this is not an end but a beginning'.[718] *Clade's* utilisation of the narrative structure of the biblical flood myth allows it to open outwards at several narrative points to consider the possibility of alternative environmental futures beyond the human. Indeed, after the cataclysmic flood, the narrative shifts sideways to include stories of characters tangentially related to the Leiths or those who come into brief contact with them, such as Amir and the bees. The narrative voices of these external perspectives interspersed with the Leiths break with the diegetic structure and temporal linearity of the narrative to open out into a kaleidoscopic narrative frame that moves away from a direct invocation of the Leith family and associated biological survivalism to a wider conceptualisation of the roles of compassion and ethical consideration beyond anthropocentrism.

Bradley explains that the open-ended narrative structure of *Clade* was a deliberate choice in his efforts to create a space for possibility by reminding the reader that the future of the planet is indeterminate and humanity is not powerless to affect it.[719] In this regard, both novels can be seen to end on a hopeful note that relies on a non-eudaimonistic element of wonder to provoke love and compassion for the world as a whole. *Clade* and *A Children's Bible* thus provide an allegorical rendering of the biblical flood myth, alongside biblical notions of apocalypse, to reassure the reader of an environmental futurity despite the devastations wrought by climate crisis. On the other hand, the distancing perspective of deep time may pose a challenge to anthropocentrism, yet it also runs the risk of obscuring the effective continuation and violation of business-as-usual logic in the present on future lives. Notably, both *Clade* and *A Children's Bible* do not attempt to imagine any alternative to the sliding conditions of the Anthropocene that are already in motion, however they do chart imaginative topographies that may encourage readers to reassess their collective histories and imagined futures. Both novels employ the open-endedness of the flood narrative to widen their circle of concern, and thus extend ethical openness towards others outside the limited familial frame. Furthermore, as the children in Millet's novel demonstrate, the ability to not only stay, but play with the trouble (that is, in finding creative solutions to survive and thrive amidst calamity) will be critical as extreme weather events escalate in magnitude and number.

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[718] Bradley, *Clade*, p. 297.
[719] Brady, 'Young Climate Activist and the Language of God in *A Children's Bible'*.

CONCLUSION

In this thesis, I have explored a selection of climate and environmental novels that revisit the biblical flood narrative as an interpretive framework with which to imagine flood-related environmental catastrophe. Through the five chapters that form this thesis, I have emphasised the role of myth as metaphor in the ways in which the physical, extratextual world is cognitively apprehended through story-telling. As a type of 'living, feeling and knowing', myth functions cognitively in a similar way to metaphor, as both are culturally mediated and play a crucial role in knowledge production and dissemination. This is because mythic narratives function in a similar way to root metaphors in building symbolic universes or 'storyworlds', which provide an extradiegetic layer to the formation of flood-related catastrophe in the climate novel. In so doing, they emphasise the extent to which our experiences and perceptions of ecological calamity are narrated and contribute to cultural ontologies that are based on mythic frameworks.

To demonstrate this, I have shown that when floods are used in climate fiction, they draw on specific narrative patterns and motifs acquired from the mythic flood story, such as the metaphorical structure of destruction and renewal. This particular theme is woven into the narrative arcs of the flood novels discussed in this thesis, particularly in regard to their open-endings which operate, I have argued, as a form of 'future narrative', in that they reserve an open space for the possibility of alternative paradigms to the present, and serve as a challenge for remedial change. The sequencing of any narrative makes it inevitable that questions are resolved as part of the process of story-telling itself. A narrative being open-ended refers to how the ideas that the novel might mobilise are left suspended for the reader to attempt to resolve or leave unresolved. This is a characteristic of the biblical flood myth, since the prophetic utopian vision called forth in the post-diluvian world is left open, and therefore asks the receivers of the story to imagine an alternative, and perhaps better, model of reality as intended in Genesis before the fall.

The climate novels in this thesis thus utilise the open-endedness of the biblical flood story to contemplate the possibility of continuity following ecological calamity. The 'hopeful lading and unlading' in *The Mill on the Floss*, for example, leaves the reader a space in which to imagine an alternative to the conditions of Victorian

society that reinforce the separation between nature and culture, while enrolling ever more non-human natures into exploitative industrial systems. *The Rainbow's* open-ending, meanwhile, can be seen as a rupture to the conventional linear conceptions of time associated with the forward momentum of industrial capitalism.[720] Similarly, the climate novels explored in the second part of this thesis utilise the open temporality of the biblical flood myth to disrupt the prospect for the narrative to end on a consolatory note, and therefore invite the reader to purposefully mourn the lives lost to climate change (*Flight Behaviour, The World Without Us*), or place hope for the planet's recovery in the unimaginably vast vistas of the earth's history (*The Sea and Summer*, *Clade* and *A Children's Bible)*. As such, I have argued that the flood narrative serves to stimulate a desire for a more ecologically conscious future and motivate that desire toward action by conveying a sense that the current ecological crisis is not on a fixed trajectory, but is constantly unfolding and changing, and therefore, not beyond intervention. In doing so, they contribute to environmentalist political imaginations and the hope for a more ecologically sustainable future.

Chapter One, 'Myth and History in the Flood Narrative' focuses on Eliot's *The Mill on the Floss* to argue that the mythopoeic aspect of the novel foregrounds a sense of the convergences between humans and natural phenomena to illustrate the rapidly changing conditions of Britain's landscape during the mid-nineteenth century. Eliot revisits the 1830s at a time when the coal-powered steam engine began to overtake older, more sustainable forms of energy. I discuss how this change drives the sense that the catastrophic flood at the end of the novel is not a 'natural disaster' emptied of human culpability, but exposes the accretional effects of industrial changes on the riverine and arable landscape that have exacerbated the conditions which make the flood so destructive. By revealing these conditions, *The Mill on the Floss* puts pressure on the modern concept of 'natural disaster' that was bourgeoning in the nineteenth century, while also challenging the processes of economic development that refuse to attend to the historical and ecological roots of its social bodies. I discussed how Eliot remythologises the conventions of the biblical flood myth to demonstrate the ways in which human patterns of agency contribute to ecological calamity. In particular, Eliot uses myth as a narratological tool to create sympathetic identification with the past and retrieve a connection to the history of the landscape, its weathers and its particular topographical features. Myth in *The Mill on the Floss* thus challenges the Victorian

[720] Eliot, *The Mill on the Floss*, p. 589.

notion that nature is an inanimate resource to be cultivated by industrial modernity, but is deeply entangled in peoples' social, emotional and intellectual lives.

Chapter Two, 'Temporality and the Flood Narrative', discusses Lawrence's explorations of time and futurity shaped by flood narrative typology. *The Rainbow*'s adoption of the biblical flood myth places the family saga or 'realist' history of the novel within a much longer process of cultural evolution. By exploring the entangled historiographical and mythical elements of *The Rainbow* from an ecocritical perspective, I argued that industrial extraction in the novel is entangled with a multifarious array of socio-environmental causes and effects that is particularly bound to the temporal imaginary. Specifically, the open temporal structure of Lawrence's novel reflects a sense of the extraction economy as a future-depleting system untethered from past cycles of seasonal renewal and reproduction. At the same time, flood imagery in *The Rainbow* also points towards Lawrence's fluctuating attitude towards the war, which constantly waivers between a dialectics of breakdown and renewal, loss and compensation, punishment and redemption. Within *The Rainbow*'s larger mythological framework, I argued that the events of extractive industrialisation and war might be included as 'concentric temporalities', described by Morton as 'a nested series of catastrophes that are still playing out', that is catastrophes that are ongoing; rendering the ecologically calamitous events of the early twentieth century, the Victorian era and even those of Ancient Assyria, contemporaneous in a circle or 'twist' that forms the spatiotemporal structure of catastrophe in the Anthropocene.[721]

By tracing a similar narrative structure and comparable themes concomitant with the biblical flood myth across the historical and contemporary texts explored in this thesis, I have attempted to show how the stories we tell about climate and environmental crisis participate in the renegotiation of older narratives. The flood myth thus becomes a direct way of productively linking the current climatological fallout of industrial extractivism alongside novels that coincide with the introduction and rise of the 'fossil-fuel age'. In highlighting this point, I hope to have shown that myth has the potential to unify the vast temporal scale of environmental crisis with a scale more suitable to human understanding. Chapter Three, 'Apocalypse and the Flood Narrative', formed the first chapter in the second part of my thesis, which dealt purely on climate fiction as a genre of the late twentieth, early twenty-first century.

[721] Morton, *Dark Ecology: For a Logic of Future Coexistence,* p. 69.

The chapter explored Turner's *The Sea and Summer* as a precursor to twenty-first century climate fiction and as an example of the failure of some climate fictions to address blind spots that permit the perpetuation of racial and environmental injustice. Popular climate fiction often revisits flood and deluge as a site with which to warn of the horrors of unrestricted carbon emissions. In these instances, anthropogenic climate and environmental crisis acts as an eschatological device, with the deluge performing as a symptom and synecdoche of global environmental collapse. I examined the extent to which climate fictions return to biblical narratives of flood and apocalypse when envisioning human-caused global environmental catastrophe, but frequently do so without acknowledgment of the environmental 'world-ending' injustices that have befallen marginalised communities, and continue to do so. In addressing the notion of dispossession and '*denied* history', I contended that Turner's narrative echoes the forms of colonial violence endured by Australia's Indigenous communities for centuries previous, such as economic crash, environmental collapse, displacement and cultural disintegration, without explicit mention. As such, the veiled histories of settler-colonialism *The Sea and Summer* point to the effects of climate change as just one of the many interrelated calamities to be suffered by Australia's Indigenous citizens.

The acknowledgment of such entails a reckoning with the collective trauma of ecological loss and dispossession that haunt the environmental past, present and future. That is why I turned to the use of flooding as a metaphor for the intensity of grief in its precognitive state as a force upon the body in Chapter Four, 'Ecological Loss and Grief in the Flood Narrative'. Deluge, as a figure of speech, draws attention to grief as an embodied response to sensory stimuli, highlighting affective relationships between humans and the environment. However, it also accentuates grief as a separate entity from the self, or as an oppositional and threatening force. Juchau's *The World Without Us* and Kingsolver's *Flight Behaviour* take up these two tensions and place them in dialogue with each other to suggest the ways in which floods work on an atmospheric level to hold the reader in a present-continuous state of ecological loss, thus inviting them to empathise with the characters' grief. At the same time, flooding ruptures the novels' narrative progression creating a form of suspended possibility at each novel's closure in the same manner as *The Mill on the Floss*. Unlike Eliot's novel, however, the focus on ecological loss and grief in *The World Without Us* and *Flight Behaviour* does not allow the reader an open space in which to imagine

an alternative to the conditions of society already in place. Rather, flood imagery and metaphor disrupt the prospect for the narrative to end on a consolatory note so as to halt the process of grief to move to catharsis. In this way, both novels purposefully mourn and warn about the kinds of future losses that could arise given continued environmental depredation.

Similarly, climate novels such as those I explored in the final chapter, 'Survival and Environmental Futurity in the Flood Narrative', tend to reassure the reader of an environmental futurity despite the devastations wrought by climate crisis through the metaphorical structure of rebirth and renewal acquired from the biblical flood narrative. The utilisation of the biblical flood myth as an allegory for environmental futurity sees *Clade* and *A Children's Bible* engage with latent heteronormative and reproductive ideologies that, when expanded to meet the requirement of intergenerational ethics, prove particularly problematic and exclusionary. However, we can read the entangled multispecies relationships in *Clade* and *A Children's Bible* as a gesture towards the recomposition of multispecies social reproduction or the 'making kin' that is encouraged by Haraway.[722] In this sense, I argue, that both novels reframe the animal/human relationships afforded on the ark in the biblical tale to think through the slow ruptures and reformations of ordinary family life and anthropocentric social reproduction towards a more generous model of posterity in a time of climate crisis that gives a higher priority to nonhuman flourishing.

In these five chapters, I have attempted to shed valuable insight into the potency of the biblical flood myth that underlies many, particularly western, visions of environmental crisis. My use of narratology has been useful in this regard to help elucidate how flood narratives draw on the familiar structures and motifs of the biblical myth to engage the readers sensually and emotionally in the stories they tell. In turn, I hope to have provided an extension of econarratology's limited engagement with myth and how it functions on a narratological level in fictional accounts of the environment. At the same time, I have attempted to highlight some of the problems inherent in the frameworks we have internalised from the biblical flood myth. In this way, I hope to have shown that while the biblical flood myth is central to our cultural

[722] *Staying with the Trouble*, p. 208.

engagements with and ontological conceptions of eco-catastrophe, it will require continued assessment in future climate fiction as the effects of climate crisis no doubt worsen and evolve.

In an increasingly watery future, where large-scale flooding is the norm, mythic narratives of eco-catastrophe may become less impactful, or they might acquire new force in new retellings. I am in no doubt, however, that myth offers one of the few intersubjective spaces that we can generate narratives of possibilities to 'stay with the trouble' of our time. A particularly heart-warming example is how, in an era of relative biblical ignorance, the motif of the rainbow recovered from the flood myth attained global mobility as an instantly recognised icon of hope during the Covid-19 pandemic. In the UK, the Rainbow Trail Facebook page, which was created by a woman in Ipswich to alleviate some of the fear induced by the first nation-wide lockdown in March 2020, gained over 200,000 members and has inspired similar creative action around the world. Pictures followed of rainbows in windows and on door fronts across the country as symbols of 'positivity, hope and togetherness' during the crisis.[723]

In Genesis 9, however, the rainbow is a sign of the covenant made between Yahweh, Noah and 'all flesh', that is all living beings on earth, after the cataclysm of the flood. It is less a symbol of hope, but offered as a token of Yahweh's promise that he will never again destroy all living beings on earth, and that from now on the descendants of Noah are responsible for the earth. The anthropogenic nature of catastrophe in the Anthropocene complicates the message of the rainbow as a promise of peace after great calamity. As the woodworm decries in Julian Barnes's *A History of the World in 10½ Chapters:* 'The rainbow! Ha! A very pretty thing to be sure', but 'was it legally enforceable?'.[724] Given the rather bleak environmental outlook we face today due to climate crisis and the continued human misuse of the earth's environments, the suggestion is perhaps not. Yet, as the blue humanities scholar Teresa Shewry attests, in hope

> we establish, feel, and express a relationship between things of this world (and through this world, the claims of the past) and the future in terms of openness

[723] 'Coronavirus: Rainbow trail success surprises Ipswich mum' (2020) <https://www.bbc.co.uk/news/uk-england-suffolk-52214965> [accessed 20 November 2020]
[724] Julian Barnes, *A History of the World in 10½ Chapters* (London: Vintage, 2009) p. 27.

and potential, loosening the hold of imagined futures said to be inevitable already.[725]

Hope inaugurates a sense of openness between the present and the future in that it provides a space for different imaginaries for what might come to pass, but also for what we do now to improve the future.[726] This is certainly the view taken by the novels discussed in this thesis, which all adopt the idea of renewal from the biblical flood myth to invoke the possibility of a more hopeful notion of environmental futurity.

As I have previously discussed, the embodied or embedded nature of the human mind enables engagement in vivid mental simulations of storyworlds, situations and events we encounter in the novel, and these mental simulations have both cognitive and affective components. Similarly, the open-ending of the flood narrative intimates the embodied experience of hope, of moving into an unknown future. The open closure of the flood narrative thus represents a sense of abandonment whereby the reader is dispossessed of any narrative certainty about what is happening and what will happen, and left to wonder. As such, hope is of central import to readerly engagement in stories of environmental and climate crisis, since it is our desire to find out what will happen and our hope that it will turn out well that makes us turn the pages of a novel.

Moreover, as Diana Fritz Cates notes, hope is a goal-orientated emotion; 'we hope only in what we regard as possible', so our novelistic projects are always circumscribed by 'limits of knowledge and imagination, partial perspectives, self-interested biases, [and] the consequences of previous, poor choices'.[727] In the same way, the open closure of the flood narrative confronts hope in relating to the future in terms of potential, while also pointing to the sublimity of the past and future in order to encourage the reader to engage meaningfully with the present. On the other hand, the reader might be incapacitated by imaginary limitation in the open space given by the text. This is something Weik von Mossner points to when she observes, '[w]hat we might really need is more [novels] that imagine the way from here to there, eliciting

[725] Teresa Shewry, 'Hope', *Veer Ecology: A Companion for Environmental Thinking*, eds, by. Jeffrey Jerome Cohen and Lowell Duckert (Michigan: University of Minnesota Press, 2017) pp. 455-468, p. 456.
[726] Ibid.
[727] Diana Fritz Cates, 'Hope, Hatred and the Ambiguities of Utopic Longing', *Hope and the Longing for Utopia: Futures and Illusions in Theology and Narrative*, ed, by. Daniel Boscal- jon (Cambridge: James Clark and Co, 2015) pp. 23–40. p. 25.

not only desire for a more just and sustainable world, but also the hope that we can achieve it'.[728] In this sense, while the open-endings of the flood narratives examined in this thesis gesture towards the possibility of an ecologically conscious future, they are not without their shortcomings. The ambiguity of the novels' endings draws the reader away from the rails of tragedy, insofar as despair is denied, yet they also potentially leave the reader hermeneutically adrift between the two poles of hope and apathy.

As such, the open-endings might be said to characterise that self-same uncertainty that Hans Blumenberg writes about in *Arbeit am Mythos* (1979) with regard to the purpose of myth. If we are to think of the history of myth as existing within the *Vorvergangenheit* or the past's past, as Blumenberg suggests, we may think of myth not only as a reflection of such fears associated with the uncertainties of the chaotic world, but also as expressions of those experiences. The endings of the flood narratives discussed in this thesis, therefore, can be seen to return to the uncertainty and hope found in the postdiluvial storyworld of the biblical flood myth. This model of futurity does not attempt to foretell that which is to come, but lies with the uncertainty of the present. The open closure of these novels thus functions not only as a metaphor for the possibilities of fiction itself in this period of uncertainty, but also as expressions of the experiences of such uncertainties and the need to share them; as Blumenberg eloquently puts it: 'not just to shiver in the dark, but to sing as well'.[729]

In the future as much as in the past and present, myths will provide a space for reimagining the world in response to ecological catastrophe. How this remythologising will continue in the imaginative capacity of novel and other artworks will be of vital importance to how we collectively engage with the climate crisis. That being said, the work of mythic stories will not dislodge the engrained socioeconomic and political interests that forge our path to catastrophic climate and environmental crisis alone. As Rigby notes in her postscript to *Dancing with Disaster*, '[n]arratives alone do not determine attitudes, let alone actions […] stories arise, inter- and intra-actively, out of practices: that is to say, narratives and practices coconstitute one another'.[730] Evidence of this can be found in the ancient Mesopotamian flood narratives that were cultivated from the experiences of anthropogenic flood events.

[728] Weik von Mossner, *Affective Ecologies*, p. 189.
[729] Hans Blumenberg, *Work on Myth* (Cambridge, MA: The MIT Press, 1985) p. 62.
[730] Rigby, *Dancing with Disaster*, p. 117.

Creating and foregrounding bio-inclusive narratives about ecological calamity over and above human-centred stories will have to be undertaken, as Rigby suggests, mostly beyond the page.[731] Bruce Pascoe's ground-breaking work in relation to *Dark Emu, Black Seeds* offers one such alternative narrative: having researched Aboriginal practices of land-management, Pascoe saw in the historical record a measure of how degraded the land has become, but also, how it can be restored. He subsequently started growing kangaroo grass, which has deep root systems that help guard against erosion, and used traditional burning practices to help the grass take hold and prosper. As a result of his work, permaculturalists, soil scientists and traditional farmers have taken to looking at alternative agricultural practices in Australia that draw on Indigenous knowledges.

Alongside Pascoe's work has been a strong revivalist myth-telling tradition built to rediscover practices of living with the earth on the earth's terms. The tradition in its myriad forms is heavily indebted to Native futurisms, solarpunk, and Indigenous myth-telling traditions that survived the settler-colonial onslaught. These traditions model what Native American scholar Grace Dillon dubs *biskaabiiyang*: an Anishinaabemowin word for 'the process of returning to ourselves,' which involves knowledges central to help repair relationships between humans and the environment.[732] The current revivalist myth-telling seeks old and new bio-inclusive myths that interrogate and destabilise the Anthropocene's monologue about eternal progress with an imagination that affirms cultural and biological diversity.[733] A potential extension of my particularly Eurowestern focus on flood narratives could be to look at work on floods in relation to climate change in revivalist myth-telling tradition, especially from Indigenous authors or those of other cultural and national heritage. The inclusion of an ethnographic dimension, relating literary narratives to the stories told by those impacted by climate-driven extremes, would also be of

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[731] Ibid.
[732] Grace Dillon, 'Imagining Indigenous Futurisms', *Walking the Clouds: An Anthology of Indigenous Science Fiction*, ed, by. Grace Dillon (Tucson: University of Arizona Press, 2012) pp. 1-12, p. 10.
[733] For discussion on contemporary re-workings of ancient Indigenous myths, see Caryn Lesuma, 'Reimagining Youth Relations with Moananuiakea (The Large, Expansive Ocean): Contemporary Niuhi Mo'olelo (Man-Eating Shark Stories) and Environmental Activism', *Fantasy and Myth in the Anthropocene: Imagining Futures and Dreaming Hope in Literature and Media*, Eds by. Marek Oziewicz, Brian Attebery and Tereza D#dinová. (London: Bloomsbury Academic, 2022) 176–187.

benefit, since this could have an impact in transforming ecological perception and help people engage with the realities of climate catastrophe beyond the page.

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