

Just Apocalypse?: From Apocalypse to Justice in Climate Fiction

by

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Abstract

This dissertation argues that contrary to recent criticism of climate fiction, many works of cli-fi engage with climate justice by exploring the connections between the climate crisis, colonialism, environmental racism, dehumanization, and neoliberal capitalism. Using Nicole Roger's concept of "wild time" as an organizing structure, my project reads texts set in different points of the climate crisis—the present moment, the near future, and the far future—and argues that the requirements for climate, environmental, and ecological justice will differ as the climate crisis progresses. Specifically, I read works by Thomas King, Doreen Vanderstoop, Paolo Bacigalupi, Sherri L. Smith, Premea Mohamed, Sam J. Miller, Harold Johnson, and Kim Stanley Robinson, and argue that the need for justice in climate-changed futures is a persistent theme in all of their works. Each work of cli-fi analyzed herein represents specific elements of the climate crisis, from racial extractivism to drought, flooding, and disease; the conditions differ based on each novel's setting, demonstrating how climate change is a global problem with profoundly local consequences, and suggesting that solutions must also consider multiple scales. Despite their differences, the novels are united in their position that justice in the context of the climate crisis will not be possible without systemic social change. The necessity of such change leads to my conclusion that climate utopianism may be the impetus for imagining the alternatives that are required to center justice in the context of climate change.

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Chapter One: Introduction

On July 22, 2023, as I was nearing the completion of this project, a province-wide state of emergency was declared in Nova Scotia due to severe flooding, after the province saw upwards of 300mm of rainfall within a five-hour period. This was the second emergency declaration in two months, with the first on May 27, 2023, as wildfires tore through the province. The wildfires were the largest in the province's history, impacting over 24,242 hectares, and displacing 16,000 people (Hernandez). Both the fires and the floods can be connected to climate change because, prior to the fires, Nova Scotia experienced a record-breaking streak of hot weather in May, coupled with an abnormally dry spring (Cassidy). Anthony Taylor notes that "climate change is increasing the number of fire weather days ... in eastern Canada" which means "an increase in the number of days each year conducive to supporting fires" (qtd. in Tutton n.p.). In addition to the number of fire weather days in summer 2023, debris and downed branches from Hurricane Dorian in 2019 and Hurricane Fiona in 2023 fueled the fire. Kent Moore explains that climate change will not only result in hotter and drier conditions, but also "augments the atmosphere's ability to hold moisture" which leads to heavier rain and flooding (quoted in Alam). Like fire weather days, the frequency and severity of hurricane and tropical storms is also related to climate change (Knutson et al. E303). The flooding was described by officials as a "one-in-a-thousand-years storm" (qtd. in Glass); this followed on the heels of Hurricane Dorian, which was "the most destructive storm to hit the region" (Snoddon), and Hurricane Fiona, which was the "most costly" weather event to ever hit the Atlantic provinces (McClearn).

The frequency and severity of tropical storms and hurricanes hitting Nova Scotia, as

well as record breaking summer temperatures, compound with the province’s housing crisis. The impacts of these weather events on Nova Scotia’s unhoused populations are a climate justice issue that points to the necessity not only of better and more inclusive storm preparedness planning, but also affordable housing. Sean A. Kidd points to the connections between homelessness and the climate crisis, noting that climate change “present[s] significant and immediate issues for populations lacking shelter” and that the climate crisis will exacerbate the housing crisis through “housing loss, migration, poverty and other increasing stressors” (n.p.). As of September 2023, there are over 200 people living in tents in Halifax alone (population ~420,000), which does not account for other people experiencing homelessness or marginally housed populations. Despite these numbers, hurricane preparedness plans in the Halifax Regional Municipality (HRM) do not offer adequate supports or shelter; for example, in 2022 when Hurricane Fiona hit Halifax, the city could only accommodate 75 homeless people (Rankin n.p.). The province’s approach to extreme weather has been criticized as it “illustrates that the wellbeing of the homeless is not a priority” (Rankin n.p.).

These experiences reinforce, for me, that contrary to conservative rhetoric denying the climate crisis,¹ climate change is not an issue of the future but is already a lived reality across the globe and here in Nova Scotia. Thus, climate justice should be prioritized at all levels of government. As Kidd rightly points out, as the climate crisis

¹ In a televised debate among Republican candidates for the 2024 U.S. election, one candidate, Vivek Ramaswamy, flat out denied climate change, claiming that “more people are dying due to bad climate change policies than they are due to actual climate change” (qtd. in Singh). Although other candidates did not deny the climate crisis, they eschewed responsibility for mitigating it, pointing fingers at the developing world, instead (Singh).

worsens, so, too, will a variety of issues related to justice, including access to housing and crisis support. This project responds to this reality by emphasizing the importance of climate justice in climate literature, and by challenging the futurist orientation of most works of climate fiction (cli-fi). To do so, I read both popular works of cli-fi and works that have received less critical attention to argue that many works of cli-fi point to the need for climate justice by depicting a retrenchment of the injustices of the status quo as the climate crisis intensifies, or by envisioning alternatives that foster climate justice. In terms of the real-world examples I point to above, this status quo may include a worsening of the housing crisis, or, in many works, increased xenophobia, class stratification, and conflict. However, I contend that cli-fi also has the potential to represent more just futures, as marginalized peoples may use the crisis to challenge the structures underwriting the climate crisis, climate injustice, and environmental racism, and demonstrate how these systemic forces and structural violence, including the violence of literary structures, must be dismantled to foster just futures in the context of climate change. Before introducing the specifics of my argument, I situate my study in the field of cli-fi scholarship, with particular attention to what critics suggest are the roles of climate fiction, and in relation to cli-fi's engagement—or lack thereof—with climate justice.

I. Climate/Fiction/Cli-Fi

Global climate change is a defining issue of the twenty-first century; the need to act, and act rapidly, to slow its effects are widely acknowledged, yet the political will has not matched the urgency of the crisis. As they have done with previous large scale or

environmental threats, including the threat of nuclear annihilation or the dangers of pesticides,² literary works take up the issue of climate change, bringing it into the cultural sphere by making it more accessible than scientific charts and numbers. In the years since 1975, when geochemist Wallace Broecker first used the phrase “global warming,” literary authors have imagined futures shaped by pronounced global warming. Until relatively recently, science fiction was the domain of many of these works, but within the last decade or so, literature about climate change has entered the mainstream. In 2007, Dan Bloom purportedly coined the term “cli-fi,” a shorthand for climate fiction that derives in part from its similarity to sci-fi.³ More recent works of climate fiction blur generic boundaries, and as climate change is widely acknowledged to already be felt, even realist literary texts must grapple with representing climate change.⁴

Works of climate fiction represent climate change directly: the environment is not a background issue that can be overlooked, but, instead, climate and climatic changes drive

² See, for example, *A Canticle for Leibowitz* by Walter M. Miller Jr., *On the Beach* by Nevil Shute, and *Alas Babylon* by Pat Frank for nuclear dystopias, and *The Sheep Look Up* by John Brunner, *Silent Spring* by Rachel Carson, *Animal’s People* by Indra Sinha for works responding to pesticide use.

³ Although Caren Irr notes that “the exact origins of the term ‘cli-fi’ are obscure (2), she, alongside Goodbody and Johns Putra (1), Rebecca Evans (95), Matthew Schneider-Mayerson (474), and Jeff Vandermeer (n.p) and others all attribute the phrase to Dan Bloom.

⁴ For examples of realist works dealing with the climate crisis see, Stephen Markley’s *The Deluge*, Barbara Kingsolver’s *Unsheltered* and *Flight Behaviour*, Megan Hunter’s *The End We Start From*, and Doreen Vanderstoop’s *Watershed*, Eleanor Catton’s *Birnam Wood*, Richard Powers’s *The Overstory* and *Bewilderment*, and Annie Proulx’s *Barkskins*. John Thieme’s *Anthropocene Realism: Fiction in the Age of Climate Change* provides a critical account of several works of realism dealing with the Anthropocene and climate crisis. For works blurring generic boundaries, see Jeff Vandermeer’s works (especially *Hummingbird Salamander*), Rebecca Roanhorse’s *Trail of Lightning*, Claire Vaye Watkins’s *Gold, Fame, Citrus*, Chang Rae Lee’s *On Such a Full Sea*, Paolo Bacigalupi’s *The Water Knife*, and Jenny Offill’s *Weather*.

the plot. At its most basic, cli-fi is defined by its “thematic focus on climate change and the political, social, psychological and ethical issues associated with it” (Goodbody and Johns-Putra 2). In his book length survey of the genre, Adam Trexler contends that “nearly all climate fiction ... [brings] characters into confrontation with an immediate climatic disaster” (24), forcing characters to confront the reality of climate change. In doing so, works of cli-fi explore climate change “not just in terms of setting, but with regard to psychological and social issues” (Goodbody and Johns-Putra 2). Similarly, Trexler and Johns-Putra argue that cli-fi explores “climate change in psychological and social terms” and “how [it] occurs not just as a meteorological or ecological crisis...but as something filtered through our inner and outer lives” (196).

Because climate fiction situates climate change within the social, it is often touted as an educational or political genre: as Whiteley, Chiang, and Einsidel argue, it can “elucidate the complexities of the problem in ways far removed from temperature charts and other scientific ways of understanding climate change” (34). Climate fiction is thus an inherently political genre, one that “pulls on the issue-oriented and didactic approach of activist fiction into contact with the intensive description and site specificity of Romantic nature writing” to describe the effects of climate change and to “offer a vision of the options available to a population seeking to adapt or mitigate the effects” (Irr n.p.). Much early scholarship on the genre focuses on its political or educational potential, promoting the idea that climate fiction can encourage readers to reflect on the climate crisis, and perhaps even motivate behavioural change toward a more sustainable

lifestyle.⁵ This position is due in part to the generic similarities climate fiction shares with science fiction, which employs cognitive estrangement and defamiliarization to make the present strange in such ways that help readers to “deconstruct their contexts” (Wilkinson 25).⁶ Keith Booker argues that defamiliarization in science fiction fosters “fresh perspectives on problematic social and political practices that may otherwise be ... considered natural and inevitable” (3-4), and Tom Moylan suggests that “imaginatively and cognitively engaging with [works of speculative fiction] can bring willing readers back to their own worlds with new or clearer perceptions, possibly helping them to raise their consciousness” (qtd. in Weik von Mossner 86). If climate fiction functions analogously to science fiction, it has the potential to educate readers and raise their consciousness about the climate crisis. Even if the genre does not motivate climate action or lifestyle changes, Antonia Mehnert argues that it is nevertheless important for the insight it fosters regarding “the ethical and social ramifications of this unparalleled environmental crisis” and because it “reflects on current political conditions that impede action on climate change, explores how risk materializes and affects society, and ... plays an active part in shaping our conception of climate change” (4). Similarly, Gregers Andersen argues that climate fiction provides insight into the “imagination forms” that

⁵ See, for example, Goodbody and Johns-Putra 8, Sadowski-Smith 111, Weik von Mossner “Imagining” 86, Mehnert 188.

⁶ According to Darko Suvin, science fiction is the genre of cognitive estrangement (4). Estrangement here refers to a “feedback oscillation” that moves between the author and readers’ “implied norm of reality to the narratively actualized *nouvum* in order to understand the plot-events” and back, in order to see reality from a new perspective (Suvin 71), where cognition refers to the fact that the fiction is “*not impossible* within the cognitive (cosmological and anthropological) norms of the author’s epoch (viii). Frederic Jameson argues that the function of science fiction is not to give us “images” of the future ... but rather to defamiliarize and restructure our experience of our own *present*” (Jameson 151).

constitute the “dominant narrative templates that underlie the imagination of anthropogenic global warming” (2). While identified through narrative, these imagination forms are dominant cultural understandings that can be recognized in cultural discourse in addition to narrative.

However, Morel adds that judging climate fiction solely based on “its value as a binary between effective or ineffective politicization frames the genre reductively” (Morel 69), as it overlooks not only the literary value of the texts, but also how texts represent, reflect on, and challenge the political climates in which they are written. Following Hubert Zapf, the value of ecological literature can be understood by its place in a cultural ecology, or the role literature plays within “the larger system of cultural discourses.” Per Zapf, this function is three-fold:

- 1) literature is a culture-critical metadiscourse, which deconstructs hegemonic ideologies and exposes internal contradictions, coercive structures, and pathogenic implications of the dominant [culture] ... 2) as an imaginative counter-discourse, which foregrounds and semiotically empowers the culturally excluded in transgressive ... encounters with radical alterity, with human and nonhuman others that nevertheless turn out to be signatures of repressed deeper realities; and 3) as reintegrative interdiscourse, which brings together the civilizational system and its exclusions in new, both conflictive and transformative ways and thereby contributes to the constant renewal of the cultural centre from its margins. (61)

Further, scholars such as Alexa Weik von Mossner and Erin James argue that “literature and film can make new things matter to [readers], widen [their] sense of identity to

embrace human and non-human others, and foster a sense of care” through “textual cues” which bring the reader into the text (cited in Goodbody and Johns-Putra 7). E. Ann Kaplan argues that cli-fi is valuable in that it provides a space for authors and readers to work through pre-traumatic stress about the climate crisis, which refers to the experience of suffering “unconsciously” from “an immobilizing anticipatory anxiety about the future” (xix). Cli-fi helps “face horror and fear” before it is too late (Kaplan 9).

Regardless of how the genre works, and whether it truly has the potential to alter readers’ behaviors, it is “a cultural-political attempt and innovative alternative of communicating climate change” (Mehnert 4). In this project, I unequivocally argue that climate fiction is important, both for the insights it can foster, as well as for its reflection of the current socio-cultural and political state of affairs.

One way in which cli-fi communicates the severity of the climate crisis is through the use of dystopian or apocalyptic tropes. Notably, in one of the first book-length works of ecocriticism, *The Environmental Imagination*, Lawrence Buell argues that “apocalypse is the single most powerful master metaphor that the contemporary environmental imagination has at its disposal” (258). This assertion still seems to be true. Caren Irr suggests that apocalypticism is characteristic of the genre because it is characteristic of (Western) environmentalism more broadly (n.p). For example, Rachel Carson’s *Silent Spring* is a foundational text of U.S. American environmental literature, and Carson uses the apocalyptic “Fable for Tomorrow,” to introduce her work about the environmental hazards of pesticide use. Similarly, Trexler notes that this mode of cli-fi is closely related to political rhetoric which “calls for climate change to be averted, threatening catastrophe if it is not” and “warn[s] readers of an impending disaster” (25). Thus, apocalypse may be

a dominant mode within cli-fi as apocalyptic rhetoric is often harnessed by the environmental movement.

When works of cli-fi are not apocalyptic, however, they still tend to be dystopian. Whereas apocalypse connotes the end of the world or a disaster resulting in “drastic, irreversible damage to human society or the environment” (*OED* a & b), dystopian works do not depict the end of the world, but rather “a negatively deformed future of our own world” (Baccolini and Moylan 115). Often dystopian literature, including dystopian cli-fi, includes some form of repressive political regime, but I argue that environmental conditions can be dystopian in and of themselves, regardless of their accompanying politics. Dystopian literature also has an educational or political aim; Patrick Murphy claims that the purpose of dystopian literature is forewarning, and suggests that many writers of dystopian fiction “would be entirely dissatisfied if their novels led people only to understanding and not to any type of social action” (26). Dystopian literature is inherently political as in its setting of “a negatively deformed future of [the reader’s] world,” it critiques existing social or political systems (Baccolini and Moylan 115). Eric C. Otto writes specifically about eco-dystopian science fiction, which can be taken as a precursor or parallel genre to climate fiction: eco-dystopian science fiction “stages dystopian presents and futures,” “frightening worlds” that are “extrapolated out of some current and real, anti-ecological trend” (50). Anti-ecological trends, as will become apparent in the following chapters, can be “social, scientific, economic, religious, or a combination of these” (Otto 50). A critical distinction between apocalypse and dystopia is the timeline: per Kaplan, apocalypse implies a “sudden event [which] takes place to bring on the end,” and thus much climate fiction may better be described as dystopian, as it

envisions “gradual and subtle shifts in ecosystems damaged by humans, rather than a Big Bang sort of event” (14). All of the works analyzed herein are more properly understood as dystopian, shaped by the slow violence of the climate crisis; the world is altered, but it is not ending.

Like many dystopian and apocalyptic texts, much climate fiction is set in the future. The genre tends to employ the future anterior, providing a retrospective look at the readers’ presents and pasts to show continuities between past and present, and to create negative future scenarios that may still be staved off.⁷ These works turn toward the future anterior to dramatize “what will have been” (Craps and Crownshaw 5). However, this future orientation has been criticized, as “the imagination of future scenarios might distract from present-day environmental catastrophes and their impact on the precariat,” obscuring “the environmental injustice of fast and slow violence” (Craps and Crownshaw 5). Ben De Bruyn advocates for climate fiction with a “presentist” mode, instead, which would “scrutinize a fictional present to identify early intimations of...disastrous futures” (61). He suggests that literary works should hint “at the apocalypse in the making now” (61).

By structuring my project according to Nicole Roger’s concept of wild time, which outline later in this introduction, I include works that are written in a “presentist” mode, and others that use the future anterior. *The Back of the Turtle* is set in the present, alluding to “disastrous futures” (De Bruyn 61), while the other works read in this project employ the future anterior to point to the disaster in the making now. These works call back to

⁷ The majority of climate change novels “project future climate-changed worlds from which retrospection on and cultural remembrance of the changing climate and its causes is staged” (Craps and Crownshaw 5).

specific moments in history, including notable climate events such as Hurricanes Katrina and Sandy, as well as the dominance of the oil industry in Canada, and neoliberal regimes that ignore climate change in favour of business as usual. In so doing, they thus help “connect present and future, rather than posit a radical break between them” (Evans 104). These works show not only how climate change is rooted in exploitative and colonial ideology, but also how the injustices of the past and present will persist and worsen in the future, unless a radical break is made.

2. Climate/Fiction/Justice

In addition to its emphasis on the future, climate fiction has also been criticized for its lack of attention to climate justice frameworks.⁸ Because cli-fi has a “unique place in climate education and activism” (Evans 96), it is important to consider not only how works of cli-fi envision environmental and social change, but also *who* is envisioned as participating in climate-changed futures. My dissertation responds to a newer body of criticism that points out the lack of climate justice narratives in “canonical” cli-fi to argue that many other works do, in fact, prioritize environmental, ecological, and climate justice, although these works have not yet received the degree of scholarship as works of

⁸ See, for example, critiques by Matthew Schneider-Mayerson; Rebecca Evans; Briggitta Peirrot and Nicole Seymour; Mabel Gergan, Sara Smith, and Pavitra Vasudevan and April Anson.

“canonical” cli-fi.⁹

In 2017, Rebecca Evans published one of the earliest articles addressing climate justice in cli-fi. In that article, she argued:

representations of climate futures matter in terms of climate justice ... to combat the way that climate change is disproportionately caused and disproportionately experienced along lines of privilege. Climate justice narratives thus require an attention both to the likelihood of climate injustice in the future *and* to the way that such injustice is rooted, and indeed ongoing, in the present moment. (95)

Two years later, Matthew Schneider-Mayerson took a different approach to the issue of climate justice. Whereas Evans argued that David Mitchell’s *The Bone Clocks* promoted climate justice, Schneider-Mayerson surveyed “recent American climate fiction” (“Whose Odds?”, 945) and found an “absence of climate justice concerns” (945).

Critiquing Nathaniel Rich’s *Odds Against Tomorrow*, Schneider-Mayerson asked: “whither the poor and people of color?” and argued that this is a question that must be asked of every climate change narrative (997).

Taking this question as a starting point, my dissertation examines both “canonical” climate fiction and works that have received less critical attention, including works of Afro- and Indigenous Futurisms; I argue that, in many of these texts, the poor and people

⁹ Here, I use “canon” in scare quotes to acknowledge that the cli-fi “canon” is “nascent” (Schneider-Mayerson, “Influence” 490) or “emergent” (Schneider-Mayerson, “Just As” 338), and that canon-formation is a field in and of itself. Despite the relatively recent emergence of cli-fi, I am not alone in using “canon” to describe frequently referenced works of cli-fi. This terminology is also used by Carl Death (445), Adeline Johns-Putra and Adam Trexler (189), Stef Craps and Rick Crownshaw (1), and Adeline Johns-Putra (266). “Canon” offers a useful shorthand for referring to the texts most often categorized as cli-fi. I elaborate on the concept of a cli-fi canon later in the introduction.

of colour are where they have always been: in marginalized positions overlooked by the dominant society as represented in the work. However, in others, marginalized peoples embrace the changes wrought by the climate crisis, contending that structures (including narrative structures) of white supremacy must be dismantled to adequately and justly adapt to the climate crisis.

Without acknowledgement that the climate crisis is rooted in a history of exploitation of the environment and racialized peoples, climate fiction's futural and dystopian orientations can obscure past and ongoing oppression or even justify settler colonialism. Schneider-Mayerson argues that many early works of cli-fi "portrayed climate destabilization as primarily a problem for white, wealthy, educated Americans and secondarily gestured toward its consequences for human beings in general" and thus "ignored climate justice, which many scholars, activists, and policymakers were emphasizing as the most appropriate framework for conceptualizing climate change so that responses do not exacerbate existing inequalities" (Schneider Mayerson, "Whose Odds?" 945). The U.S. military has characterized climate change as a "threat multiplier" that will lead to climate migration (Sadowski-Smith 110), and works of U.S. American climate fiction tend to reflect this discourse, seeing climate change as a threat to the global order and entrenched power structures. Such works reflect what Christian Parenti terms "the politics of the armed life boat," a political response to climate change that prioritizes the protection of one's own resources at the expense of others, and express anxiety that climate change will trigger "the collapse of whiteness as a formation of global power" (Mitchell and Chaudhury 32). Alternatively, cli-fi may rely on a state of emergency or exception to create dystopian environments, which "extends, and makes

more acute, the political stakes of a literary tradition often only understood to emerge with the same colonial history [as the state of exception itself]" (Anson 62). Because, Anson argues, the state of emergency is "the primary descriptive template for both fictional and factual accounts of accelerating climate chaos, as well as the increasing visibility of white nationalism, the emergency event perniciously endures" (62), and can be used to justify repressive, or otherwise unjust responses to the climate crisis. The depiction of state of emergency politics, as well as fear of collapse and loss of power and privilege is herein explored primarily through *The Water Knife* and *Orleans*, but the loss of privilege that may accompany the climate crisis is also touched on in *Corvus* and *The Annual Migration of Clouds*.

In addition to depicting armed-lifeboat politics, the dystopian conditions in many works of climate fiction rely upon what Hsuan L. Hsu and Bryan Yazell call "structural appropriation": a "process in which the world-threatening structural violence that has already been experienced by colonized and postcolonial populations is projected onto American (and predominantly white) characters and readers" (347). Even as works structurally appropriating these histories re-stage them in dystopian futures, they "obscure histories of racism and colonialism" (Hsu and Yazell 347). Thus, while it is possible that climate fiction's dystopian futures are intended to warn of the consequences of unchecked climate change, they, at the same time, reveal deep-seated cultural fears about the loss of privilege and the concern that the climate crisis will subvert global power structures. Although they do not use the term "structural appropriation," Mabel Gergan, Sara Smith and Pavithra Vasudevan make a similar claim: apocalyptic films about climate change enact "a darkly ironic reversal of the history of genocide ... in the

Americas” (92), which temporally displaces apocalypse into the future. Considering the future orientation of climate fiction, as well as structural appropriation (although she does not use this term), Evans concludes that “popular climate-catastrophe narratives” “focus on the future destabilization of white Western privilege rather than the environmental and climate injustices that are ongoing yet often ignored in the present” (104).¹⁰

In addition to reflecting the cultural anxiety regarding the Global North’s loss of power, climate fiction has (relatedly) been criticized for how it temporally displaces climate change into the future. Such a temporal dislocation not only creates a false sense of security regarding the time available to avert crisis, but also obscures how marginalized people, and in particular Indigenous peoples, already are living through climate crisis. Kyle Powys Whyte argues that “the hardships many nonIndigenous people dread most of the climate crisis are ones that Indigenous peoples have endured already due to different forms of colonialism: ecosystem collapse, species loss, economic crash, drastic relocation, and cultural disintegration” (226). Whereas much climate fiction portends future crisis, Indigenous literature “tends to narrate a sense of ongoing crisis, rather than an upcoming one” (Scott qtd. in Whyte 227); this is apparent in Thomas King’s presentist focus in *The Back of the Turtle*.

Although focusing solely on climate fiction’s didacticism neglects a consideration of how works of cli-fi are literary texts, as outlined above, it is nevertheless important that literary works about the climate crisis do not perpetuate historical and ongoing injustices

¹⁰ Similarly, Audra Mitchell and Aadita Chaudhury argue that end of world narratives are more concerned about “the collapse of whiteness as a formation of global power,” than the end of the world itself (326), an argument echoed by Hee-Jung S. Joo, who argues that climate catastrophe films such as *The Day After Tomorrow* depict “the end of the *white* world as the end of *the* world” (75).

related to the climate crisis; thus, representations of climate justice matter, and texts that fail to engage with issues of climate justice, including ongoing and historical injustice, miss the opportunity to “cultivate an awareness of climate justice and empathy in American readers” (Schneider-Mayerson, “Whose Odds” 959). This strikes me as important, given the outsized role that global North countries have played in the climate crisis, and Canada’s and the United States’ historic and ongoing lack of participation in climate accords that seek to redress historical injustice.¹¹

Ultimately, recent critiques of climate fiction point to how narratives of catastrophe that rely on structural appropriation, or that express greater anxiety over the destabilization of the Western world than of climate change itself, obscure the connections between colonialism, patriarchy, racialized violence, and anthropogenic climate change, as well as the “ongoing oppression against Indigenous peoples and other groups” (Whyte 234). As Agathangelou and Killian write, “the naming of what we currently face as crisis or emergency evades the ways radical black ecologies ... have been disavowed in accounts of what counts as history’s long durée” as they “have

¹¹ In 1997, delegates from more than 150 countries signed the Kyoto Protocol, which sought to lower the amount of greenhouse gasses emitted to below 1990 levels. Although the Kyoto Protocol was initially ratified by the Canadian parliament in 2002, Canada withdrew from the Protocol in 2011, after failing to reduce its emissions to below 1990 levels, instead seeing a 30% increase in GHG emissions from 2008-2012; the withdrawal was justified by the fact that the Protocol did not include two of the world’s biggest polluters, China and the United States (Hrvatín). The United States has still not backed the Kyoto Protocol. The Paris Agreement is a “legally binding international treaty on climate change [that was] adopted by 196 parties” and has the goal of limiting global temperature increase to below 2 °C (UNFCCC). Canada has signed the Paris Accord, and has promised \$2.65 billion to help developing countries combat climate change (Hrvatín). The U.S. had initially signed the accord, but under former President Trump withdrew in 2019. In 2021, under President Biden, the U.S. rejoined the Paris Accord, although the country is only on track for a 17% reduction of emissions compared to 2005 levels, instead of its promise to reduce emissions by 25% (Mai).

refused the ruse that capitalism, the state, heteropatriarchy, and the domination of more-than-human nature are the means and ends of justice and freedom” (Opperman qtd. in Agathangelou and Killian 826). This is why Lewis and Maslin, as well as Davis and Todd, drawing on Whyte, suggest that the Anthropocene begins with the colonization of the Americas, rather than during the industrial revolution or the great acceleration;¹² this accounts for the fact that “the current environmental crises which are named through the designation of the Anthropocene, can be viewed as a continuation of, rather than a break from, previous eras that begin with colonialism and extend through advanced capitalism” (Davis and Todd 771). The importance of acknowledging the role of slavery and genocide is reflected in Françoise Vergès’ related term, “Racial Capitalocene,” which builds on Jason Moore’s concept of the “Capitalocene” and Cederic Robinson’s “racial capitalism.”¹³ The Racial Capitalocene “suggest[s] a geological re-mapping of the so-called Anthropocene to the emergence of racial capitalism through genocide and slavery” (Roane, Femi-Cole, Nayak, and Tuck 130). Because settler colonialism “is a ‘structure’ rather than an ‘event’” (Wolfe qtd. in King, Smith and Navarro 80), global racial capitalism (with its roots in genocide and slavery) is the “essence of the present moment’s material struggles and ecological violence” (Agathangelou and Killian 822).

¹² When Paul Crutzen and Eugene Stoermer proposed the Anthropocene, they suggested it began during the Industrial Revolution; however, “the Anthropocene Working Group (AWG) locates the onset of the Anthropocene in 1945 when the Great Acceleration, the period after World War Two that saw rapid growth across many measures of human activity, began” (Hawkes 3).

¹³ Jason Moore proposes “Capitalocene” rather than Anthropocene to denote the historical era shaped by the endless accumulation of capital and its role in the ecological crisis. Although Cederic Robinson was not the first to introduce the idea of racial capitalism, he popularized the concept, which refers to how “racialism” inevitably permeates capitalist society (2).

The Racial Capitalocene points to the role of race in the Capitalocene, and suggests that heteropatriarchy, racism, colonialism, and slavery underpin the epoch; works of climate fiction that fail to account for the ideological underpinnings and violent dispossessions that characterize colonialism and its legacies overlook the importance of climate justice, and can therefore reinforce the structure of settler colonialism.

3. Just Apocalypse

My dissertation responds to and complicates these recent critiques of climate fiction, suggesting, in part, that the lack of climate justice themes may be due to generic constraints. However, whereas Rebecca Evans argues that cli-fi is limited by an adherence to “realistic literary strategies commonly associated with scientific knowledge” (95), I suggest that the genre’s similarities to speculative and science fiction as well as its reliance on dystopian or apocalyptic tropes, rather than its realism, prompt some of these critiques. This narrow codification of the genre may result in myopic tendencies that overlook how works of other genres, including Indigenous Futurisms, Afrofuturism, and satire engage with climate justice. Shelley Streeby comes to a similar conclusion in her work on the intersections between activism and Indigenous and Afro-Futurisms, arguing that futures imagined by “[social] movements, speculative fictions, and futurisms of Indigenous people and people of color” are “all too often excluded from the category of cli-fi” (4). Afrofuturism “is a literary, aesthetic, and cultural movement that emerged among the diaspora during the second half of the twentieth century” that “combines science fiction, reflections on technology in its relations with black cultures, magic realism, and non-European cosmologies, with the aim of interrogating the past of

so-called colored peoples and their condition in the present” (Mbembe 163). Ytasha Womack elaborates that Afrofuturism is “both an artistic aesthetic and a framework for critical theory” (9). Indigenous Futurisms are works of “Indigenous artistic expression that return to traditional teachings about spacetime” (Baudemann qtd. in Dillon 3), or works oriented toward optimistic futures that center Indigenous peoples in their narratives (Dillon 8-9), or that express how Indigenous peoples currently live in a “post-Native apocalypse” (Dillon 10). Streeby argues that a critical difference between Afrofuturisms and Indigenous Futurisms and climate fiction, as well as the mainstream environmental movement, is these futurisms’ “insistence on not isolating climate change problems from larger economic, racial, and social problems and conflicts over colonialism” (104).¹⁴ Both Afrofuturism and Indigenous Futurisms tie science fiction’s emphasis on the future to the past, to explore the entanglements of past and future and to create space in the present for overcoming oppression.

Cli-fi has gained prominence in the years since Bloom coined the phrase; however, relatively few authors and titles are mentioned in publications about the genre, whether critical or popular. To give a telling, if unscientific, example: a survey of the first page of

¹⁴ This holistic approach to climate change and social issues can be seen in recent anthologies of Afrofuturism and Indigenous futurisms, including *Dark Matter: A Century of Speculative Fiction from the African Diaspora* (ed. Thomas), *Love After the End: An Anthology of Two-Spirit & Indigiqueer Speculative Fiction* (ed. Whitehead), and *Walking the Clouds: An Anthology of Indigenous Science Fiction* (ed. Dillon). However, while some of the stories anthologized in these collections can be read as cli-fi, they are not marketed as such. A notable exception to this trend is the *Grist Imagine 2200: Climate Fiction for Future Ancestors* series published online, a collection of stories written by “writers from across the globe” imagining “intersectional worlds of generational healing and community-based solutions” (*Grist*). While these stories are relevant for this project, given their focus on envisioning justice, healing, and community in the context of climate change, I do not read them in this project as I focus on novels, rather than short fiction.

Google results for “climate fiction” bring up lists of “must read” works of climate fiction, from publications such as *Grist*, *Outside*, Smith College, the Vancouver Public Library, and *Business Insider*. These reveal a large degree of overlap with the titles analyzed by cli-fi scholars. Without fail, titles include works by Margaret Atwood, Kim Stanley Robinson, Nathaniel Rich, Octavia Butler, T. C. Boyle, Omar El Akkad, Paolo Bacigalupi, Ian McEwan, Barbara Kingsolver, George Turner, Richard Powers, and occasionally Sherri L. Smith.¹⁵ The results of this Google search also (less frequently) include more recent works by authors who have received less scholarly attention, including Jenny Offil, Jesmyn Ward, Julia Glass, Imbolo Mbue, Rebecca Roanhorse, and Rita Indiana. I include this list to suggest that, perhaps, the issue identified by critics of the genre (although I do not deny the problems with some “classic” cli-fi) may also be due, in part, to issues of canonization. Attempts to build the “cli-fi canon” have tended to exclude works that include a climate justice framework, or if these “canonical” texts do include this framework, it may be overlooked in favour of a critical emphasis on describing the genre. Several early works of climate fiction are, in fact, concerned with justice. For instance, George Turner’s *The Sea and the Summer* and Margaret Atwood’s *Oryx and Crake* both depict the unequal impacts of climate change on the poor, and critique class stratification. Furthermore, Atwood’s novel also touches on the exploitation and sex-trafficking of Asian women, implying these issues are exacerbated by poverty driven by climate change.

Because the authors most frequently associated with the genre are North American or European, it is perhaps no surprise that their works would focus on the future effects of

¹⁵ See, e.g. Evans, Irr, Johns-Putra, Trexler.

climate change on those continents. However, even within North American and European countries, there are climate justice issues that must be addressed; BIPOC authors envision climate-changed futures, and understanding how they envision the future of climate justice is important for cli-fi scholarship, as climate injustice and environmental racism, as in the international context, will also have earlier and more severe impacts on Black people, Indigenous peoples, and people of color within North America.

By limiting the scope of my own project to works about Canada and the United States, I recognize that I contribute to the problem that I have identified above. However, this geographic limitation was imposed due to the scope of this project, and that fact that settler colonial histories and racial politics are similar in U.S. American and Canadian contexts. Nevertheless, by including the work of authors who are the subject of less frequent popular and scholarly discussion, in addition to some of the biggest names in the genre, I show that many works of cli-fi do, in fact, prioritize climate justice.

Acknowledging the presence of climate justice frameworks in novels written by North American authors is important, as “an ecocritical analysis of climate change fiction can illustrate how issues of environmental injustice are framed and, ultimately, what particular justice claims are articulated” (Mehnert 189). Often, climate justice is framed as an “international” issue, for example through the idea of carbon debt.¹⁶ However, the carbon or climate debt approach to justice can foreclose “a more differentiated discussion of the impacts of climate change because it elides intra-national class and race differences in its emphasis on national emissions budgets” (Mehnert 186). My dissertation

¹⁶ For example, Tracey Skillington focuses exclusively on international climate justice. Rosemary Lyster takes a more balanced approach, although it also focuses heavily on the international component of climate justice.

demonstrates that, because of the legacy of colonialism and slavery in America and Canada, intra-national climate justice is equally important, as marginalized peoples in these countries will be more vulnerable to the climate crisis; because the U.S., in particular, plays an outsized role in creating the conditions of the climate crisis, justice within its borders cannot be overlooked.

Throughout this project, I refer to various strands of justice related to environmental concerns, based on the specific conditions depicted in each work. This is because “human induced climate change gives rise to large and diverse issues of justice,” including “justice between generations, between small island nations and the polluting countries ...and between developed, industrialized nations ... and newly developing ones (Chakrabarty 56). Broadly, the kinds of (in)justice that recur in the novels analyzed are climate justice, ecological justice, and environmental justice. Because social justice,

including recognition-based and participatory justice,¹⁷ is entangled with climate and environmental justice, I also analyze elements of social justice; Laura Pulido explains the

¹⁷ Broadly defined, social justice attends to what justice is, and “whether it is available within a variety of social contexts” (Capeheart and Milanovic 1); this requires examining “dominant and non-dominant conceptions of justice,” how justice is “selectively institutionalized” and “formally applied” and “what persons and/or groups are being deprived of its formal mandates” (Capeheart and Milanovic 2). Thrift and Sugarman explore the nuances and ambiguities of the term, noting that per Rawls social justice can refer to “equal access to basic liberties and the fair distribution of goods and opportunities” (3), per Young, it can refer to the “recognition of difference and elimination of oppression across institutions” (3), and that per Fraser it refers to the “opportunity of participate equally in social and political life” (3). Recognition-based justice is often understood as a requirement or precursor for other forms of justice, including social justice or distributive justice (Rawls qtd. in Bodwitch 3). For example, Schlosberg suggests that lack of cultural recognition or failure to recognize difference is “the foundation of distributive injustice” (14), as distributive inequity is directly linked to a “lack of value of the poor and people of color” (60).

As Bodwitch et al. note, recognition accounts for how justice is tied to “the ways group interests are represented and social difference and diversity of knowledge is respected,” and provides a means for marginalized groups or people to resist assimilation or domination by the dominant group (3). Recognition-based justice calls for the recognition of the identities belonging to marginal groups, and how these identities are “shaped by situatedness in particular social, political and historical context” (Pandey and Sharma 1), and ensures that people’s identities are recognized and respected in decision making processes (Pandey and Sharma 2). Participatory justice encompasses everything from “individual procedural fairness rights to collective citizenship-based models” and “plays a significant role in social rights adjudication under both international human rights and domestic constitutional law jurisdictions” (Liebenberg 623). According to Smith et al., participatory justice is closely related to social justice, and they suggest that participatory justice foregrounds “collaborative values that counterbalance neoliberal trends” (467). In short, participatory justice “emphasizes the common good and the public’s right to be fully included within civic opportunities, protections, and resources” and includes people’s ability to have their voices be heard and play a role in shaping public policy (467).

The Law Commission of Canada notes that participatory justice emphasizes relationships and dialogue, such that outcomes are agreeable to all parties (xiii). Participatory rights can range from “basic right to be notified of decision-making processes where one’s rights are to be determined or a stronger right to be consulted, to more extensive models of engagement or even co-decision-making between community groups and public authorities” (Liebenberg 624), and I refer to this entire spectrum when referring to participatory justice in this project.

entanglement of these forms of justice, arguing that environmental injustice will only be rectified through “the alteration of power relations, cultural practices, and systems of meaning” (cited in Schlosberg 125). In what follows, I define these concepts and discuss their intersections in terms that reflect their role in my analysis.

Climate and environmental justice are closely related but are different frameworks. The environmental justice (EJ) movement emerged first, in the 1980s, in response to the “disposal of PCB-tainted soil at a new landfill in Warren County, North Carolina” (Schlosberg and Collins 360). This landfill was situated in a “poor, largely African-American community,” and protests brought together environmentalists, political leaders, and civil rights activists in what was the “first major action joining civil rights and white campaigners since the 1960s” (Schlosberg and Collins 360). Since its beginning, the EJ movement connected “race, class, indigeneity, gender, and environmentalism and fundamentally involve[d] social justice” (See 14). The EJ movement differed from mainstream environmentalism, as it had a broader conceptualization of “environment” that moved away from a wilderness or nature free from humans,¹⁸ to consider the environment as a place where people live, work and play (Schlosberg and Collins 360). This conceptualization was important to counter the racist history of the conservation movement, especially in the United States; in July 2020, the Sierra Club issued a statement, in response to the Black Lives Matter movement, reckoning with the

¹⁸ Global conservation movements remain largely shaped by this Western model, which is a form of “exclusionary conservation ... based on a strict separation between nature and people” (Kashwan, Duffy, Massé, Asiyanbi, Marijnen 7). For a history of conservation’s settler-colonial roots, and its continued preference for “pristine” nature free from human populations, despite the fact that this idea “entrench[es] the racist and imperialist legacies of fortress conservation” (14) see Kashwan, Duffy, Massé, Asiyanbi.

organization's racist history. Michael Brune, the statement's author, critiques John Muir, the founding member's, racist views and notes that in its early years, the Sierra Club was only open to "middle- and upper-class white people who worked to preserve the wilderness they hiked through," a wilderness that only needed protection because "white settlers violently displaced the Indigenous peoples who had lived on and taken care of the land for thousands of years" (n.p.). While the early conservation movement "fed into [the] dangerous idea ... still circulating today ... that exploring, enjoying, and protecting the outdoors can be separated from human affairs" (Brune n.p.), environmental justice advocates argue that this is not the case.

The EJ movement emerged in response to environmental racism, which describes why minority and low-income communities face "disproportionate environmental harms and limited environmental benefits" (Taylor 2). Environmental racism results not only in disproportionate environmental harms for marginalized peoples, but also in the creation of ecological sacrifice zones, areas where "it is simply dangerous to breathe the air or to take a drink of water" (Faber 16); sacrifice zones are detrimental not only to human health, but also that of the non-human world.

EJ activists seek to counter the unjust distribution of environmental harms and challenge the status quo which is "too invested in the institutional forces and ideological structures that exacerbate already existing conditions of environmental and social injustice" (Sze 15-6). Foundational to the EJ movement are the seventeen principles of environmental justice that were drafted in 1991 at by the Delegates of the First National People of Color Environmental Leadership Summit (hereafter, The Delegates). The introduction to these principles reads:

We, the people of color, gathered together ... to build a national and international movement of all peoples of color to fight the destruction and taking of our lands and communities, do hereby re-establish our spiritual interdependence to the sacredness of our Mother Earth. (The Delegates)

While this language may flatten difference, the preamble goes on to emphasize the need “to respect and celebrate each of [their] cultures, languages and beliefs about the natural world and [their] roles in healing [themselves]”; promote “economic alternatives which would contribute to the development of environmentally safe livelihoods”; emphasize the need to secure the “political, economic and cultural liberation that has been denied for over 500 years of colonization and oppression, [resulting] in the poisoning of ... communities and land and the genocide of our peoples”; and affirm that the earth and all species, including humans, have the right to be free from ecological destruction (The Delegates). According to these principles, environmental justice demands that public policy be premised on mutual respect, not discrimination, that land should be used in ethical and sustainable ways, and that self-determination for all peoples is critical, including group rights to participate as “equal partners at every level of decision making” (The Delegates). The principles also highlight the interconnections of racial and environmental justice, nationally and internationally, and within the U.S. call for the recognition of “a special legal and natural relationship of Native Peoples to the U.S. government through treaties, agreements, compacts, and covenants affirming sovereignty and self-determination” and the “strict enforcement of principles of informed consent, and a halt to the testing of experimental reproductive and medical procedures and vaccinations on people of color” (The Delegates).

Many of these principles are relevant to the novels analyzed in the following chapters. For example, the Principles call for “economic alternatives which would contribute to the development of environmentally safe livelihoods” and oppose “the destructive operations of multi-national corporations” (The Delegates). Many of the works read herein deal with the difficulty of navigating the climate crisis without changes to the economic system; *New York 2140* imagines a radical restructuring of the financial system that includes a universal basic income, and in a more dystopian vein, *Orleans* depicts a trade and barter economy within Orleans, that seems to function better than the collapsed economy of the Outer States. *The Back of the Turtle*, *Watershed*, and *The Water Knife* all condemn the operations of multinational corporations, pointing to their role in environmental destruction. The Principles also demand the cessation of both “the production of all toxins, hazardous wastes, and radioactive materials” and “the testing of experimental reproductive and medical procedures and vaccinations on people of color,” emphasizing the need for prior and informed consent (The Delegates). *Orleans* deals with the issue of medical racism and lack of consent in scientific experimentation, while *The Back of the Turtle* demonstrates the consequences of the production and improper use of toxic chemicals.

There is a significant overlap between the principles of environmental justice and climate justice. As critiques of climate fiction premised on climate justice suggest, climate justice connects the climate crisis to the “social, racial and environmental issues” with which it is “deeply entangled” and recognizes the disproportionate impacts of climate change on the people least responsible for the problem, including low-income people and people of color (University of California Center for Climate Justice). As with

environmental justice, there are principles of climate justice. The Bali Principles of Climate Justice were published in 2002 by an international coalition of groups including CorpWatch, Third World Network, Oil Watch, the Indigenous Environmental Network and others, while these groups gathered at the Earth Summit in Johannesburg. The coalition sought to “broaden the constituency providing leadership on climate change” by “linking local community issues to climate change” (International Climate Justice Network). The twenty-seven principles insist that all “communities have the right to be free from climate change, its related impacts and other forms of ecological destruction” and advocate for the elimination of the production of greenhouse gases. The principles also affirm the importance of local governance, democracy, and the rights of impacted peoples to speak for themselves; more specifically, two lines refer specifically to the necessity of climate justice for Indigenous peoples. The principles advocate for “the right to self-determination of Indigenous Peoples, and their right to control their lands, including sub-surface land, territories and resources and the right to the protection against any action or conduct that may result in the destruction or degradation of their territories and cultural way of life” as well as “the right of Indigenous peoples and local communities to participate effectively at every level of decision-making ... the strict enforcement of principles of prior informed consent, and the right to say ‘No.’” The principles also call for the development of “locally controlled and low-impact energy resources” not only in the interest of humans, but to ensure “a sustainable planet for all living things,” pointing to the engagement of ecological justice with climate justice. Likewise, they point to the importance of intergenerational climate justice.

These issues are reflected and analyzed in the works and chapters that follow. Briefly,

the importance of self-determination for Indigenous peoples, as well as the ability for “local communities, affected people, and Indigenous peoples to” “represent and speak for themselves” and “play a leading role” in addressing climate change (International Climate Justice Network) are made clear in *Watershed*, *The Back of the Turtle*, *The Water Knife*, *Blackfish City*, and *Corvus*. The principles also point to the necessity of intergenerational climate justice, which is brought up in *Watershed*, *The Water Knife*, and *The Annual Migration of Clouds*, and ecological justice (“a sustainable planet for all living things (International Climate Justice Network)), which is an important issue in *The Back of the Turtle*, *Blackfish City*, *Corvus* and *New York 2140*.

Although this project is more explicitly concerned with climate justice, given its focus on climate fiction, I refer often to environmental justice. These are intersecting, but not identical issues; there are many similarities between the causes of environmental and climate injustice and the solutions demanded by their advocates. In fact, as Schlosberg and Collins note, climate justice emerges from the environmental justice movement. Although Hurricane Katrina is generally seen as the first confluence of EJ and climate justice, these issues were already related prior to the storm: the Environmental Justice and Climate Change Initiative was founded in 2001, “as a direct result of the first Climate Justice Summit at The Hague during the COP6 meeting of the UNFCCC [United Nations Framework Convention on Climate Change]” (Schlosberg and Collins 362). Environmental and climate justice continue to be connected, as the works analyzed herein show. Many of the novels, in their focus on local rather than global concerns, explore how the climate crisis has the potential to exacerbate environmental racism and the need for environmental justice. For example, Thomas King’s *The Back of the Turtle* deals with

racial extractivism on Indigenous land, while Sherri L. Smith's *Orleans* envisions a future where the Gulf Coast is utterly abandoned after a series of Katrina-like hurricanes in an extrapolation of the environmental racism that shaped the response to the historical storm.

Finally, in addition to environmental and climate justice, my project also considers how ecological justice is depicted in climate fiction. Whereas both climate and environmental justice emphasize the importance of social justice to address environmental and climate concerns, ecological justice advocates for justice for the natural world itself. Brian Baxter argues that all nonhumans are “members of the community of justice” and should thus be recipients of ecological justice (qtd. in Schlosberg 119). Importantly, Baxter suggests that any “viable populations of merely living organisms have a right to environmental resources necessary ... to exist and survive” and are worthy of justice (Schlosberg 119). Similarly, Nicholas Low and Brendan Gleeson focus on the ability of ecosystems and nonhumans to operate with integrity: “every natural entity is entitled to enjoy the fullness of its own form of life” (qtd in Schlosberg 136). As the climate crisis alters the historical environmental conditions that ecosystems rely on, ecological justice comes to the fore. The importance of justice for the nonhuman world is apparent in Thomas King's *The Back of the Turtle*, Kim Stanley Robinson's *New York 2140*, and Sam J. Miller's *Blackfish City*.

4. “Wild Time” and States of Climate Exception

To explore how these strands of justice are represented in climate fiction, I analyze the works of eight North American authors, published between 2013 and 2021, a

period that saw a rapid increase in the publication of climate fiction. The organization of my project is premised on Nicole Roger's concept of "wild time." Rogers is a legal scholar, whose *Law, Fiction and Activism in a Time of Climate Change*, focuses on "the growing collection of narratives in climate litigation, climate fiction ... and climate activism" (4) and the different roles that narrative plays in these spheres. She uses the term "wild time" to acknowledge "the significance of time" in "any analysis of climate change" (3), and to point to the fact that the understanding of "time as regulated linear progression" or "the more recent manifestation of time as commodity" are "peculiarly Western phenomena" (5) which will likely be undermined due to climate change. Wild time describes "a future in which the world has been radically transfigured by climate change," a "chaotic future period in which the logic, institutions, or modes of interacting and artefacts of civilization are abruptly or gradually undone as a consequence of climatic and other disruptions" (4). Wild time is "distinguished by chaos, disruption and unpredictable events" and the effects of climate change are so pronounced that it is no longer possible to sustain "the illusion that human mastery over the planet and its inhabitants is possible" (Rogers 11). Wild time can lead to climate exceptionalism: a state of exception that is enacted as an attempt to manage climate chaos. Rogers explains that human rights "evaporate" during a state of exception and links the onset of the state of exception to the rhetoric of climate emergency, pointing to dystopian cli-fi wherein the state of climate emergency leads to the development of totalitarian regimes: this is wild time. Rogers relies heavily on Giorgio Agamben, and I expand her references to Agamben to note that a state of exception should be temporary, enacted "on the basis of factual danger" (Agamben 169); the state of exception can become the rule, although this

rule “nevertheless remains outside the normal order” (Agamben 169). A notable feature of the state of exception for climate dystopias (especially those set in wild time) is that it is paradoxical: in a state of exception, “it is impossible to distinguish transgression of the law from execution of the law” (Agamben 57); thus, political leaders and those who gain power as a result of climate exceptionalism are free to act in such a way that is, in other times, immoral or illegal. As Rogers argues “climate exceptionalism and official recognition of the climate emergency can potentially usher in the totalitarian state, the setting aside the rule of law and the erosion of human rights safeguards” (156); this explains why works of climate fiction are frequently dystopian in nature.

Totalitarian regimes and climate exceptionalism directly threaten climate justice because they are likely to curtail human rights in their efforts to manage the crisis, or turn toward politics of the armed lifeboat to ensure adequate resources for their own populations (or segments of them). For this reason, April Anson critiques the state of emergency, or state of exception, as it perpetuates and justifies settler-colonial dominance and logic (61). Anson argues that “[t]he state of emergency is more often than not the primary political cover for the unequal distribution of resources, the disproportionate deployment of militarized police in fights over fossil fuel extraction, and the uneven consequences of armed occupation” (62). Ironically, Anson argues, appeals to apocalyptic emergency “reinforce the exclusionary violence and ecological devastation they so often seek to diagnose and disrupt” (61). This is true of *Watershed*, *The Water Knife*, and *Orleans*, which all deal explicitly with climate exceptionalism.

Entry into wild time, like climate change itself, is not sudden, but is the consequence of prolonged political inaction to not only avert climate change, but also to

minimize the ensuing crisis by implementing fair adaptation and mitigation strategies. Although it may appear sudden, wild time is the result of slow violence, that is, “a violence of delayed destruction that is dispersed across time and space, an attritional violence that is typically not viewed as violence at all” (Nixon 2). Slow violence, if not addressed, can “fuel long-term, proliferating conflicts in situations where the conditions for sustaining life become increasingly but gradually degraded” (3).

Thus, to attempt to make slow violence visible, my project is temporally organized according to wild time. The first two chapters read Thomas King’s *The Back of the Turtle* and Doreen Vanderstoop’s *Watershed*, works set prior to the onset of wild time, showing how slow violence drives conditions that may lead to collapse. These works, which are nearly contemporaneous for readers, can be read as precursors to wild time, and demonstrate how the seeds of crisis are already planted. In the subsequent two chapters, I read works set in wild time, Paolo Bacigalupi’s *The Water Knife* and Sherri L. Smith’s *Orleans*, focusing on how climate exceptionalism can intensify climate injustice. Rogers draws heavily on climate fiction in her conceptualization of wild time, noting that “climate fiction is, almost exclusively, the narrative domain in which the potential dimensions of wild time are fully explored and portrayed” (128); the works explored in these middle chapters are works of classic dystopian or apocalyptic climate fiction. The final two chapters move beyond wild time, as social systems that may have collapsed during wild time are reestablished. Here I read *Blackfish City* by Sam J. Miller alongside *The Annual Migration of Clouds* by Premea Mohamed, and *Corvus* by Harold Johnson alongside *New York 2140* by Kim Stanley Robinson; these works move beyond acute crisis to read the destabilization of wild time as an opportunity to establish a more just

society. By arranging my project temporally in this way, I am able to demonstrate how justice requires different conditions to be met in each stage of the climate crisis. Climate fiction is inherently interested in time and temporality, as it establishes “throughlines” from the readers’ pasts and presents to extrapolated futures. Analyzing apocalyptic pre-traumatic films, Kaplan writes that “awareness of a traumatic past is figured in many of the films in the genre, as this past is understood to have shaped the future (i.e., the narrative present), a fictional future that we should avoid” (12). Kaplan argues that it is imperative to consider “how these imaginaries of the future in turn shape constructions of the present and the past” and to do so “temporality needs to be made explicit so we can move beyond focusing only on the memory of past wounds” (12). My dissertation thus makes temporality explicit in its structure and analysis.

Using wild time as a temporal organizing frame for my analysis, I move from the present day or near future to the future of the late twenty-first or early twenty-second centuries. Each chapter is interdisciplinary, drawing on relevant sociological, biological, or environmental studies to explore different facets of justice in climate-changed futures. Rooted in ecocriticism as my project is, I acknowledge that “any ecocriticism of value must try to be competent about all the factors at work in environmental degradation—material, cultural, psychological, legal and political” (Clark 111). This means considering the world outside the text. Interdisciplinarity is important for both literary and environmental studies, as just as “literary discussions of landscape, place, and environment stand to be energized by a greater engagement with complex articulations of nature being developed in such fields as history, geography, ecology, sociology, theology, and Native studies” the “environmental field in turn also benefits from literary theory’s

insights about representation, interpretation, and aesthetics” (Kerber 16). Due to the complexity of climate change, my work relies on Timothy Clark and Ursula K. Heise’s understandings of ecocriticism,¹⁹ which touch on wide ranging issues; thus, my work brings in scientific, political, and sociological information based on what is at stake in each text.

Many works read herein do not appear on lists of “must read climate fiction,” but my analysis shows that, contrary to recent criticism, cli-fi does engage with climate justice, although these works may have been met with less critical attention. My dissertation points to issues with the ways in which the genre is defined and studied, as recent critiques of the genre hold less weight when climate fiction is understood more expansively; I demonstrate engagement with climate justice themes in “marginal” or non-canonical texts, and argue for more nuance when analyzing climate justice themes in more canonical works. In doing so, I aim to challenge popular and critical beliefs about climate fiction and broaden what constitutes climate fiction to include works of Afrofuturism and Indigenous Futurisms. As I move toward and through wild time using the works of Thomas King, Doreen Vanderstoop, Paolo Bacigalupi, Sherri L. Smith, Preme Mohamed, Sam J. Miller, Harold Johnson, and Kim Stanley Robinson, I explore how these works grapple with justice in a climate-changed world, more or less successfully. Accordingly, each chapter explores the potential, and potential challenges,

¹⁹ Timothy Clark argues that ecocriticism must attend to all of the factors contributing to environmental degradation, including “material, cultural, psychological, legal and political” factors (111), and Ursula K. Heise argues that ecocriticism has a “triple allegiance” to “the scientific study of nature, the scholarly analysis of cultural representations, and the political struggle for more sustainable ways of inhabiting the natural world” (506).

for enacting just futures at each temporal stage (pre-wild time, during wild time, and post-wild time). Each chapter focuses the specific temporal and geographical challenges of the climate crisis, demonstrating how the climate crisis is simultaneously a profoundly local and global problem.

Chapter Two reads Thomas King's *The Back of the Turtle*, a work that is not typically considered climate fiction as its engagement with the climate crisis takes place in the background, so to speak. However, King's novel is a work of Anthropocene fiction that challenges neoliberal ideology and advocates for the power of stories to foster care and community to combat environmental racism and destruction.²⁰ Climate change is a clearly present backdrop in *The Back of the Turtle*, and King emphasizes environmental and ecological justice. Through the devastation of Kali Creek and the Smoke River Reserve due to neoliberal policies, environmental racism, and colonial resource extraction, King challenges Western epistemologies that view the natural world as an inert resource to be exploited, and points to the negative consequences of such attitudes on the land and on Indigenous peoples. King draws on alternative epistemologies, especially Indigenous epistemology through the Haudenauonee creation story, but also Judeo-Christian stories and Norse mythology, to demonstrate alternative ways of relating to both other humans and the non-human world. King's work is appropriate as the first novel analyzed, as it introduces a theme that is prevalent in many of the works that

²⁰ Adam Trexler prefers to use Anthropocene fiction instead of climate fiction, as "Anthropocene ... shifts the emphasis from individual thoughts, beliefs, and choices to human process that has occurred across distinct social groups, countries, economies and generations" and "names a world-historical phenomenon that has arrived" (4). He claims that "nearly all Anthropocene fiction addresses the historical tension between the existence of catastrophic global warming and the failed obligation to act" (9).

follow: drawing on King's Massey Lectures, I show that he clearly views stories as inherently political and able to intervene in the world. As he says following each lecture: "Take [this] story. It's yours. Do with it what you will ... but don't say in the years to come that you would have lived your life differently if only you had heard this story. You've heard it now" (29). Representation and genre are issues I return to again and again, given the political and educational aim of much cli-fi. However, King breaks with the dystopianism of many works of cli-fi, using humour and satire to point to the need for change not only in environmental policy, but also in how we tell stories about the environment. King draws on alternative narratives that suggest more just ways forward.

In Chapter Three, I read Doreen Vanderstoop's *Watershed*, which deals more directly with the climate crisis. Like King's novel, *Watershed* depicts the consequences of resource extraction in the Prairies on water systems. Set in Alberta in 2058, Vanderstoop's novel is set on the cusp of wild time and introduces the state of exception and the politics of the armed lifeboat, which are central to understanding climate justice and its depiction in climate fiction. Vanderstoop attempts to imagine a response to the climate crisis beyond climate exceptionalism and conflict; however, as this response meets with pushback and conflict, *Watershed* demonstrates the challenges of enacting climate justice once the crisis has already begun, an idea which is more fully developed in the following two chapters.

Chapters Four and Five move into wild time, reading *The Water Knife*, by Paolo Bacigalupi, and *Orleans*, by Sheri L. Smith, respectively. In both novels, climate change has dramatically altered social, political, and environmental landscapes, and as a result pre-existing injustices are exacerbated. Bacigalupi's novel is the only work included in

this project that critics have identified as promoting climate justice. I build on and complicate these claims by arguing that Bacigalupi's U.S. American focus occludes climate and environmental injustices in the country's past. I contend that although Bacigalupi includes a diverse cast of characters, these characters do not work together to create a more just future but are driven by their own self-interest that reinforces conservative armed life-boat politics. In contrast, Smith does depict cooperation between diverse characters to begin to heal the divides wrought by the climate crisis and to foster a future shaped by climate justice. In addition to promoting cooperation and climate justice, Smith also promotes ecological justice through Mr. Go, who is restoring the Mississippi River Delta after it was devastated by a series of hurricanes. The combination of ecological revival and cooperation to create a better future at the end of the novel suggests that climate change need not necessarily lead to social collapse and injustice; these are the consequences of unjust governmental policies, and Smith shows how in the absence of such policies, people can work together to create better futures.

The next two chapters move out of wild time, to a period when the climate crisis has stabilized. The climate is altered, but following wild time, social order has been or has begun to be re-established. The works in these two chapters "articulate the unsettling of familiar systems and the reconfiguration of human ecology" as "species, weather, social groups and financial interests act on their own terms" (Trexler 173). In Chapter Six, I read Premee Mohamed's *The Annual Migration of Clouds* alongside Sam J. Miller's *Blackfish City* using posthuman and queer ecological theory to argue for the need to de-center the human and the heterosexual reproductive family unit as the privileged bearer of the future. A repercussion of climate change in both works is the emergence of

subjectivity-altering illness; these illnesses challenge the humanist subject. In Mohamed's novel, despite the challenges to it, humanism triumphs over posthumanism, suggesting that abandoning the privilege afforded to the traditional humanist subject may be too much to ask when so much has been lost to climate change. Relatedly, the world lost to climate change raises important points about intergenerational climate justice; the protagonist, Reid, pushes back against both the family-timed future and the Child as a symbol of the future. In contrast, in Miller's novel queer ecological posthumanism flourishes; both posthumanism and queer ecological theory challenge boundaries and binaries, and this boundary blurring makes space for a just transition that foregrounds relationships outside of the heterosexual family unit, including with non-human animals. These relationships are critical to the characters' ability to topple the status quo, fostering a more just future for all.

Chapter Seven builds on the conclusions of Chapter Six and, specifically, the utopian potential at the end of *Blackfish City*. This chapter uses Kim Stanley Robinson's *New York 2140* and Harold Johnson's *Corvus* as case studies for climate utopianism. I argue that climate utopianism is a necessary counterbalance to the pervasiveness of dystopian cli-fi. Neither work is optimistic about the climate crisis; rather, the authors are optimistic about the potential of climate crisis to catalyze personal and societal transformations prioritizing climate and ecological justice. In many ways *Corvus* depicts a dystopian society, but it nevertheless contains a utopian impulse to create a better world for both the natural world and the people within it. Relying on the Cree Raven story and the Indigenous trope of spiraling time, Johnson situates the climate crisis in a longer history of colonialism and conquest to create a sense of cyclicity and the possibility for

transformation and survivance through the Indigenous characters in the novel.²¹ The utopian transformation Johnson envisions is of a smaller scale than that envisioned by Robinson; Johnson focuses on personal transformation and building strong communities at the local level. Robinson's novel depicts a larger scale transformation of social and political systems at the state, national, and global levels that prioritize people over capital, through the nationalization of the banks and the creation of affordable housing. Both works also suggest the utopian potential of art, and the power of art (and importantly for this project, fiction), to be a part of their utopian transformations.

Like Thomas King in the first chapter, both Johnson and Robinson believe that stories have the potential to intervene in the world through the impact they have on their audience, a belief that I share and come back to throughout this project. The authors' obvious belief in the power of climate fiction reinforces the importance that works of cli-fi engage with climate justice. Climate justice requires confronting the hegemonic power, political, and economic structures that are entangled with the climate crisis. The works analyzed in my dissertation demonstrate how climate fiction's novelty and generic fluidity can lead to more inclusive narrative structures that create space for voices that may be left out of dominant climate change discourse. I argue that by engaging with climate justice, even when they may not fully succeed in depicting just futures, authors of cli-fi help to imagine how the climate crisis could lead to large-scale systemic change, whether through changes to capitalist infrastructure, as Robinson envisions, or through grassroots organizing, as imagined by Miller and Johnson.

²¹ Survivance, a term coined by Gerald Vizenor, refers to “more than survival, more than endurance or mere response” but to an “active presence” and a “repudiation of dominance, tragedy, and victimry” (15).

Chapter Two

“It’s Us What Needs Her”: Ideology, Environmental Justice, And Multi-Species Community in *The Back Of The Turtle*

Thomas King’s Governor General’s Award winning novel, *The Back of the Turtle* (2014), is not typically categorized as cli-fi; however, due to its critique of neoliberal ideology, global capitalism and environmental racism, an ecocritical reading of King’s novel highlights, first, the systems and ideologies that are linked to global climate change; second, the far reaching impacts and injustice of these system; and finally the importance of community and cooperation to combat environmental degradation and, by extension, climate change. Furthermore, through its emphasis on narrative, building on themes introduced in King’s Massey Lectures (published as *The Truth About Stories*), *The Back of the Turtle* demonstrates the importance of narrative in shaping politics and worldviews, and thus its ability to impact people’s environmental attitudes and actions. Given that the influence and politics of narrative is a major concern of much cli-fi criticism, the novel’s emphasis on narrative, in addition to its ecocritical emphasis and focus on climate justice, helps to situate my analysis of *The Back of the Turtle* in relationship to cli-fi and the other works examined here.

The Back of the Turtle tells the story of ecological devastation due to runoff of a chemical defoliant into Kali Creek, which King locates in so-called Western Canada. Kali Creek leads to the Smoke River, and from there, the contaminated water kills all plant and animal life in the region, including in Samaritan Bay and at the Smoke River Reserve, where 137 people are killed. The quaintly named chemical defoliant, GreenSweep, developed by the multinational corporation Domidion, was used in the region to facilitate deforestation for a pipeline project. However, the defoliant was used at

100 times its recommended concentration, to devastating effect. The novel alternates between the story of the aftermath of the spill on the Samaritan Bay community, largely focalized through Gabriel Quinn, and the story of Dorian Asher, the CEO of Domidion. Dorian Asher's Toronto-based narrative outlines multiple crises for the company. The first is the *Anguis*, an ocean liner carrying toxic waste, whose whereabouts are unknown. In addition to the PR crisis of a missing ocean liner carrying toxic waste, Dorian must deal with the even greater crisis of a massive tailings pond leak in the Athabasca Tar Sands, and the disappearance of Domidion's top scientist, Gabriel Quinn. Finally, Dorian is blindsided by the fact that Gabriel has gone to the media with the story of the Kali Creek disaster, which brings additional negative press to Domidion. Each PR crisis is a distinct, yet related issue of environmental injustice that ties Dorian and Gabriel's narratives together.

Unlike Dorian's narrative, which revolves around managing Domidion's image to minimize the negative consequences of its environmentally damaging practices, Gabriel's narrative revolves around his guilt for his role in the Kali Creek disaster, as Domidion's former top scientist, and his visit to Samaritan Bay and the Smoke River Reserve, the communities devastated by Greensweep. Gabriel was in charge of the Greensweep project, and the devastation wrought by the defoliant shifts his worldview. After years of working for Domidion, Gabriel abandons the corporation due to his torment over his role in the Kali Creek disaster, and the fact that he is haunted by his knowledge of this incident, in addition to many other human-made environmental disasters driven by profit-hungry corporations. When Domidion investigates Gabriel's disappearance, they discover that he has covered the walls of his home with the names of catastrophes, such as

“Chernobyl,” “Idaho Falls” and “Chalk River...” (King 23). Although Dorian finds this graffiti “disturbing” (King 23), it suggests that Gabriel sees his involvement in the Kali Creek disaster as part of a larger issue rather than an isolated incident.

Gabriel’s narrative begins in the ocean at Samaritan Bay, where he attempts to drown himself. He goes to Samaritan Bay after learning that his estranged mother and sister were killed at the Smoke River Reserve during the Kali Creek disaster. Gabriel wants to witness the devastation he caused before taking his own life. Unlike Dorian Asher’s Toronto-based, realist narrative, the world of Samaritan Bay cannot be described in realist terms; it is a “liminal, otherworldly locale” (Rhoads 124). It would seem that Samaritan Bay has other plans for Gabriel, and the story does not begin with his death. As I will demonstrate, Gabriel’s narrative suggests that the natural world has both agency and the ability to shape the narrative. Furthermore, through the interventions of Master Dog and Sonny, the community and the turtles killed in the GreenSweep disaster return to the bay, suggesting a realm of possibility beyond what can be rationally explained, contrasting dramatically with the rational world in which Domidion operates.

I argue that an expanded definition of cli-fi that includes ecocritical works like King’s would help to address recent critiques of the genre,²² as well as open up the possibilities of what constitutes cli-fi to include a broader range of styles, genres, and issues. King’s

²² Matthew Scheider-Mayerson’s “Whose Odds” points to the absence of climate justice in many cli-fi novels. He notes that Adam Trexler’s *Anthropocene Fictions*, the “most exhaustive survey of the novels of climate change and the Anthropocene to date” does not mention justice as a theme of climate change fiction” (958). Likewise, I find that Goodbody and Johns-Putra’s *Cli-Fi: A Companion*, one of the earliest collections of writing on cli-fi, also neglects climate justice. In general, works like King’s have been ignored by early scholarship on the genre, despite their representation of environmental problems linked to climate justice.

novel is neither dystopian fiction, nor speculative or science fiction, the more frequent genres for works of cli-fi; however, it is not entirely realist fiction, either, as the Samaritan Bay plot includes mystical elements that challenge Anglo-European conventions. Because of King's use of multiple genres, from the realistic/satirical narrative of Dorian Asher, to the "liminal [and] otherworldly" almost magic(al) realist narrative of Gabriel Quinn (Rhoads 124),²³ which recognizes the agency of the natural world and shows human impacts on the environment, the novel differs from much climate fiction that depicts humans struggling to survive in a climate-changed world. I suggest that King's novel is a work of "Anthropocene Fiction," defined by Adam Trexler as fiction that "change[s] the parameters of storytelling" by drawing on "the tropes of recognizable narratives" or blurring or even rupturing the "defining features of genre" to combat the representational challenges of the Anthropocene (14). Trexler himself uses

²³ Maggie Ann Bowers traces the history of magic, marvelous, and magical realism, noting that magical realism has become the most widely used term. It was introduced in the 1950s in relation to Latin American fiction, and is now used to "refer to all narrative fiction that includes magical happenings in a realist, matter of fact narrative" (16). In King's text, such elements include a dog that sets the narrative in motion, fog that plays a key role in the narrative, a turtle that migrates from Toronto to British Columbia in a matter of days, and most notably, a group of people using song to push an ocean liner from their shores. King has commented on the influence of magical realism on his writing, notably the works of Gabriel García Márquez, telling Eva Gruber in an interview that the mode "allowed [him] to see that there was a potential world there [he] could work with" (270). Magical realism is often associated with postcolonial literatures (Bowers 45, Huggan and Tiffin 84, James 246, Xuasa 102), and challenges "our commitment to a dominant Western, Enlightenment version of [reality] as strictly rational and causal" by striving to expand readers understanding of "reality" (Johns-Putra 31), or "the assumptions of authoritative colonialist attitudes" (Bowers 101), or to resist "the imperial center and its totalizing systems" (Slemon qtd. in Huggan and Tiffin 84). King uses *The Back of the Turtle* to challenge Western, colonialist, Enlightenment visions of reality, and specifically the natural world, as the events in Samaritan Bay cannot be understood in the "rational," "realistic" terms that govern the Toronto-based narrative, suggesting that these are not the only ways of understanding the environment and our relationship to it.

“Anthropocene fiction” and “cli-fi” somewhat interchangeably, demonstrating the close connections between the genres. Furthermore, like much cli-fi, King’s novel shows the discursive nature of environmental problems, and how narrative has real-world ramifications, especially for already marginalized people. I argue that in suggesting parallels between colonialism and climate change, *The Back of the Turtle* links both to the anthropocentric, individualistic ideologies satirized in the novel, and shows that a radical break from hegemonic Western epistemology is necessary for environmental justice. Furthermore, King points to the necessity of recognition-based justice, and emphasizes the importance of relationality for climate justice by demonstrating how environmental justice can be fostered through a cross-cultural and cross-species ethic of care, embeddedness in environment and community, and a re-evaluation of the stories we tell about the environment and our place in it.

1. Cli-Fi Connections: King’s Ecocritical Satire

Generically, *The Back of the Turtle* is difficult to categorize, due to the density of allusions in the text and its mystical elements, combined with its realism and satire.²⁴ Although *The Back of the Turtle* does not necessarily fall under the standard rubric of cli-fi, as it does not deal with climate change *per se*, it is nevertheless concerned with issues of environmental justice, and is critical of attitudes and systems (i.e colonialism,

²⁴ The novel has been analyzed using an ecocritical perspective (Ana María Fraile-Marcos, Sean Rhoads), through the lens of Indigenous humor (Punyashree Panda) or Indigenous epistemology (Ana María Fraile-Marcos). Other works have also focused on tracing the allusions and symbols within the text (Robin Ridington, Sean Rhoads).

globalization and neoliberalism)²⁵ that are linked to the climate crisis. Set before the onset of wild time, in a world largely free from the consequences of climate change, *The Back of the Turtle* points to environmental injustice through its depiction of the uneven effects of global capitalism and uneven temporalities of climate change and environmental devastation. Whereas recent cli-fi scholarship is critical of the genre's future orientation and implicit racism in overlooking ongoing crises or dystopian conditions in racialized or poor communities,²⁶ King's novel brings these issues to the fore by contrasting Domidion's damage to a remote Indigenous community and its environment with life in Toronto, which is unharmed by the corporation's practices; this

²⁵ "Neoliberalism" has multiple referents. For example, Ganti describes it as referring to: 1) economic reforms characterized by the "D-L-P formula" (economic deregulation, liberalization of trade and industry, and privatization); 2) a "prescriptive development model" with novel roles for labor, capital and the state; 3) an ideology that views the market as guiding all human actions, and 4) a mode of governance that prioritizes the self-regulating market's values of "competition and self-interest as the model for effective and efficient government" (91). Similarly, Steger and Roy describe neoliberalism as having three "intertwined manifestations": "1) an ideology; 2) a mode of governance; 3) a policy package" (n.p.). More succinctly, both Harvey and Braedley and Luxton argue that neoliberalism is a hegemonic "mode of discourse" or "political thought" (qtd. in Ganti 98; 10).

In this paper, I refer primarily to neoliberalism's ideological dimension, which, of course, is linked to the belief in self-regulating markets and individual self-interest that are related to neoliberalism's political and economic programs; as Ganti outlines, neoliberalism prioritizes "freedom of choice across all domains" which extends to individuals who "should have the right to plan their own lives rather than being directed by a planning authority" (92). Looking at the impacts of neoliberal ideology on individuals, Meg Luxton conducted a series of interviews with subjects caring for ill or aging relatives or friends, and found that the people interviewed had accepted and internalized the basic neoliberal assertion that individuals are solely responsible for "interpersonal or family care" (164), and a "core ideological position of neoliberalism" that "individuals are responsible for themselves and that the choices they make determine the outcome of their lives" (173). Dorian Asher shares similar views, which I elaborate on, below.

²⁶ See, for example, Rebecca Evans; Matthew Schneider Mayerson; Mabel Gergan, Sara Smith and Pavithra Vasudevan; Hee-Jung S. Joo; Audra Mitchell and Aadita Chaudhury; Kyle Powys Whyte; and Hsuan L. Hsu and Bryan Yazell.

distinction connects to the idea of sacrifice zones, areas whose people and environments are sacrificed for the benefit of others.

King's novel comments on the willingness of the dominant class to displace environmental harm onto those who are less fortunate through Dorian, who thinks: "North American Norm didn't give a damn about the environment. Cancel a favourite television show. Slap another tax on cigarettes. Stop serving beer at baseball and hockey games. That was serious. Spoil a river somewhere in Humdrum, Alberta? Good luck getting Norm off the sofa" (King 422). King's play on the words "North American Norm" as both a person and a cultural norm suggest the depth of the problem of engaging the public with climate change, a problem addressed by several scholars of cli-fi, who argue not only for the genre's educational potential, but also its ability to prompt behavioural change.²⁷ Despite the need for change, King seems cynical about the public's willingness to do so before climate change impacts them personally, which points to issues of distributional and recognition-based environmental justice. In *Defining Environmental Justice*, David Schlosberg argues that justice, including climate,

²⁷ For example, Whiteley, Chiang and Einsiedel argue that cli-fi can offer "building blocks" to re-evaluate how we live, so that new expectations may emerge (28). Writing of *The Day After Tomorrow*, Anthony A. Leiserowitz finds that the film had "significant impacts on public risk perception," and that viewers indicated an increased willingness to take individual action to mitigate climate change (8). Likewise, Nikoleris, Stripple and Tenngart find that fiction can create "engagement with climate change" and that through identification with a protagonist in a work of cli-fi, climate change can move from the abstract, to the "close and personal" (307). Rebecca Evans notes that the critical response to climate fiction has been characterized by its "unique place in climate education and activism" (96), while Alexa Weik von Mossner considers the educational potential of the genre for young adults, noting that "it has the potential to impact teenagers' understanding of the social, economic, and ecological risks associated with climate change" (553). I return to this question in the final chapter of this work, "Climate Utopianism: Just Transformations in *Corvus* and *New York 2140*."

environmental, and ecological justice are comprised of “numerous interlinked elements of distribution, recognition, participation and capacity” (12). Schlosberg suggests that lack of cultural recognition or failure to recognize difference is “the foundation of distributive injustice” (14), as distributive inequity, such as exposure to environmental harms such as toxic substances and pollution, is directly linked to a “lack of value of the poor and people of color” (60); this is seen in the mistreatment of Indigenous people and land in King’s novel. Recognition is key to environmental justice in *The Back of the Turtle*, as lack of recognition facilitates the environmental racism that leads to the devastation of the Smoke River Reserve and broader environment. Schlosberg outlines the importance of recognition for justice, noting that environmental justice requires the elimination of “institutionalized domination and oppression” of those who are “un-, mis-, or mal-recognized” due to difference (15). In this context, misrecognition is an “institutionalized relation of social subordination” (Fraser qtd. in Schlosberg 18).

Recognition is important as fights for environmental justice are “embedded in the larger struggle against oppression and dehumanization” (Pulido qtd. 51) and the lack of recognition or devaluation of identity or community leads to a lack of respect and/or environmental harm, as industries are often sited in “overwhelmingly minority area[s],” indicating “institutionalized racism, classism, and misrecognition” (Schlosberg 59). The novel’s only direct reference to climate change reads:

Winters in Toronto were never as cold as they had been in Ottawa nor as long as they had been in Edmonton. Or at least, that’s the way it used to be. Before the influx of fresh water from the melted Arctic ice cap had begun to slow the ocean’s thermohaline conveyor, and global weather patterns had begun to shift. It wasn’t a

surprise. It had been predicted, the matter studied until the public had gotten tired of being told what was going to happen. Yet now that it was happening, everyone was indignant and annoyed, as though the longer, colder winters, the lost springs, and the tentative summers were somehow an unexpected personal affront. (King 11)

King's novel presents a similar view to critiques of cli-fi that argue that the genre only depicts climate change as apocalyptic when it impacts the "white world" (Joo 75); the devastation of Indigenous environments is not an emergency for "North American Norm," pointing directly to a lack of recognition-based justice, as "North American Norm" participates, wittingly or not, in institutionalized oppression, and fails to consider the consequences of their human and environmental oppression and devastation, until the consequences impact them, paying little heed to the impacts on Indigenous people who are "un-, mis-, or mal-recognized" (Schlosberg 15).

Contrary to conventional cli-fi's projection of catastrophe into the future, Conrad Scott finds that "Indigenous literature, following the culturally destructive process of colonial European advancement and absorption of what is now called the Americas, tends to narrate a sense of ongoing crisis, rather than an upcoming one" (qtd. in "Indigenous Science" 227). Kyle Powys Whyte shares this idea, arguing that in the Anthropocene, "Indigenous peoples already inhabit what [their] ancestors would have likely characterized as a dystopian future" ("Our Ancestor's" 207). This discrepancy in dystopian temporalities of environmental devastation is clear in King's novel through the contrast between the wealthy citizens of Toronto (who are largely depicted as white in the novel) and the Indigenous characters in British Columbia and Alberta; for the latter,

environmental devastation is not a future anxiety but a lived reality. Environmental racism creates apocalyptic conditions like those depicted in mainstream cli-fi at the Smoke River Reserve. Thus, while Rogers locates wild time in the future, King suggests that wild time is ongoing for Indigenous communities. In its disruption of colonial structures of governance, wild time ushered in by the climate crisis may be welcomed by some Indigenous peoples; however, its negative impacts may disrupt its liberatory potential. Wild time describes a “world radically transfigured by climate change” (Rogers 4), which suggests, as Whyte argues, that Indigenous peoples already live in wild time, as colonialism’s impacts on their environment mirror the less localized environmental impacts of climate change, which have already radically transfigured Indigenous peoples’ environments and ways of life. The tone of *The Back of the Turtle* may be lighter than that of much dystopian climate fiction; however, the crises at the heart of the novel are no less dystopian; the only difference is that they are set in the present in Indigenous communities and reflect the ongoing crises of settler colonialism and environmental racism which are closely connected to climate change.

Whereas many works of cli-fi do not depict environmental or climate justice, King’s novel centers environmental justice by showing how Indigenous people deal with environmental devastation and racism, and by satirizing the ideals and attitudes that hinder environmental justice. The primary target of King’s satire is neoliberalism. While this term can be used to reference several different socio-economic structures, these can be summarized as an ideology shaped by heightened economic deregulation and belief in self-regulating markets and individual self-interest, including a mode of governance and set of political policies that are shaped by those focal points, rather than by social security

and state intervention (see Steger and Roy, as well as Braedley and Luxton).

King satirically criticizes many facets of neoliberal ideology through Dorian Asher, whose narrative can be read in the same vein as Ian McEwan's 2010 novel, *Solar*. Like Michael Beard in *Solar*, Dorian's storyline in *The Back of the Turtle* emphasizes the parallels between a character's willful ignorance of his health and his attitude toward the environment (Dorian is afflicted by a mysterious, undiagnosed illness).²⁸ As Marion Moussier explains, the body is often used as an "allegorical trope" for the failure of the state. She cites Catherine Bernard who argues that "literary works often turn to the allegorical trope of the dysfunctional, diseased body to reflect and denounce their sociopolitical context" (qtd. in Moussier 4); works such as *Solar* and *The Back of the Turtle* extend this metaphor to the environment.

King establishes the connection between the body and the environment by using similar language to describe them. Asher thinks "it [is] common knowledge that the body was very efficient at healing itself. If it was left alone" (King 397). Asher's belief that the body can heal itself parallels his thoughts about the spill in the Athabasca River: "the river wasn't that pristine to begin with...[it] would eventually clean itself. That's what rivers did" (King 303). These attitudes satirize the neoliberal belief in self-regulating markets, as Asher's wholehearted buy-in to neoliberal ideals leads to his belief that his body and the environment should also be self-regulating, leading to negative health and environmental consequences rather than resolution. Furthermore, Asher's belief that his

²⁸Like Dorian, *Solar's* protagonist, Nobel Laureate Michael Beard, is driven by his desire for profit, while ignoring his ill health. Beard steals his deceased post-doc's research on solar power fueled by artificial photosynthesis in a bid to profit from the popularity of clean energy; like Dorian, Beard also ignores his own ill-health, consumed instead by hyper-consumption and accumulating wealth at any cost.

body and his environment should be self-regulating point to additional issues with the neoliberal ideology to which he subscribes, wherein personal and individual freedom are guaranteed through the reduction of government oversight and regulation (Ganti 92, Braedley and Luxton 12). However, with the change from “a re-distributive state model to one that more openly justifies and reinforces market outcomes by rewarding those who place the least demand on public social programs” (Luxton 166), each individual becomes “responsible and accountable for [their] actions and well-being” (Harvey 65). Ironically, in refusing medical treatment, Dorian believes he is taking responsibility for his own well-being; by exaggerating and satirizing Dorian’s belief in personal responsibility, the limits of personal responsibility for both health and the environment are made clear. If corporations like Domidion eschew responsibility for their role in environmental contamination and its associated health problems then, barring intervention by some kind of oversight body, the consequences of their actions will have to be borne by those affected by them.

Dorian’s belief that he alone is responsible for his health extends to his belief that he must be personally responsible for his own consumption of and proximity to toxic chemicals, suggesting that others must also take this care, while simultaneously disregarding his role in releasing such toxins into their environments. This irony is foregrounded early in the novel, when Asher wonders if his health problems might be related to a recently purchased mattress (King 39). Reading a Japanese study measuring “toxicity in furniture,” Dorian recalls how “when the new mattress arrived and the plastic wrapping was removed, their bedroom immediately filled up with a violent odor that irritated their eyes and set the both of them to coughing” (King 39). By bringing toxicity

into Dorian's home through his new mattress, King demonstrates the absurdity of Domidion's approach to offloading their waste. The mattress salesperson assures Dorian that "all the emissions [are] within government regulations and [do] not pose a health problem" despite the cough and rash that Dorian experiences after sleeping on the mattress (King 39). Furthermore, the salesperson insists that the mattress's comfort is "the most important thing," and offers Dorian a twenty percent discount on a special mattress cover recommended for "people with heightened sensitivities," suggesting that Dorian, not the mattress producer, is responsible for his health problems (King 40), and that Dorian's responsibility can be further commodified. Domidion is in the same position as the mattress salesperson, believing that profit is the most important factor and washing their hands of responsibility for any negative consequences of their actions.

Although both King and McEwan use satire and draw parallels between the body and the environment, the targets of their satire differ. Whereas "*Solar* employs satire to highlight the moral failings that contribute to climate change" (Whiteley, Chiang, and Einsiedel 33), *The Back of the Turtle* focuses less on individual moral failings and more on the systems responsible for climate change and environmental injustice. Like climate change, which is often discussed in terms of representational challenges in ecocritical or

cli-fi criticism,²⁹ the political and economic systems that King criticizes can also be difficult to represent or understand, as their ubiquity makes them invisible. However, as Jon Gordon argues, satire makes us “laugh at what we normally accept or ignore” (26). Through humor, *The Back of the Turtle* makes neoliberal ideology visible, rendering it absurd. The absurdities of Asher’s mindset are emphasized in his interview about the spill in the Athabasca, with journalist Manisha Khan, where he justifies the damage by saying: “the modern world runs on energy, Manisha. Domidion can’t change that. The spills are unfortunate, but our first priority has to be the security of the nation and the protection of our children’s future” (King 425). Dorian’s statement is ironic given the devastating

²⁹ See, for example, Timothy Clark’s *The Value of Ecocriticism*, wherein he argues that “A supremely important task for modern literature and criticism [is] to find ways of representing this new reality of elusive agencies and distant or invisible wrongs, happening at counterintuitive scales, and to do so in ways that are engaging, credible, and pertinent” (84). Amitav Ghosh and Dominic Head both argue that this task is made difficult due to the literary conventions of the contemporary novel which emphasize character and the everyday. Adam Trexler suggests that this challenge is due to the “inadequacy” of existing cultural narratives for dealing with the complexities of climate change and the Anthropocene (118). Similarly, Axel Goodbody and Adeline Johns-Putra note that climate change is particularly difficult to represent through “literary or filmic narrative” due to “the complexity of its causes and manifestations” and the “discrepancy between its enormous spatial and temporal scale and that of individual human experience” (10).

environmental effects of the tar sands and their connection to climate change,³⁰ which will negatively impact the “children’s future.” King’s satire attacks “ideas, behaviours, institutions, or individuals by encouraging us to laugh at them” (Bore and Reid 454). The target is not only Dorian Asher, but corporations and systems that understand a good future only in terms of short-term material wealth rather than a safe environment.

In addition to satirizing neoliberal ideology, by linking the environment in Dorian’s home directly to his health, King reinforces the theme that humans are part of the ecosystems they inhabit, which is essential for his treatment of climate and environmental justice in the novel. Dorian’s mysterious illness is not only used to satirize his deliberate ignorance of the negative environmental and health consequences of his actions, but also disrupts the expectation that privileged, powerful people like Dorian should be immune to the negative consequences of their corporate behaviours. King’s ironic reversal of the negative health outcomes defamiliarizes environmental injustice

³⁰ The connection between climate change and the tar sands has been well documented. This connection is in part due to the resources required for extraction of tar sands oil. One process used in extraction is steam-assisted gravity drainage (SAGD) wherein steam is used to melt bitumen into a liquid form that can be collected. SAGD technology requires burning “enough natural gas to heat four million North American homes every day” (Nikiforuk 14), with natural gas accounting for 60% of the operating costs for a SAGD project (15). In addition to the cost of extraction, bitumen must be refined: first, excess carbon is removed by “super-heating the bitumen to at least 500°C,” and then heat and high pressure are used to remove nitrogen and sulphur (Davidson and Gismondi 153). A barrel of bitumen produced from tar sands results in 1.8 to 3 times more carbon dioxide emissions (187 pounds, per Nikiforuk) than a barrel of regular crude, depending on the source (Environmental Defense 8; Nikiforuk 119). Because of the carbon-intensive nature of extraction and processing, Parson and Ray find that “tar sands are one of the most inefficient means of meeting energy demands” (77). Nikiforuk also notes that “most statistics on the carbon intensity of bitumen mining” do not consider the destruction of the boreal forest, but that by destroying the boreal forest and peat bogs, the tar sands destroy important carbon sinks that could help counteract emissions (119), a finding echoed by Finkel who notes that destroying the forests “accelerates the release of greenhouse gas emissions” (53).

related health impacts. Displacing the negative health consequences of toxic environmental practices onto Asher, rather than showing the long-term effects on a character from Samaritan Bay, has several narrative consequences. Firstly, it points to globalization, demonstrating how environmental injustices such as pollution and climate change are not isolated problems but are integrated with and result from globalized flows of capital and waste. These connections are explained in Daniel Faber's critique of the "polluter industrial complex," where he shows how "the worsening ecological crisis in the global South is directly related to an international system of economic and environmental stratification in which ... advanced capitalist nations ... shift or impose the environmental burden onto weaker states" (179). Similarly, Ingrid R. G. Waldron argues that neoliberal policies have resulted in a "new geography" wherein "natural resources...become ecological commodities that reinforce environmental colonialism" (39) and turn the "'nation-state' into a 'market-state' to facilitate global capital accumulation" (47). Secondly, King's novel shows the connections between disparate places and their shared environmental vulnerabilities, while suggesting that even those wealthy countries or people who try to offload their waste and environmental problems onto others are not immune to the consequences. As Courtney Traub argues of Michael Beard in *Solar*, "embodiment ... is paramount to both the novel's satirical indictment of consumer capitalism and to the way it ends up pointing beyond the selfish motives and egotistical concerns of the modern individualist subject, tying his body to his wider environment whether or not he acknowledges such interdependencies and porous connections" (100). I argue that the same can be said of Dorian Asher in *The Back of the Turtle*; whether he realizes it or not, Asher is part of the very global ecosystem he is

responsible for degrading.

Although Asher's illness is never explicitly connected to his business or environmental toxins, King implies this connection in the beginning of the novel when Asher first reflects on his symptoms, which include physical ailments like nausea and tinnitus, as well as less tangible symptoms such as "his imagination running away from his intellect, turning the ordinary and mundane into vivid metaphor" (King 12). Dorian's reflections on his health are interrupted by environmental symbols suggesting catastrophe, directly connecting his illness to environmental degradation: "he had noticed a slight loss of concentration as well, coupled with a propensity to see catastrophes in canaries ... there it was again. Catastrophes in canaries ... Before long he would be standing at the corner of Yonge and Dundas, predicting the end of the world" (King 12). This statement can be read ironically, given that his company has already been responsible for several environmental catastrophes, which it works hard to cover up. By suddenly and humorously opening his mind to literary devices like metaphor and hyperbole, Dorian's illness connects to King's larger argument about the power of narrative to shape the world. By displacing the health consequences of Domidion's actions onto Dorian, King may suggest that a catastrophe might have the potential to shape or change the narratives espoused by neoliberalism, as seen through the cracks beginning to appear in Dorian's character.

This optimistic reading of Dorian's turn to metaphor is challenged, however, by how the novel not only satirizes him, but also how it criticizes the public's reaction to climate change and news of environmental devastation, poking fun at readers while encouraging us to break free from the short-termism satirized in the novel. Writing about

King's *Green Grass Running Water*, Gordon argues that the text allows "readers to see the ridiculousness of the characters and to see that the ridiculousness *is their own*" (27). Dorian is not the only one to blame for the various crises in the novel, and as such, it is not enough for Dorian to begin thinking differently. Although Dorian is the only satirized character, he makes several comments about the public, linking the wider population of consumers and readers to his world view. While many works of cli-fi seek to motivate readers through fear, *The Back of the Turtle* uses satire to encourage readers to see their world and actions in a new light.

Scholarship addressing the use of humor in ecocritical texts suggests that it can help break through fatigue with apocalyptic narratives about climate catastrophe. Inger-Lise Kalvinkes Bore and Grace Reid suggest that satire can "promote active engagement with climate change by encouraging reflection, investigation, and action" (463); they also argue, however, that in order to be effective, satire must not only "cultivate...useful moments of political creation" where the satirist questions authority, but also must "propose something politically productive" as an alternative (Spicer qtd. in Bore and Reid 463). King succeeds at balancing the satirical elements in *The Back of the Turtle* by contrasting the satirical tone of Dorian Asher's narrative with the more optimistic elements of the Samaritan Bay narrative. While the narrative in Samaritan Bay does not provide an explicitly political alternative, through its emphasis on community (both human and non-human), King contrasts the individualism of Asher's beliefs with the community ethos that leads to the resurgence of Samaritan Bay, emphasizing the importance of strong communities for weathering catastrophe. Although it differs from "canonical" cli-fi by breaking with dystopianism and employing humor, its emphasis on

communal responses to ongoing environmental injustices within both Canadian and global contexts make *The Back of the Turtle* a key text within the overarching argument of this project.

2. Ships, Spills and Streams: Environmental Racism in *The Back of the Turtle*

Dorian Asher's and Gabrielle Quinn's stories, set in Toronto and Samaritan Bay respectively, can be read as distinct narratives; however, reading them together illuminates King's emphasis on environmental racism and injustice that impacts Indigenous communities in Canada and also economically marginalized countries.³¹ The novel explores the Canadian context of environmental racism, situating it in relation to Indigenous communities, first through the Kali Creek disaster, which devastates the Smoke River Reserve and later through a tailings pond spill in the Athabasca Tar sands.³² King expands his critique of environmental injustice beyond Canada through the *Anguis*, the missing freighter looking to dispose of its toxic waste in a low-income country. The narrative of the aptly named *Anguis* (echoing anguish) demonstrates the racism behind

³¹ In an article for NPR's global health and development blog, Marc Silver outlines the problems with the terms "Third World" and "Developing World," and looks for alternatives to these problematic terms. He notes that an alternative may be to use a data-based classification, like that used by the World Health Organization which classifies countries as "low- and lower-middle income," although this approach may also be flawed due to income disparities within countries. He ultimately contends that it's best to simply be specific; in the case of *The Back of the Turtle*, Domidion is looking to offload its waste to "poor countries and desperate governments" (King 19), so I use "economically marginalized" throughout this chapter.

³² Oil sands mining operations produce "tailings," as a by-product of their operations. Tailings are a mixture of water, sand, clay, and residual bitumen (Canadian Association of Petroleum Producers). Tailings ponds or lakes are engineered using dams or dykes to store tailings and to theoretically allow water to separate from the tailings, allowing for the water to be recycled (Canadian Association of Petroleum Producers).

the West's waste disposal practices,³³ as well as the risks incurred by those who must work on the ship. King's plot is rooted in environmental injustice and makes visible the interconnections between environmental injustice and global trade, encouraging the recognition that "disasters" such as those depicted in the novel are not isolated incidents, but are symptomatic of a larger problem that is parallel to climate change.

There are two strands of environmental injustice in King's novel—the global and the local— although these are not distinct categories. Despite the relationship between the novel's disasters, I first consider the examples of Domidion's environmental negligence and racism as separate incidents before demonstrating how they are connected. King's first critique in the novel is of global environmental injustice, as Domidion searches for the missing *Anguis*. Domidion runs the ship "under a Bolivian registry and flag" that first gets stranded and then goes missing while on "a routine run to dump a mountain of toxic waste and incinerated biohazards into the ocean" (King 18). Through the *Anguis*, King is critical of neoliberal global capitalism, highlighting the environmental racism that governs waste disposal practices in countries that have higher standards for environmental regulations and the handling of toxic waste than their economically marginalized counterparts. These higher regulatory standards are introduced in the novel by the fact that, while the *Anguis* is at sea, Ottawa introduces a new law banning dumping toxic waste into the ocean. When the *Anguis* tries to return to port in Montreal after this regulatory change, it is barred entry as while "Quebec...had no objection to garbage

³³ This is infamously exemplified by former Undersecretary of the Treasury of International Affairs Lawrence Summers's claim that the World Bank should encourage *more* dirty industries to be moved to "less developed countries," and his belief that "under-populated countries in Africa are vastly *under*-polluted" (qtd. in Faber 179).

leaving the province” it has “strict laws prohibiting it from coming in” (King 18), pointing to the double standard that governs waste disposal in Canada; toxic waste is deemed safe enough to leave the country on route to impoverished countries, yet too dangerous to re-enter. Media coverage of the ship prevents Domidion from employing its traditional strategy of finding “someone who would take the waste” such as “poor countries and desperate governments who needed money” (King 19). In his book, *Capitalizing on Environmental Injustice: The Polluter-Industrial Complex in the Age of Globalization*, Daniel Faber explains how “environmental regulations relating to industrial pollution ... displace ecological hazards” (122) onto more vulnerable people, which King’s novel critiques through Domidion’s attempts to pay economically marginalized nations to accept its waste.

Domidion’s plan to offload its toxic waste to “poor countries and desperate governments” such as Haiti (King 19) reflects Faber’s argument that “the liberal regime of regulations promotes the commodification of pollution” (122). This expands the “waste circuit of capital” rendering pollution “geographically mobile as corporations search for ever more ‘efficient’ (low-cost and politically feasible) disposal sites” (Faber 122). Although the consequences of the missing ship are not fully explored in *The Back of the Turtle*, Faber’s text makes clear how “the various forms of free-market environmentalism being implemented are deepening the ecological crisis. The crisis is being displaced onto marginalized communities” (162). King emphasizes this point when Dorian speculates that the best-case scenario for the ship would be an accidental sinking, “as far away from Canada and the U.S. as possible. Off the coast of Cuba, though that was a little too close to Florida and the Gulf. Argentina or Chile perhaps. Or any of the

other Central and South American countries that had not supported North America's trade and peace initiatives" (King 20). Dorian's desire for the ship to break apart near a country that does not support trade with North America relates to the importance of free-trade for neoliberal capitalism (Bieler and Morton 36), and suggests punishment for countries who resist integration into systems of global finance and trade.³⁴

The ramifications of such a toxic economy are further reinforced by the Chin and Huang families, the Taiwanese families who comprise the *Anguis*' crew, and who arrive mysteriously in Samaritan Bay. King initially introduces the narrative of the *Anguis* not because Domidion is concerned with its toxic cargo, but due to "the question of a compensation package" for the crew (King 19). When Dorian agrees to compensation, his assistant recommends speaking to accounting; however, Dorian delays her, arguing that they will "start with the announcement" and will revisit the compensation package at a later date, indicating that the welfare of the crew is lower on his list of priorities than protecting Domidion's image.

As it turns out, the ship's crew wash up in Samaritan Bay and are pulled from the ocean by Gabriel in the first chapter. Unsure if they are welcome, and with few resources or possessions, the Chin and Huang families squat in an empty house on the reserve, leading to Sonny's mistaken belief that they are the returned "Indians" for most of the novel, a misrecognition that points to the novel's theme of environmental racism, as both

³⁴ The importance of free-trade for neoliberalism is also stressed by Steger and Roy, who trace neoliberal expansion in the 2000s. They outline how, following 9/11, "countries were told in no uncertain terms to stand with the leader of global neoliberalism—the United States of America" or to "face the consequences of their bad choice." The consequence of the "bad choice" of resisting neoliberal expansion and trade agreements with America in King's novel is becoming an environmental sacrifice zone.

the crew and the Indigenous residents of the Smoke River Reserve are seen as disposable by Domidion. In addition to carrying a load of toxic waste, the *Anguis* is old and “more things [are] broke than [the crew] could fix” (King 433). When a storm hits and the *Anguis* is damaged, the crew has no means of communication, and no one comes to rescue them, suggesting that, like the ship’s toxic cargo, its crew, too, is disposable. The condition of the ship not only demonstrates disregard for the environment, but also for the people employed on it whose lives are at risk due to its poor condition.

The next environmental (and PR) crisis Domidion faces is the Tar Sands spill, which is worse than the 2010 Deepwater Horizon spill in the Gulf of Mexico (King 289). Despite its potential reach, the Tar Sands Spill is framed by Domidion as a predominantly local crisis. Regardless of the fact that Dorian believes that the Tar Sands represent a poor investment opportunity due to the cost in terms of finances, water and emissions, as well as “the proximity of the processing plants to the river and the danger that tailings ponds posed” (King 113), Domidion has seven tailing ponds in the Athabasca Tar Sands. Dorian’s worries have less to do with environmental concerns, and more to do with the value of Domidion’s stock; after the spill Dorian worries that “stock prices, which were already unacceptably low, would go into temporary free fall,” and that any bonuses he would have received are “now at the bottom of the Athabasca” (King 304). Dorian’s concerns about investing in the Tar Sands are also legitimate for environmental reasons. Although much has been written about the negative impacts of the Tar Sands in terms of oil extraction and transportation, I focus my analysis on the tailings ponds, given their representation in *The Back of the Turtle*.

Dibike, Shakihaeina, Droppo and Caron explain that “within the Oil-Sands

industry in Alberta, Canada, tailings ponds are used as water recycling and tailings storage facilities (TSF) for mining activities” (1263). Tailings ponds are necessary due to the extraction process in the tar sands; as Madelon L. Finkel explains, “open-pit mining ... produces liquid tailings, which must be safely stored given their toxic composition” (53). Negative environmental impacts have been documented for years due to seepage of the toxic materials stored in tailings ponds into the groundwater. As Finkel outlines, tailings ponds seep “millions of litres per day into groundwater and Alberta’s Athabasca River” (53). Seepage is exacerbated by the fact that “these ponds are often unlined and...depend on clay or gravel dykes, which have broken or seeped into local water sources on over ten reported instances since 2010 alone” (Parson and Ray 75). Tailings ponds are no small problem: “according to the Government of Alberta, there are approximately 68 square miles of tailing ponds throughout Canada, mostly centered in Northern Alberta” (Parson and Ray 75). Seepage, then, represents a serious environmental issue.

Although it is a major problem, King’s novel goes beyond depicting seepage to represent a more catastrophic dam collapse in two of Domidion’s tailing ponds. As Dibike, Shakihaernia, Droppo and Caron outline, based on a review of “historical tailings dam performance in British Columbia,” there is a “1 in 600 chance of a tailings dam failing in any given year” (1266). Domidion’s engineer explains that the dams collapse because tailings ponds are meant to be evaporation ponds, and “[are] not meant to hold liquids for an extended period” (King 287-8). However, full ponds are never given time to evaporate so that the “toxic residue [can be] removed and processed” (King 288). Rather, due to high production rates, there is not “an opportunity for evaporation to run

its course” and due to their improper use, the dams holding back the water collapse (King 288). While the first breach occurs in a fairly small pond, the second occurs at Holding Pond Number Two, the largest at the facility, measuring 585 acre-feet, and dumps “about 242 million gallons of toxic waste into a river system” (King 289). As Dorian’s assistant explains: “the spill will kill everything in the river. In less than a week, the toxins will reach Lake Athabasca. From there, the toxins will join the Mackenzie River system and everything will wind up in the Beaufort Sea” (King 289). Such a spill would have such dire consequences because of pollutants such as benzo(a)pyrene, a “potent mutation and carcinogen,” methylmercury which is “toxic to central and peripheral nervous systems,” and polycyclic aromatic hydrocarbons (PAHs), which can cause skin and respiratory conditions (Finkel 53), as well as the presence of naphthenic acids, which are toxic to fish, birds, trees and plankton (Rowland, Scarlett, Jones, West and Frank n.p).

Initially, Domidion is alerted to the seepage at the tailing ponds by the death of fish along the banks of the Athabasca (King 113); however, as the toxins make their way downstream King emphasizes the devastating effects of the Tar Sands on Indigenous communities in addition to the environment. As Domidion’s PR person reports, “several communities along the Athabasca” are experiencing a “higher than expected mortality rate” (King 437). She softens the blow, however, with what she presents as the supposedly good news that “most of these are Native communities where the mortality rate is higher than the norm” which makes it “difficult to determine whether the additional deaths are the result of the spill or lifestyle” (King 437). The racism of this statement is reinforced when these “lifestyle” factors are listed as “alcoholism, drug use, and irresponsible behaviour” (King 438), with no attention paid to the effects of ongoing

colonialism and environmental racism, which have negative health impacts on Indigenous peoples.

These attitudes, expressed so bluntly by Domidion, have also been expressed by the oil industry and criticized by scholarship on the tar sands that looks at their impacts on the lives of Indigenous peoples. The environmental racism and lack of environmental justice in Indigenous communities near the tar sands can be understood in terms of recognition-based environmental justice. As Schlosberg notes, lack of recognition in environmental justice struggles is a question of “community and cultural survival” for cultures that are “thoroughly devalued” (62). Schlosberg quotes Lance Hughes, the director of Native Americans for a Clean Environment, who argues that, although his organization focuses on environmental issues, it is not an environmental organization, but an organization for cultural survival (63). The struggle for the environment and cultural survival are often intertwined as identities are constructed “*in place*” and environmental damage compromises the “homeland environment and the local knowledge and sense of place” that exist in endangered communities (Peña qtd. in Schlosberg 63). Schlosberg elaborates that in an Indigenous context, cultural preservation is “not just an issue of recognition, but of community functioning” (72); while assaults on Indigenous communities and the environments they rely on may stem from misrecognition, the consequences are more severe than “misrecognition” implies. Misrecognition in the context of environmental justice can lead to “direct assaults on native peoples and longstanding cultural practices” and “land destruction [can be] seen as an erosion of traditional lifestyle, health, and culture—in a word, genocidal” (Schlosberg 72). In *The Back of the Turtle*, lack of recognition leads to the death of 137 Indigenous people and

results in the destruction of the Smoke River Reserve; by the time of the novel, no one remains at the reserve, as they have either been killed by GreenSweep or been forcibly relocated, demonstrating the devastating consequences of lack of recognition for Indigenous peoples.

Whereas Domidion's PR expert misrecognizes the impacted Indigenous communities, stereotyping the Indigenous people in the Athabasca region, Jen Preston writes that in reality "many Indigenous nations have long objected to the tar sands industry," quoting Chief Roxanna Marcel of the Mikisew Cree First Nation, who argues: "our message to both levels of government, to Albertans, to Canadians and to the world who may depend on oil sands for their energy solutions, is that *we can no longer be sacrificed*" (qtd. in Preston 44; emphasis added). This quotation demonstrates that Indigenous people are not vulnerable due to "lifestyle choices," but due to conscious choices on the part of industry and the Canadian government; these choices that treat Indigenous land and communities as "sacrifice zones"³⁵ are facilitated by a lack of cultural recognition. The impacts of the tar sands on Indigenous communities are emphasized by a survey looking at "Indigenous consensus on the impacts of oil sands development," which found that "87% of respondents believe that oil sands development has contaminated the Peace and Athabasca Rivers and the fish in them" (Natcher et al.

³⁵ Sacrifice zones are "sites that are deemed dispensable by people in power because they tend to be inhabited by poor and powerless people," which Mehnert links to distributive injustice (191). While Mehnert links the development of sacrifice to distributive injustice, as Schlosberg notes, distributive and recognition-based injustice are linked, as "one can look to a lack of recognition and validation of identity as a central factor in the distribution of environmental risks (59). Faber notes that in sacrifice zones, which occur disproportionately in neighbourhoods populated by "poor people of color and working-class whites," it is dangerous "to breathe the air or take a drink of water" (Faber 16).

1330). Sean Parson and Emily Ray argue that “tar sands production on First Nations land is a practice of resource colonialism” (68), and Clinton N. Westman and Tara L. Joly note that the negative effects of “oil sands development on Indigenous communities have led some analysts to refer to development as a ‘slow industrial genocide’ (Huseman and Short), ‘racial extractivism’ (Preston, Willow), or ‘resource colonialism’ (Parson and Ray)” (235).

Extraction in the tar sands is explicitly linked to settler colonialism through Treaty 8, which governs the region and was signed in 1899. Preston outlines how the oil sands deposits in the region were the impetus for the proposal of the treaty by the Crown, as “the Dominion of Canada recognized this resource as potentially profitable” (“Racial Extractivism” 358). James Heydon demonstrates how the expansion of the oil sands industry since the mid-1990s has impacted Indigenous communities in the region, through “industrial contamination and encroachment onto Treaty territory” which has “reduced the quantity and quality of resources needed by First Nations to continue their traditional land based activities” (Heydon 71). While King’s novel does not explicitly explore this history and its ongoing effects, King alludes to environmental racism and the contamination of water sources relied on by Indigenous peoples in Canada through the contamination of water in Indigenous communities in both the Athabasca region and the Smoke River Reserve.

The Back of the Turtle’s emphasis on water is especially pointed in terms of health and environmental racism, as many Indigenous communities in Canada lack access to

clean drinking water.³⁶ This issue is tied to fossil fuel use and global warming (through its relation to fossil fuels, as well as through the impact of drought on water availability); as Jen Preston notes, “[while] many remote Indigenous communities continue to fight for access to drinking water, the tar sands industry expends and pollutes much clean water” (45). Lack of recognition of Indigenous cultures is relevant for understanding why tar sands contamination has such a severe impact on Indigenous communities, as recommendations for exposure to contaminants may overlook Indigenous beliefs and cultural practices. For example, Anishinaabekwe activist and scholar Winona LaDuke outlines how the EPA sets limits for dioxins released from paper mills into rivers and streams, which contain fish, based on the “average consumption of such fish”; however, Indigenous fish consumption is known to be higher than that of the average American, which makes dioxin release a much higher risk for Indigenous peoples (qtd. in Schlosberg 60). Similarly, Hoover et al. find that Indigenous communities are disproportionately impacted by environmental harms due to their locations and “cultural activities that put them in close contact with their environment,” which render them both more vulnerable to, and “disproportionately exposed to environmental contaminants” (1647). Despite this increased vulnerability, however, both federal and state laws “make it easier for extractive and polluting enterprises to access tribal lands” (1647). In 2011, Canada’s Auditor General declared that “more than half of the water systems on the lands reserved for Indigenous people posed a medium or high risk of contamination” (Sarkar, Hanrahan and Hudson 2). Looking specifically at the relationship between Indigenous

³⁶ Ana María Fraile-Marcos explores the topic of water in *The Back of the Turtle* thoroughly in her paper “Who’s Going to Look After the River?”

communities, water, and the tar sands, Natcher et al. find that 87% of their survey participants believe that the Athabasca river is contaminated by tar sands development (1330), and that 92% of respondents do not believe that fish from the river are safe to eat (1333). Given the fact that the first sign of trouble in Domidion's tailings ponds is the appearance of dead fish along the river's shores, King seems to be making this point, too.

The final PR and environmental crisis that Domidion must confront is the GreenSweep contamination of Kali Creek—the first catastrophe Domidion is responsible for in the novel, although the last described in the narrative. This disaster, explained previously, involves the use of the chemical defoliant GreenSweep, at 100 times the suggested concentration, despite recommendations that the product not be used. When a storm washes the defoliant into Kali Creek and down the Smoke River, plants, animals, and humans are killed. As with the tar sands, King foregrounds environmental racism and the need for recognition-based environmental justice through the Kali Creek disaster. Climate change, climate justice, and environmental justice come together in this incident, which is a direct result of the fossil fuel industry: GreenSweep is used because a “mid-level manager” seeks a shortcut to accelerate construction of the pipeline, which has been slow due to protests led by environmental groups and Indigenous peoples, and challenges due to “the terrain and the thick underbrush” (King 320). The pipeline's construction, despite Indigenous protests, points to a lack of recognition of Indigenous people and their culture and environment, as well as to the role that fossil fuels play in climate change. When GreenSweep devastates the Kali Creek ecosystem, killing “turtles and every living thing in the river's path,” its effects are not limited to animals, but also the Indigenous “people [who] sickened and died” (King 248); furthermore, and further exemplifying

environmental racism, in the aftermath “no one came” to help the community until it was safe, at which point “tourists and transients...tramped through the reserve, invaded homes, scavenged for souvenirs” (King 105), suggesting that whereas the Indigenous people’s lives are seen as expendable, their possessions are valuable and worth “scavenging,” echoing the colonial practice of collecting Indigenous artifacts.³⁷

In addition to depicting the environmental racism and colonial mentality involved in the disaster and its aftermath, King further alludes to Canada’s settler-colonial history through the forced removal of survivors following the spill. Mara laments that Indigenous families were forced “off the reserve” by the government “for their own safety” and relocated to “Saskatchewan and Manitoba, as far away from Samaritan Bay as possible” (King 156). This forced relocation echoes the forced removal of Indigenous people from their lands throughout Canada’s history and situates environmental racism in a history of settler-colonialism that includes ecosystem devastation, showing, as Whyte argues, that conditions of environmental apocalypse are not future-conditional results of climate change, but persistent features of Indigenous people’s lives since colonization. *The Back of the Turtle* highlights the parallels between colonialism and climate change, linking both to Anthropocentric, individualistic ideologies, and pointing to the necessity of decolonization and climate justice.

³⁷ Greg Thomas writes that since the mid-18th century, there has been an “ongoing flow of Indigenous artifacts and natural history specimens transferred from what is now western and northern Canada to museums” (128), and that these artifacts are now beginning to be repatriated. Similarly, the editors for *Advancing Archaeological Practice* in their interview with three Indigenous historians and anthropologists note, “archaeologists and private artifact collectors have done significant damage” to the American archeological record, which was produced predominately by Indigenous peoples, as artifacts were removed for “scientific investigation, satisfaction of personal curiosity, or financial gain” (10).

The Kali Creek disaster also demonstrates the connections between the three environmental catastrophes Domidion is responsible for. Although King's novel makes several pointed critiques of specific instances of environmental racism, it also makes a larger and more complex commentary about environmental injustice and power and how, like global trade, the effects of environmental injustice are not only localized, but are also interconnected and global. These narrative and environmental justice strands converge via Domidion in Samaritan Bay. Although it is in British Columbia, Samaritan Bay is connected to the Athabasca Tar Sands by virtue of the fact that GreenSweep was used as part of a pipeline project in British Columbia's interior. If it had not been for the desire for a pipeline to carry oil from Alberta to the coast, the devastation at Kali Creek would never have happened. Furthermore, the *Anguis* washes ashore in Samaritan Bay, bringing all of Domidion's problems to one location. Although it arrives by coincidence and is ultimately forced from the shore by the Samaritan Bay community, its arrival on a shore near an Indigenous reserve suggests that if toxic waste cannot be off-loaded to economically marginalized countries, Indigenous communities would make an appropriate substitute. Furthermore, while we are given scant details about the characters, the arrival and acceptance of the Chin and Huang families in Samaritan Bay may suggest cross-cultural parallels between those who are forced to live near and work with toxic waste, moving King's novel from a critique of localized environmental racism to a broader environmentalism of the poor.³⁸

³⁸ Rob Nixon argues that it is the poor who suffer predominantly from "slow violence"—a violence that occurs "gradually and out of sight...dispersed across time and space" and is rarely viewed as violence (2). He describes the environmentalism of the poor as resisting "conjoined ecological and human disposability" (3).

In addition to linking environmental racism, injustice, and the flows of global capital with the flows of global waste and its consequences, King alludes to a longer history of (un)natural disasters and environmental injustice through Gabriel. After leaving Domidion, Gabriel inscribes the names of various unnatural disasters on the walls of his Toronto home, and then later, his deck in Samaritan Bay. Such disasters include “Chernobyl. Idaho Falls. Chalk River” and “Pine Ridge, South Dakota” an “Indian reservation ... used as a bombing range during World War II” as well as the nuclear and biological waste dumps at Rokkasho and Lanyu and “Renaissance Island ... the Russian anthrax facility” (King 23). Most poignantly, perhaps, King connects Domidion’s behaviour to the threat of nuclear annihilation through Gabriel’s references to the atomic bomb. Gabriel frequently repeats the phrase “Now I am become death...the destroyer of worlds,” which King makes clear is borrowed from Robert Oppenheimer, who himself borrowed the phrase from the Bhagavad Gita to describe his feelings about the tests of the atom bomb in Los Alamos in July and August of 1945 (King 62). When Mara asks Gabriel what he does for a living, he simply tells her “Worlds...I destroy worlds” (King 168), later elaborating “I’m a scientist. I developed a defoliant called GreenSweep. GreenSweep caused The Ruin I am Death, the destroyer of worlds” (King 454). By aligning himself with Oppenheimer, Gabriel fully and finally abandons his belief in the rationality and goodwill of science, while also connecting to a longer history of environmental racism. The connection between the atomic bomb and environmental racism is established by both Punyashree Panda and Doreceta E. Taylor. Panda notes that while atomic bombs were used in Hiroshima and Nagasaki, their testing had negative impacts on the Navajo and Apache peoples, on whose lands the bombs were tested.

Furthermore, Panda notes that “the Manhattan Project’s plutonium production reactor in Hanford, WA, displaced members of the new Percé, Yakama, Umatilla, and Wanapum tribes and deprived them of historic hunting, fishing, and sacred sites” (336). Taylor argues that “radioactive colonialism” persists through the relationship between “reservations, the DOE, and corporations” (52), and that in addition to being impacted by the extraction of materials such as uranium, Indigenous communities are “heavily courted to become the temporary and permanent storage sites of high-level nuclear waste from all over the country” (52), which would compound the exposure to radioactivity experienced in these communities due to atomic explosions at the Nevada Test Site between 1951 and 1992. Through Gabriel’s alignment with Oppenheimer and death itself, King critiques Domidion’s instrumental view of nature, a view that is reinforced by both commodification and science, aligning the corporation’s environmental destruction with nuclear annihilation. Furthermore, King points to the fact that it is not only the natural world that will suffer the consequences of this view, but that due to environmental racism and lack of recognition, Indigenous people and others who live near or work in polluting industries or environmentally negligent companies are also threatened. Domidion exemplifies the scientific “ethics” Gabriel disavows, and the convergence of Gabriel and Domidion’s three PR crises at Samaritan Bay points not only to globalized flows of waste and capital, but also to other, more ethical ways of relating to the natural world.

3. Narrative Intervention: Cooperation, Competition, and Climate Change Narratives

As my emphasis on the issues of environmental justice outlined above as PR crises to be managed by Domidion suggests, a key theme in *The Back of the Turtle* is the power of discourse to intervene in the world. The previous section explored the negative

consequences of such interventions, whereas here I explore the positive potential of discursive interventions to shape worldviews. The power of narrative is cynically expounded on by Dorian, who believes that “taken as a whole,” the “large and small misfortunes that Domidion had been a party to over the years” could either be seen as “the environmental wreckage left behind by a callous corporation” or “as a concerted assault by shadow extremists... Corporate malfeasance or international conspiracy,” and that the trick is simply to “control how the matter [is] *read*” (King 449, italics added). As Goodbody and Johns-Putra argue “the stories told about global warming participate in the organization of our social reality as ‘regulatory fictions,’ deploying metaphorical concepts to define and constitute classes of objects and identities, and thereby determining how the problem is framed” (7). King’s novel, like his Massey Lectures, *The Truth About Stories*, deals with the ways in which different stories produce different outcomes and understandings of real processes or events, by framing them in a certain way.

In both *The Truth About Stories* and *The Back of the Turtle*, one of the ways that King demonstrates this point is through the use and comparison of Indigenous and Christian creation stories. As its title, *The Back of the Turtle*, alludes to, King’s novel deals with the Haudenosaunee creation story, The Woman Who Fell from the Sky, in which Sky Woman falls from the Upper World, where she lived with the Great Spirit, to the Water World, below. The water animals catch the woman, placing her on the back of a turtle, and dive one by one until muskrat brings up earth, which grows upon the back of

the turtle, creating Turtle Island, or what is known as North America.³⁹ Sky Woman gives birth to twins, referred to as the right-handed and left-handed twins in *The Truth About Stories* and *The Back of the Turtle* (the left-handed twin is named Gabriel, in King's telling).⁴⁰

In *The Truth About Stories*, King describes the twins as opposites: the right-handed twin attempts to create a world that is flat and has rivers that flow in both directions, to facilitate the lives of its inhabitants, whereas the left-handed twin creates valleys and mountains, and crooked rivers that only flow one way (19); through their cooperation, the twins create a varied world that celebrates balance (24). As Kelsey recounts, in colonial re-tellings, one twin tends to be described as Evil-Minded, and one as Good-Minded, but in the original story, the twins create different elements of the world, with one "bringing beauty into the world" through "fish, birds, animals, human beings, plants, rivers, mountains, and so forth" (117), and the other creating "bats, mice, storms, river rapids, poisons, and other undesirable things" (117). One twin is associated with day, and one with night; the original story emphasizes the importance of balance (Williams cited in Kelsey 118), whereas in colonial re-tellings, notions good and evil are imposed on the twins through a Christian cosmology, as opposed to the Indigenous worldview of the story which seeks balance between order and disorder, desirable and

³⁹ This version of the story is told by Keller George, a member of the Wolf Clan, and was recounted to him by his maternal great-grandmother (Oneidanation.com/the-haudenosaunee-creation-story/). In Joanne Shenandoah and Doug George's telling of the tale, recounted by Penelope Kelsey, Sky Woman is named Iotsitsisen, and she does not fall from the Sky World, but is sent to the Water World after her husband dreams that she must travel to a new world.

⁴⁰ In Shenandoah and George's telling, it is not Iotsitsisen who gives birth to the twins, but her daughter.

undesirable elements. By giving both the left-handed twin (the twin associated with chaos) and Gabriel the same name, King suggests that although Gabriel may have been responsible for releasing undesirable elements into the world, by returning to his Indigenous roots and working to rectify his past wrongs, Gabriel may find balance within himself and play a part in returning balance to the world.

In the novel, Nicholas Crisp tells the creation story at his birthday party, taking great joy in the telling of the tale and its ability to bring the community together at the hot springs. Through a conversation between Crisp and Gabriel, King demonstrates the power of stories to shape worldviews. Gabriel suggests that *The Woman Who Fell from the Sky* is “sort of like the Garden of Eden” (King 236), to which Crisp responds that it is “nothing like it...for in that story we starts with a gated estate and are thrown into suburbia, because we preferred knowledge to ignorance. In our story, we begins with an empty acreage, and, together, the woman, the animals, and the twins create a paradise which gets pissed away” (King 236-7). Similarly, in *The Truth About Stories*, after telling the story of Charm, or the Woman Who Fell from the Sky, and the story of Genesis, King says: “a storyteller would tell you that these two stories are quite different, for whether you read the Bible as sacred text or secular metaphor, the elements in Genesis create a particular universe governed by a series of hierarchies—God, man, animals, plants—that celebrate law, order, and good government, while in our Native story, the universe is governed by a series of cooperations— Charm, the Twins, animals, humans—that celebrates equality and balance” (*The Truth* 23-4). King sets up the different worldviews that result from these narratives, demonstrating Goodbody and Johns-Putra’s point about cli-fi’s regulatory function: depending on which story you believe, your worldview will

see “creation [as] a solitary, individual act or a world in which creation is a shared activity; a world that begins in harmony and slides toward chaos or a world that begins in chaos and moves toward harmony; a world marked by competition, or a world determined by co-operation” (*Truth* 24-25). It is this final dichotomy, between cooperation and competition that King highlights in *The Back of the Turtle*, setting the two worldviews against each other.⁴¹ In King’s novel, despite the contrast between the creation stories explained by Crisp, these differences are ultimately political, rather than rooted in culture or religion. In fact, the community at Samaritan Bay, whose name has resonances with the parable of the Good Samaritan,⁴² includes characters who represent both the Christian son of God (Sonny) and the Christian God (Dad), as well as a variety of mythological, historical and other religious characters, from Gabriel Dumont, to the Angel Gabriel, to the Virgin Mary, to Pan,⁴³ suggesting that various traditions espouse ethical ways of relating to the world, and that it is neoliberal ideology, rather than a particular culture or religion, that is the target of King’s satire.

Although Gabriel has lost faith in the scientific community and has left Domidion by the beginning of the novel, he was once the corporation’s top scientist, believing in the

⁴¹ Fraile-Marcos argues that King aligns “storytelling with ontology,” and that the novel contrasts two “sets of narratives:” one set that connects the “stories that uphold neoliberal capitalism with the construction of precarity” (473), and the other that is “deeply invested in the alternative stories emerging from Indigenous cultures and the ontological positions they elicit” (474).

⁴² This parable is found in John 10:29-37.

⁴³ For a detailed analysis of the allusions in King’s novel, see Sean Rhoads’ “The Inestimable Nicholas Crisp” and “Got Any Grapes” by Robin Ridington.

Enlightenment myths of rationality and progress. When Mara asks Gabriel why he developed GreenSweep, he answers simply: “science” (King 464). Although science was once “Gabriel’s answer to everything” (King 446), leaving Domidion gives him the perspective to stop ignoring the “obvious answers,” in favour of only asking scientific questions, and to think more deeply about the issues that he worked on (King 446). Gabriel was originally interested in science due to the Enlightenment myths of improvement and progress through the rationality of the scientific process, and believed that “science was supposed to have been the answer” to problems such as “world hunger,” “disease,” “energy,” “security,” and “commerce,” and that “biology would save the world. Geology would save the future. Physics would make sense of the universe” (King 446). However, by the time Gabriel arrives at Stanford, where he takes an ethics of science course, it is clear to him that science is not only motivated by “progress” but also by profit, as exemplified by the Katheryn Kousoulas case studied in the class. Katheryn Kousoulas was “a neurologist and research fellow at University Hospital in Tucson, Arizona” where she was contracted by “the pharmaceutical giant Bush International” to “conduct clinical trials for a new drug called Lucror” (King 171). As Gabriel learns, halfway through the study Kousoulas discovered that Lucror “appeared to trigger gliomas in the brain stem” (King 171). Surprisingly, Gabriel’s ethics professor has chosen the case not as an example of sound ethics, as Kousoulas disclosed the side effects to the study participants, but as an ethical breach, due to the fact that her contract with Bush International contained a nondisclosure clause (King 171). This case teaches Gabriel that what is ethical, in the scientific community, is maximizing profits for the corporations one is contracted to; scientific ethics are not necessarily premised on acting with the best

interests of people or the environment in mind, a lesson that is reinforced through Gabriel's experience at Domidion.

Despite getting into science to “work on something that matters” (King 205), Gabriel eventually becomes Domidion's top scientist on the team that develops GreenSweep, a project that ultimately runs counter to his hopes and aspirations. As Gabriel learns at Stanford, modern science, like the rest of the modern world, is shaped by neoliberal ideology, including “entrepreneurial values such as competitiveness, self-interest, and decentralization” (Steger and Roy), which privilege profit, efficiency, and competition over the scientific process. GreenSweep, as it turns out, should never have been used. After testing, Gabriel recommends the GreenSweep project's termination, out of concern that it “had the potential to become an event horizon” (King 409). However, Domidion ignores Gabriel's assessment, proceeding with the project out of the belief that if they “could find a way to control life cycle and horizontal transfer” they “would have a potent and *commercially valuable defoliant*” (King 409, emphasis added). As Fraile-Marcos writes, “Domidion strictly adheres to [an] ‘ethical’ subservience to money” (476), as demonstrated by its willingness to continue developing GreenSweep despite the risks, which reinforces Gabriel's realization about scientific ethics while at Stanford.

Gabriel is devastated by the realization that “the proper goal of research” is “profit” (King 446), as exemplified by the fact that in the same way that he is haunted by the Kali Creek disaster, he is also haunted by numerous other human-made disasters. Furthermore, the name Kousoulas appears inside a folder labeled “The Woman Who Fell From the Sky,” which Gabriel uses to organize information about GreenSweep. This folder, which brings together the Kousoulas case, GreenSweep, and the creation story

central to the Samaritan Bay narrative, concretely links Domidion's devastation of an Indigenous community to the same ideological cause as the Kousoulas case (notably, Domidion sounds like Dominion, alluding to both the Dominion of Canada and the country's colonial history, and Genesis, in which God gives Adam "dominion" over the natural world, linking the corporation to a long history of beliefs that have been used to devalue both non-white others and the natural world). Bringing together these narrative threads further emphasizes the contrast in narratives identified by Fraile-Marcos. Fraile-Marcos argues that this division is set up in the first chapter of the novel, where Gabriel's "inner turmoil" is reflected by the "disarray of his thoughts, which shift from his meditation on the deceptiveness of rationality to his resurfacing memories of the Haudenosaunee creation story" (476). She argues that this "Indigenous story stands for an ontological and epistemological alternative to the logical fallacies of (corporate) Euro-western thinking" (476). While Fraile-Marcos argues that the novel sets up a contrast between Indigenous and Euro-Western epistemologies, I argue that the novel goes beyond emphasizing Indigenous epistemologies over Euro-Western ones to promote a broader ethics of care that draws not only from Indigenous stories, but also from other traditions, suggesting that there are many ethical ways of engaging with the natural world.

King's novel emphasizes the power of stories to shape worldviews, and therefore ecological or environmental attitudes. For example, Dorian's adherence to neoliberal ideology facilitates his disregard for the environment, as neoliberalism allows "individuals and firms [to] avoid paying the full costs attributable to them by shedding their liabilities outside the market" (Harvey 67); the classic case of such "externalization"

is “pollution, where individuals and firms avoid costs by dumping noxious wastes free of charge into the environment” (Harvey 67). Cli-fi scholarship is interested in how literature may promote environmental attitudes, and whether it has the potential to prompt readers to change their views or behaviours. As Whiteley, Chiang and Einsiedel note, “in the context of climate change ... apocalyptic scenarios may ... offer negative but plausible possibilities that may motivate change, enlist activism, or instill fear” (31); they ultimately conclude that cli-fi may catalyze a reconsideration of our ways of life, so that “new imaginaries can be debated and collectively conceived” (35). Matthew Schnieder-Mayerson’s empirical survey of climate fiction readers finds that authors of cli-fi “illuminate what is otherwise invisible” by placing their stories in the future, helping readers to “reconfigure their temporal perception of environmental processes” (484). However, his results suggest that readers’ largely negative affective responses are an obstacle in terms of their mobilization to act on climate change. King uses humor to overcome some of the negative affect of more traditional climate fiction and to prompt behavioural change by satirically pointing to readers’ environmental inaction.

Based on *The Truth About Stories*, it is clear that King, too, is interested in stories’ ability to precipitate action and actively encourages readers to act on them. At the end of each lecture, King says some variation of: “Take [this] story...it’s yours. Do with it what you will. Tell it to friends. Turn it into a television movie. Forget it. But don’t say in the years to come that you would have lived your life differently if only you had heard this story. You’ve heard it now” (*The Truth*, 29). What does this mean for *The Back of the Turtle*? By bringing attention to environmental injustice and satirizing neoliberal ideology, King’s novel encourages readers to think critically about their beliefs and their

place in the world, while providing an alternative that decenters the human and promotes community to promote environmental justice.

4. Ecocriticism, Anthropocentrism, Environmental Agency and Hope for the Future

Earlier I asked, if King's novel can be read as decentering the human and promoting community and care, how can readers use this information to combat environmental injustices in the real world? King's presentation of various forms of environmental injustice, discussed above, lead the novel to promote an ethic of care that crosses cultural and species boundaries, decenters the human and recognizes the agency of non-human actors. Relying on an ecocritical analysis I show how King contrasts Dorian Asher's anthropocentric views with Nicholas Crisp's community mindedness, where, borrowing Donna Haraway's phrase, he "makes kin, not kind" (*Staying* 103).

The ethic of care promoted in *The Back of the Turtle* is suggested from the first chapter, wherein Nicholas Crisp tells Master Dog (later named "Soldier" by Gabriel) "I am well, if ye be well, too" (King 2), a phrase repeated several times throughout the novel. By linking his well-being to that of Master Dog, Crisp introduces the theme of interconnectedness between all living things. Later, this phrase will be reiterated by a fortune teller encountered by Dorian, and again by Crisp to the dog in the final chapter of the novel.

The notion of interconnectedness and cross-species care is emphasized through the two named animals in *The Back of the Turtle*: the dog, Soldier, and the turtle, Big Red. Soldier subverts the typical human-pet relationship, by going where he is needed to care for the various humans in the novel, and by displaying agency and autonomy. Soldier does not belong to any of the residents of Samaritan Bay but goes where he is

most needed. Gabriel feeds and entertains the dog, despite the facts that Soldier comes and goes as he pleases and “Gabriel [doesn’t] know much about dogs” (King 116). In her *Companion Species Manifesto*, Donna Haraway suggests that “an ethics and politics committed to the flourishing of significant otherness” might be learned from “taking dog-human relationships seriously” (95). Although Haraway is referring to real, rather than fictional dogs, King’s novel speaks to an ethical engagement with significant otherness through Soldier and, later, Big Red.

Soldier has numerous relationships with humans in the novel, and it is important for understanding the ethical engagement with animal others that Soldier does not become Gabriel’s pet but is simply met as a dog. Soldier does not like typical “pet” activities like playing fetch or chase, and Gabriel does not prevent the dog from roaming or coming and going as he pleases, by leashing him or otherwise trying to control him. As Haraway writes, “dogs are not about oneself . . . that is the beauty of dogs. They are not a projection, nor the realization of an intention, nor the telos of anything. They are dogs” (*Companion* 103). Gabriel does not project expectations onto Soldier or demand anything of him; he simply caters to Soldier’s dog-needs. Likewise, Soldier looks out for Gabriel, stealing his jeans and forcing Gabriel to chase after him in his underwear to the Smoke River Reserve, where Gabriel confronts the home of his estranged mother and sister. Furthermore, Soldier provides Gabriel with company and comfort while Gabriel faces his responsibility; he follows Gabriel “everywhere,” waiting for him each morning and guarding the trailer each night (King 120), and even curls up in Gabriel’s lap to keep him warm when he falls asleep in his deck chair. To his surprise, Gabriel finds that although crowded, the dog’s presence in his lap is “not unpleasant” (King 336). The reciprocity of

their relationship represents an ethical engagement with “significant otherness,” as despite their differences, Soldier and Gabriel are able to recognize each other’s needs, and assist in their achievement.

In addition to offering care and comfort to Gabriel, who feeds him in return, Soldier also looks out for Sonny. Sonny lives alone in the Ocean Star Motel, although he believes that Dad remains in his motel room, despite Dad’s apparent disappearance. One night, Soldier visits Sonny at the motel, where, despite earlier warnings from Dad that “dogs vomit a lot” and that “dogs have mighty appetites” (King 145), Sonny and the dog have a “wonderful time” (King 145). Sonny finds that he likes Soldier because he is a good listener and a good swimmer, and because he “knows stories that Sonny has never heard” (King 145). Although the dog is gone in the morning, he returns to the motel at the pivotal moment when Sonny finally attempts to talk to his father, knocking on the motel door, only to find that there is no answer and that he is alone. Slumped on the floor where he has sung himself to sleep, Sonny wakes in the night due to the cold. However, Sonny is not cold for long; soon he is “warm and cozy as if someone had covered him with a quilt” (King 460), although the “quilt continues to wheeze and snuggle and snort” until Sonny discovers that he is sleeping with the dog. Just as Soldier comforts and keeps Gabriel warm, he also goes to Sonny when the boy is most vulnerable and provides comfort while forcing Sonny to confront an uncomfortable truth. Soldier insists that Sonny open Dad’s door, “growling at and charg[ing] the door,” hitting it with his shoulder, so that Sonny wonders if Soldier “knows something he doesn’t” (King 461). Thanks to Soldier, Sonny realizes that “Dad is no longer [there], that Dad has not been [there] in a very long time” (King 462), which ultimately prompts the solitary Sonny to

rejoin the Samaritan Bay community at the end of the novel. By expressing care and providing comfort for both Gabriel and Sonny, Soldier facilitates their reintegration into a wider community.

In addition to reciprocal relationships between Soldier and the various people in the novel, King takes his cross-species ethic of care farther, demonstrating care not only for typical “companion species” or domestic animals, but also for Big Red, the novel’s single sea turtle. Samaritan Bay is a small town that relied on tourism for its economy, and the town’s tourism was driven largely by the bay’s sea turtles. After The Ruin, the turtles disappeared from the bay, a fact often lamented in the novel, especially by Crisp and Sonny. Big Red’s return to Samaritan Bay demonstrates an ethic of interspecies care and reciprocity; furthermore, it suggests the larger interconnectedness of the bay’s ecosystem and the connections between its human and non-human inhabitants.

From the beginning of the novel, Sonny laments the devastation of Samaritan Bay; he misses “the seals that used to flop around in the surf,” the “fish that played at the mouth of the river,” and the “crabs that clattered along the waterline” (King 51). Because of his passion for collecting the salvage that washes up on the beach, Sonny is intimately connected to the Samaritan Bay environment. Although Sonny notes that the river is now “the color of water again” (King 52), he bemoans the fact that while “finding dead turtle pieces is easy” (King 52), there are no living turtles to be found. While in many ways Sonny is naive, he understands something about the relationship between the turtles and the bay, and is convinced that under the right circumstances, the turtles will return. While Crisp believes that “if the turtles returned, so would the people” (King 159), Sonny seems to believe the opposite; when he mistakenly identifies Mei-ling, one of the *Anguis’s* crew

members as an “Indian,” Sonny is overjoyed. He believes that it is “the beginning of days” because “the Indians have arrived” and believes that “soon the birds of the air and the fish of the sea and the animals, big and small, will come home, two by two” (King 104), prompting him to envision “the second coming of the turtles” (King 104). Unlike Crisp, who believes the turtles will return before the people, Sonny seems to believe that the return of the Indigenous people is paramount to the return of the animals, even as he sees this return through the lens of the Judeo-Christian narrative of the ark.

Sonny not only believes that the turtles will follow the return of humans to Samaritan Bay, but he also seeks to facilitate their return by constructing a beacon to guide them. Sonny builds “a bright tower that will stand against the dark sky and bring the turtles home” (King 268), singlehandedly hauling all of the necessary materials to the shore and building the tower. This effort and desire to guide the turtles home demonstrates Sonny’s care for the natural world and his willingness to go to great lengths to restore it. Ultimately, Sonny’s effort is worthwhile; Big Red soon appears. Big Red is a sea turtle “just like the turtles who used to arrive on Sonny’s beach during tourist season,” although she is “ragged” with “worn flippers and a wide indentation in [her] shell” (King 429). Sonny names the turtle Big Red, due to a distinctive marking on her head.

With an actual turtle present, Sonny redoubles his efforts. He rips up seagrass and holds it out to Big Red in case she is hungry, and, recognizing that she simply wants to get to the ocean, Sonny does all he can to help her. He stands behind the turtle to sight her path to the water, removing “several large sticks” from her path and piling sand on both sides of a log so that Big Red can “slide over” (King 429). When there is nothing

more for Sonny to do, he dances around her, offering encouragement and resisting the temptation to help her, remembering that he used to tell the tourists not to touch the turtles. Even in his excitement, Sonny foregrounds the turtle's needs, facilitating her journey, but not intervening, until Big Red reaches the sea. When Sonny later learns that Big Red has laid her eggs on the beach, he wants to help her yet again. He tries to help her cover her eggs with sand, until Crisp reminds Sonny that Big Red must do things properly. The theme of reciprocity between humans and animals is reinforced in this interaction between Crisp, Sonny and Big Red, when Crisp tells Sonny, "she don't need our help. It's us what needs hers" (King 487).

In the final chapters of the novel, King suggests that in addition to requiring human community, a multi-species community that helps and cares for one another across species lines is important for human and environmental flourishing. This relationship or community can be understood as an example of what Haraway calls for in *Staying With the Trouble*, when she calls for making "kin as oddkin rather than...godkin" as a way of troubling to whom "one is actually responsible" (2). By showing reciprocal relationships between the humans and animals in Samaritan Bay, King suggests that responsibility must go beyond human life, and that the natural world will look out for humans in turn. Community and cooperation are foregrounded in the Haudenosaunee creation story, outlined above, in which earth comes to be built on the back of the turtle. Big Red has a "strange indentation in [her] shell, as though [she] had spent [her] life bearing a heavy load" (King 22), suggesting that like the turtle who bears the earth on its back, she bears the weight of Samaritan Bay on hers, offering a foundation for community and ecological resurgence.

The welcome Big Red receives upon her return to the caring, multispecies community at Samaritan Bay contrasts with Dorian's purely anthropocentric viewpoint. Due to the distinctive red marking on Big Red's head, King implies that she is the turtle that was once kept in a tank in Domidion's lobby. This belief is shared by Gabriel, who asks the turtle "you catch a train or something?" (King 492), when he is mystified by the similarities between the turtle on the beach with the "depression in its shell and a blood red slash across its neck" (King 429), with the turtle that disappeared from Domidion, a "large sea turtle...with a strange indentation on its shell" with a "dark red slash" along its neck (King 22). However, in contrast to the joyful reception the turtle receives at Samaritan Bay, Dorian's views about the turtle are anthropocentric and utilitarian. When the turtle disappears, he is concerned not for the turtle's wellbeing, as "the reptile wasn't of any value," but rather because "things weren't supposed to vanish from Domidion" (King 23). Dorian's attitudes reflect the belief that nature is only valuable insofar as it has a use or economic value, and his anthropocentric vision is further reinforced when he considers filling the empty aquarium with fish. Dorian expresses ecophobia in his belief that the "motion and flash" of a tank full of tropical fish would be disquieting and anxiety provoking, and he realizes after the turtle vanishes that "he appreciated the simplicity and silence of the empty water" (King 25), further reinforcing his disconnect from the natural world.

Punyashree Panda argues that Dorian's ecophobic attitude is further reflected in his reaction to watching the Athabasca spill on television, which he finds "quite soothing," offering him "unexpected peace" (King 303); Panda argues that Dorian is an "exemplar of the anthropocentric viewpoint that indulges in an 'ideology of human

superiority that precludes feelings of kinship with other life forms” (Bron qtd. in Panda 333). Dorian exemplifies the Western view of the superiority of the human, as well as the neoliberal privileging of the individual over the community. This is demonstrated by Dorian’s interaction with the fortune teller, who reiterates what Nicholas Crisp says to the dog, telling Dorian “I am well, if you are well, too” (King 471). Panda reads this conversation optimistically, arguing that it “suggest[s] the connectedness between Native and non-Native communities and the common cause among different stake-holders in securing environmental protections in Canada, the United States, and the world” (Panda 340). However, whereas Crisp’s conversation with the dog suggests the importance of interconnection, I argue Dorian’s conversation with the fortune teller reinforces his self-interest and isolation, as Dorian cannot muster the courage to ask the one question that matters to him: “will [he] be remembered?” (King 471). This suggests that Dorian suspects that due to his personal isolation and his negative impact on the environment, no one will remember him, and rather than change his behavior to rectify this, Dorian would prefer to remain ignorant of it.

Ultimately, the web of connections and care between the various characters and animals in the novel show that “People [aren’t] single, autonomous entities. They [are] part of a larger organism” (King 189). While Mara expresses this belief while remembering her deceased family members, the relationships between Soldier, Big Red, and the community of Samaritan Bay demonstrate how this “larger organism” extends beyond humans, encompassing the natural world, as well. Although King’s novel may not deal explicitly with climate change, given that scientists acknowledge we are living in or on the cusp of the sixth mass extinction event, a cross-species ethics and politics is

important to consider. As Haraway argues, “the relation is the smallest unit of analysis, and the relation is about significant otherness at every scale;” thus, humans must approach companion species through the “ethic” or “mode of attention” of “significant otherness” (*Companion* 116). By demonstrating two such relations, between the dog and humans and the turtle and humans, King shows how we can respect significant otherness while simultaneously coming together as a community.

In addition to promoting an ethics of cross-species care and significant otherness, the appearance of Soldier the dog in the first chapter of *The Back of the Turtle* also introduces the idea that non-humans have agency, as it seems it is the dog, Soldier, who initiates what follows in the narrative. As Crisp and Soldier sit on the bluff overlooking Samaritan Bay watching Gabriel wade out into the sea, the dog “raise[s] his head and test[s] the air, open[s] his mouth, and beg[ins] a soft, low keening” to which Crisp responds, “fine, fine...but just remember, this be your idea” (King 2). The idea that Soldier is the architect of the story is reinforced when he steals Gabriel’s jeans, bringing Gabriel up to the reserve for the first time, and again when Gabriel asks Soldier if he knows what he is doing, suggesting that the dog has agency and complicated motives beyond Gabriel’s ken. It is not only Gabriel who attributes motive and agency to Soldier, but also Sonny, who mistakenly believes that Mei-ling is a “ghost Indian” being led home by the dog, who “is her guide” (King 120). Soldier’s intervention in the unfolding narrative lends itself to a material ecocritical reading, which studies the way “material forms” such as “bodies, things, elements, toxic substances, chemicals, organic and inorganic matter, landscapes, and biological entities” “intra-act” with one another and with humans, producing “configurations ... that we can interpret as stories” (Iovino and

Opperman qtd. in Clark 111). The actions of Soldier, the environment, and the characters in *The Back of The Turtle* combine to produce the narrative, rather than being a narrative driven solely by human actors.

The Back of the Turtle not only attributes agency to non-human animals, like the dog, but also to non-living subjects, like the fog in the bay. Like the dog, the fog plays an active role in the novel, helping to shape the narrative. Although it is sometimes implied that Nicholas Crisp controls the fog, as Sean Rhoads argues, the novel also suggests that the fog is an agent in its own right. For example, when Sonny reads that “fog” is defined as “droplets of liquid water suspended in air near the earth’s surface,” he cannot help but laugh, as “everyone knows that fog is smarter than that” (King 266). By including the reader in “everyone,” Sonny challenges reader expectations and beliefs about the intelligence and agency of non-living elements of the natural world, as well as its role in literature. Material ecocriticism encourages “critical self-reflection ... on the constitutive engagement of human discursive systems with the material world” (Iovino and Opperman 19). King takes this approach literally, by having the fog, like the dog, play an active role in the narrative. At Crisp’s birthday celebration at the hot springs, the fog is “like a blanket, thick and cozy...tucked...around the trees” (King 202), creating an intimate environment for the gathering and the storytelling, that also allows both Sonny and the Chin and Huang families to come to the party unseen, to benefit from the elaborate spread that Crisp has prepared. Crisp does not care that his guests hide under the cloak of the fog, as “Food’s for the belly, and [he’ll] feed the silent as certain-sure as the noisy” (King 237). Likewise, the fog protects the *Anguis*’s crew later in the novel, when Gabriel and Mara return to the reserve to hang Mara’s art— the fog is so thick that

Gabriel gets lost, nearly wandering off the cliff, and allowing the crew to disappear unseen from the house they had been squatting in before Mara and Gabriel arrive.

In contrast to Dorian Asher's anthropocentric views, King's novel ultimately decenters settler understandings of the human by emphasizing the interconnectedness of ecosystems, and by demonstrating the inability of human communities to persist alone in damaged ecosystems. While people do remain in Samaritan Bay after The Ruin, the town is on the verge of collapse, with everyone from the pharmacist, to Margery, who runs the surf shop, leaving town and only returning at the end of the novel, along with Big Red. Although the novel is focalized through its human characters, the devastation of the Smoke River Reserve and Samaritan Bay are not narrated, and King does not give the perspective of any witnesses of the disaster, save Crisp's brief description, as neither Mara nor Gabriel were present at the time. By leaving out the human experience of the disaster, King emphasizes the devastation through his description of the ravaged environment, where "almost everywhere" along Kali Creek "there were bones" (King 403). By glossing over the human effects of the catastrophe, King emphasizes the impact of the ecological crisis in terms that go beyond its impact on human society or life, and emphasizes instead its devastation of the natural world, which the novel suggests should matter for its own sake.

Continuing with a material ecocritical reading, the above examples demonstrate how King's novel suggests abandoning the "untenable dualisms between the human, as supposed sole home of the realms of 'meaning' and 'significance,' and other living entities, allowed only 'stimuli' and 'impulses'" (Clark 113), in favour of a worldview that acknowledges not only that human actions have impacts on the human and natural world,

but also that the natural world has impacts on humans, as demonstrated by the interconnection between the turtles and people of Samaritan Bay. King's novel emphasizes how "environmental issues are always inherently 'posthuman' in that they stress the degree to which human life and thought are determined by multiple material conditions and relationships [and] challenge the way modern human society is often dominated by the values of a supposed human exceptionalism" (Clark 14). By acknowledging the agency of the natural world, King's novel challenges anthropocentrism, and by looking at how "meaning and matter are inextricably entangled, constituting life's narratives and life itself" (Iovino and Oppermann 16), King demonstrates how anthropocentric narratives are responsible for the climate /ecological crisis, as well as how narratives that engage with the significant otherness of the natural world and recognize its agency can foster different, more equitable ways of life.

Although it tells a story rooted in ongoing environmental racism and climate injustice, *The Back of the Turtle* is not completely pessimistic about our ability to implement climate justice, and the novel itself demonstrates how climate change or climate catastrophe might be narrated without resorting to apocalyptic tropes, which may help to overcome the challenge of representing climate change. King's novel does not deal explicitly with climate change; however, I have shown that it does represent the systems, emotional states and modes of life that are responsible for climate change, and I argue that by showing the interconnections between several environmental catastrophes and Domidion, it has the potential to make the hyperobject of climate change easier to grasp.⁴⁴ Formally and thematically, King's novel suggests a way of calling people in that

⁴⁴ Hyperobject is Timothy Morton's neologism to describe "things that are

is unusual in the genre of cli-fi.

King's novel emphasizes the importance of community, in contrast to the individualistic attitude exhibited by Dorian. By the end of the novel, with the re-appearance of the turtles at Samaritan Bay the whole environment and community are once again beginning to thrive. As the sea life, including plankton, crabs, starfish, and turtles return, so too do the people of the Bay, such that by the time the *Anguis* crashes upon the shore, enough people have been drawn by Sonny's beacon that they are able to work together to push the ship from their shores. When Gabriel expresses doubt about their ability to move the *Anguis*, Mara tells him: "it's not about moving... It's about community" (King 498), emphasizing that a strong, diverse community facilitates the fight against environmental injustice. However, despite the cooperation of the community, the novel's ending is ambiguous; while the ship drifts back into the bay, it is not gone, nor is its toxic load, and so the end cannot be totally optimistic. Although the threat of the ship still lingers, King suggests that community is paramount, both for the health of the environment, and for the health of the individuals.

In addition to emphasizing the importance of community in the Samaritan Bay narrative, King also points to the importance of diversity, as seen by his wide-ranging

massively distributed in space and time relative to humans" (1). Because of their immensity, hyperobjects are difficult to grasp, intellectually and physically: "one only sees pieces of a hyperobject at any one moment" (4), and when they are near they are uncanny. Morton describes the uncanniness of climate change as follows: "It is strangely cool or violently stormy. My intimate sensation of prickling heat at the back of my neck is only a distorted print of the hot hand of global warming. I do not feel "at home" in the biosphere. Yet it surrounds me and penetrates me, like the Force in *Star Wars*. The more I know about global warming, the more I realize how pervasive it is" (28).

references to other texts and cultures. As Rhoads notes, King alludes to many “mythological and supernatural characters, including a range of figures from Judeo-Christian teachings, Islam, Nordic lore, literature, East Asian traditions, Hinduism, and Classical Greek and Roman mythology” (122). King thus suggests that despite their differences, many worldviews and religions can promote ethical engagement with the natural world and significant otherness. King’s novel suggests that it is possible to come together for a common goal, drawing what is useful from a variety of sources or stories, to build an ethical way of relating to the world. By emphasizing the importance of narrative in shaping world views, through the Haudenosaunee creation story, and the neo-liberal narrative and myth of science and progress, King’s novel demonstrates Haraway’s point that “it matters which stories tell stories, which concepts think concepts” (“Anthropocene” 160). By using a multi-vocal and humorous storytelling strategy, King opens up the story of climate change and environmental racism in a way that Panda suggests can help to reach “segments of society that would not otherwise consider the issue” prompting “self-introspection” (Panda 338-9). By emphasizing relationality, King urges readers to break from the story of individualism, and suggests that cli-fi, or fiction about the climate crisis or environmental injustice, has a role to play, not only by modelling the kind of multi-species communities that he does in the novel, but also by emphasizing that if “the truth about stories is all that we are” (King *The Truth*), then we need a better story for the end of the world.

Chapter Three

Watershed: Brining Climate Change Home

Climate change is a global problem with localized effects. Geography plays a role in cli-fi world building, as different regions will be impacted in different ways, depending on local environmental conditions. In *Anthropocene Fictions*, Adam Trexler surveys climate fiction and what he calls “Anthropocene fiction,” finding that many novels “explore ‘natural’ disasters originating in Antarctica, international waters, or across continents” (10), which suggests a global scope to the genre. However, he also notes that “the vast majority of novelists” respond to the challenge of using fiction to “heighten” climate change’s “reality” by “setting climate change in a specific place” (75). This specificity reflects “a long tradition of Anglophone environmentalism” that has “often argued that a sense of place is central to the project of conservation” (75). Doreen Vanderstoop’s *Watershed* is a work of extremely localized cli-fi, dealing only with climatic, political, and economic concerns in the province of Alberta. However, contrary to much climate fiction, which tends to be set in urban centers (Trexler 76), Vanderstoop’s novel is largely set in the rural community of Fort Macleod and depicts the impacts of climate change on a rural, agricultural community affected by severe drought.

Watershed explores the ramifications of climate change for Canada’s largest oil producer and second largest agricultural producer: Alberta. This poignant setting allows Vanderstoop to envision a future for oil infrastructure and the tensions that may arise as Canada transitions away from fossil fuels, as well as to imagine the long-term consequences for these two industries as climate change intensifies. Both agriculture and the oil industry require tremendous amounts of fresh water, and Vanderstoop imagines

the future anterior legacy of the oil industry and the future of Canadian agriculture. Like many works of cli-fi, *Watershed* makes use of the future anterior -- “the dramatization of that which will have been” -- to “establish a timeline of change that requires the reader to move back and forth between her own present, the character’s past, the reader’s future and the characters’ present” to create a “sense of the temporal scale of the Anthropocene and our own place in it” (Parham 93). This creates a sense of retrospection in the novel, emphasizing that climate action is imperative at the time of the book’s publication, that is, in the contemporary reader’s time. As one character puts it, “experts predicted long-term droughts forty-years ago, but little was done to protect the headwaters of either the North or South Saskatchewan River Basin,” which led to negative consequences, compounded by how “the oil sands used and abused [Alberta’s] water resources” (Vanderstoop 216). This retrospective on Alberta’s destructive environmental practices and their negative effects specifically on the water system point not only to the necessity of action, but also to the challenges for climate justice, as Albertans, accustomed to oil and agriculture prosperity, struggle to adapt to the realities of climate change as the province’s resources become limited.

Drought is the primary effect of climate change depicted in *Watershed*, and all of the conflicts in the novel stem from water, whether through access, commodification and pricing, or changes to familial and interpersonal dynamics. Unlike Thomas King’s *The Back of the Turtle*, explored in the previous chapter, where there was little recourse against the forces of global neoliberalism and environmental racism save local cooperation and small-scale environmental restoration, Vanderstoop’s novel is more optimistic about Western Canada’s future, even as she depicts a world that is closer to

wild time than does King, with more pronounced climate change. *Watershed* is set on the cusp of wild time, yet rather than devolving into apocalypticism, Vanderstoop envisions an Alberta that attempts to manage the environmental and economic consequences of the climate crisis equitably, and that works towards justice for the Indigenous peoples of the region. Unlike works explored in later chapters in this project, set in or beyond wild time, where governing structures are ineffective or non-existent, Vanderstoop imagines a functioning government attempting to enact climate change solutions that seem to take some elements of justice into account, although the commodification of water undermines these attempts at justice.

I read *Watershed* using what Adam Trexler calls “eco-nomic” criticism, a mode of critique which focuses on the various functions of the term “eco” (economic, ecological, and their joint root in the concept of home). According to Trexler, novels amenable to this kind of criticism “explore what it means to dwell in the Anthropocene” and many take up the question of domesticity in the Anthropocene (171). Climate change already impacts the economy, “whether through crop failures, demand for local produce, hybrid cars, energy taxes, environmental enterprises, municipal amelioration strategies, or emission targets” (Trexler 26), and its effects will only intensify. According to Trexler, “sophisticated” climate novels “describe a complex transformation of human economies, and so human culture” (26). *Watershed* is sophisticated in this way, as Vanderstoop depicts provincial and personal economics in transition and trouble, as people and the province adapt, or struggle to adapt, to drought in Alberta. Reading eco-nomically makes visible the connections between the environment, food systems, and economics, which are often obscured in modern life, and how disruptions to sense of place and home,

through changes to climate or economics can have negative impacts on individual or collective mental health. Although Trexler focuses on the meanings of “eco” for his economic critique, I also touch briefly on *nomos*, or law, and its relationship to the “eco;” focusing on law in this context is relevant, especially given that Rogers, who introduces the concept of wild time, is a legal scholar. Reading *Watershed* in this way demonstrates that these interconnected issues lead to a variety of divisions in response to the climate crisis: individual, psychological divisions; familial divisions; and divisions within the province, premised on both rural-urban divides, as well as access to water and environmental conditions. At all scales, these divisions can be traced to water and economics.

In addition to revealing the connections between water, domestic life, ecology, economics, and the law, reading *Watershed* eco-nomically reveals how, in its focus on the home (and how the home is shaped by economic and ecological forces), eco-nomic critiques make clear the imbrication of the local in global systems. While *Watershed* is eminently local in its concerns, overlooking the global environmental and economic connections inherent to modern life, which also shape eco-nomics, it does raise questions that point, if obliquely, to these connections. These connections are primarily seen through infrastructure and access in the novel, as Vanderstoop envisions Alberta’s oil infrastructure and economy being used to transport and sell water. Conspiracies swirl about the possibility that Canadian water will be sold to the United States, which is Vanderstoop’s only concession to representing global issues in the context of climate change. Surprisingly, in a novel so focused on the impacts of climate change on agriculture, global food systems do not feature in the novel. Given the collapse of many

family farms in the novel, it is unclear where food comes from. Is it imported? Produced by agri-business corporations? These questions are raised, if not answered, by an economic critique. While these questions are not addressed in the novel, its local focus is not inherently negative. As John Thieme argues regarding Barbara Kingsolver's *Flight Behavior*, another locally focused text, the "specifics of [a] small world represent planetary forces" (31). *Watershed's* depiction of unequal experiences of climate change on a small scale can be read metonymically, reflecting unequal experiences on a global scale.

Furthermore, the novel's unanswered agricultural questions, as well as the question of whether it is or is not justifiable to sell water to the United States if Alberta's needs are met, point to the challenges of narrating climate change. Malewitz writes that:

the presence of climate-change technologies in literary narratives draws attention to the relationships between geography and culture in ways that echo some of the strategies of older literary regionalisms, but...these narratives force us to re-evaluate the ideologies that govern these older regionalisms, replacing a model of difference rooted in permanence with a more volatile regionalism that foregrounds the relationships among local, national, and global networks. (720)

In *Watershed*, unequal access to climate-change technologies including the water pipeline point to the relationship between geography and culture Malewitz identifies, demonstrating how geographical changes can lead to a volatile regionalism, as seen through the conflict between northern and southern Alberta. However, the novel's focus on the regional leaves unanswered questions about the global networks in which the local is always imbricated. *Watershed's* depiction of local climate, environmental, and

ecological justice issues point to the necessity for realistic climate fiction to balance local adaptations and justice with globalized systems, as without an acknowledgement or consideration of the bigger picture, local changes and issues remain just that. Thus, *Watershed* allows for a metacritical analysis of eco-nomic readings, pointing to the ways in which the global can evade the local, the sum of the parts sometimes not equalling the whole.

1. Eco-nomic Criticism: Domestic Life and Intergenerational Justice

Vanderstoop's focus on local issues in rural Alberta raises particular issues of climate justice, such as the importance of democratic participation in politics, the future of the oil and agriculture industries, and what intergenerational climate justice will look like on family farms. In *Watershed*, social systems and governments have not collapsed; however, the consequences of climate change are widely felt, and division and conflict are increasingly prevalent. Everyone acknowledges that climate change is real, but "no one [knows] what to do about it except to blame everyone else" (Vanderstoop 109), and this blame leads to divisions between northern and southern Alberta. The novel begins in 2058, after the "deluge decade" of the 2020s (Vanderstoop 247), and despite the flooding that once challenged the province, southern Alberta now suffers from catastrophic drought. The provincial and overarching conflict in the novel is between southern farmers impacted by drought and people in northern metropolitan areas who do not wish to share "their" water. Because glaciers have melted and aquifers have dried up, Alberta relies on desalinated water transported from the Pacific Ocean through the Northern Gateway Pipeline, a reference to the province's involvement in the oil industry. After the

“oil barons [were] chased out of Calgary’s plush offices in the 2040s” due to “the world’s intolerance for unconventional oil and its untenable footprint of emissions and tar ponds” (39), oil infrastructure, including the Northern Gateway Pipeline, is recycled to transport water after being cleared of natural gas (Vanderstoop 12). This pipeline is at the heart of the conflict in the novel. It is being extended to southern Alberta by Crystel Canada but is met with resistance from the Northern Water Army (NWA), a northern Albertan terrorist group that violently protests and sabotages the pipeline. The NWA believes that southern Alberta has “squandered” its water (Vanderstoop 266), and that “northern Alberta will suffer if they have to fill a pipeline to the south with their water” (Vanderstoop 12). In the south, distrust of the government also leads to skepticism on the part of those in need of water, who do not trust that the government has their best interests at heart.

In addition to depicting intra-provincial conflict, the novel centers on the Van Bruggen family and the challenges of maintaining their family farm. The novel is focalized through Willa and Dan Van Bruggen, which allows Vanderstoop to depict the conditions in both rural and urban Alberta, and, through both Dan and Willa’s travels, the broader provincial perspectives on the pipeline and conflict over water, as well as the contrast between the conditions in the north and south. Vanderstoop’s emphasis on agriculture situates *Watershed* in a long tradition of prairie literature that deals with agriculture in an inhospitable landscape (Estock 79), a landscape which only becomes less hospitable due to climate change and drought. Generically, it can also be understood as what Adam Trexler calls Anthropocene fiction: fiction that “addresses the historical tension between the existence of catastrophic global warming and the failed obligation to

act” (Trexler 9), and which, due to the presence of climate change in the “landscape of the novel” must alter “long traditions of narrating space, place, and disaster” (Trexler 74). Thus, while *Watershed* is recognizably a work of prairie literature, “the narrative difficulties of the Anthropocene threaten to rupture the defining features of genre” such that realism and speculation are blurred, and novels can no longer be put “into discreet generic pigeonholes” (Trexler 14). Trexler outlines how various genres are challenged by the Anthropocene; for example, “coming-of-age stories break down when the actions of prior generations trigger insolvable weather disasters and collapse economic opportunities for young people struggling toward independent adulthood” and “suspense novels have surprising elements of realism” (14). *Watershed*’s plot and style blur these generic boundaries, as Dan struggles to become an independent adult, and the novel’s suspense plot regarding water conspiracies does not seem far-fetched.

Although *Watershed* blurs generic boundaries--it is part political thriller, part coming of age story, and part climate dystopia--it is nevertheless a realist novel that deals with the impacts of climate change on Albertan agriculture. The Van Bruggens and other famers have replaced their cattle with goats, which are less water-intensive, but still struggle to keep the farm afloat, given the high price of water. Willa and Calvin Van Bruggen are on the verge of foreclosure, and this financial stress leads to conflict within the family when their son Dan gets a job working at Crystel, rather than returning to the “lousy farm” (Vanderstoop 16). The familial and financial stresses are compounded by Willa’s deteriorating mental health, which is brought on by the stress.

In addition to being a rare work of cli-fi set in a rural community, *Watershed* is also unique for its emphasis on domestic life. This regionalism and focus on the home are also

a characteristic of prairie literature.⁴⁵ The provincial conflict provides the backdrop for the family conflict and domestic life which comprise the novel's plot, as Vandestoop explores the impacts of climate change on the Van Bruggen home and family. Because *Watershed* is set before wild time, domestic life is altered, but remains recognizable for contemporary readers, and the novel's setting in the near rather than distant future and its focus on domestic life literally bring climate change home. In terms of my analysis of climate justice, this setting is significant as it allows for the depiction of local changes, foregoing the problematic apocalypticism of some works of cli-fi. Rather than depicting climate change as an inevitable end of the world, *Watershed's* plot instead points to the everyday challenges of living with climate change and demonstrates the need to foreground climate justice now and in the near future to prevent the dystopian collapse envisioned in many works of cli-fi. Vanderstoop creates urgency as regardless of oil's abandonment in the 2040s, devastating effects of climate change persist two decades on, suggesting the long-lasting consequences of climate inaction.

Trexler notes that works of Anthropocene fiction that explore what it means to "dwell in the Anthropocene" take up the "question of contemporary domesticity" and how quotidian activities re-establish themselves after climate disaster. Vanderstoop does not depict disaster as a single event with a before and after; rather, drought is ongoing, with no end in sight. The ongoingness of the drought makes *Watershed* a strong candidate for eco-nomic criticism, as "environmental crisis has now become a regular part of the uncertainty in which people nowadays dwell" (Buell xiv). Reading eco-

⁴⁵ According to Deborah Keahey, in prairie usage the "home place" refers to the homestead, and suggests the home is "singular and locatable" and tied to a specific place (3).

onomically reinforces how domestic life, family relationships, and economic issues will all be (if they are not already), impacted by the uncertainty and instability of the climate crisis. To read eco-nomically, one must consider how novels “capture how geology, geography, and species radically shape human experience” as well as how the “agency of nonhuman things commonly called artificial, such as technology, vehicles, and capital” likewise shape experience (Trexler 171). In *Watershed*, domesticity and human relationships are shaped by their situatedness in a specific place with specific climatic conditions, and these conditions (place and climate) combine to shape economics, which in turn shape the relationships of the novel. Water and economics are closely tied in *Watershed*, given the high price of water that Albertans must pay, and these impact familial relationships and dynamics. Eco-nomic criticism helps make visible how domesticity is situated in a wider world. In *Watershed*, this means exploring the relationship between the drought-stricken Prairie environment, economics, mental health, and family dynamics.

Eco-nomic readings look not only at economic systems, such as agricultural production, distribution, and consumption, but more generally “articulate the unsettling of familiar systems and the reconfiguration of human ecology” (Trexler 173). Human ecology is the interdisciplinary study of the relationships between humans and their natural, social, and built environments. Climate change will disrupt all of these environments, and Vanderstoop touches on all of them in *Watershed*.

The Van Bruggen family is emblematic of Southern Alberta’s residents; through Willa’s perspective, Vanderstoop shows the impact of drought on Alberta’s farmers and, through Dan, what life is like in Calgary. The cost of water is prohibitive in urban, as

well as rural environments. Willa and Calvin are on the verge of foreclosure and losing everything, but are determined to keep the farm operational. Willa does not want to follow in the footsteps of many of their neighbours, who have “[stolen] away in the middle of a dark night” abandoning their farms (Vanderstoop 16). Likewise, in Calgary, Dan also struggles financially; the two-month grace period his landlady granted him is running out, and his student loans will soon be due. While the threat of foreclosure looms over his parents, little separates Dan from the homeless people lining Calgary’s streets, or sequestered at the edge of the city in “Tent Town.” Ecological collapse leads to economic collapse in southern Alberta, such that the federal government initiates a buy-out program, where landowners in the region will have until the end of 2058 to “cash in their land” for “twenty-five percent of its current assessed value,” which is in itself a “fraction of land values a decade ago” (Vanderstoop 20). This low offer makes it an unpopular option with the Van Bruggens and other farmers in the area, who will not be able to get out of debt, even if they do take the buyout.⁴⁶

Regardless of whether one lives in urban or rural Alberta, drought alters domestic life: namely, residents rely on Crystel Canada for water transportation. In rural areas,

⁴⁶ Vanderstoop’s depiction of the economic struggles of Alberta’s farmers builds on the historical precursor of the “farm crisis” in Canada’s west, which began in the late 1990s when the federal government failed to articulate a policy on “the viability of the family farm, on the health of the land, or on the issue of rural depopulation” (Boyens xiv), focusing instead on promoting global free trade, which signaled a “shift to an increasingly industrial agricultural system” (Boyens xv). Ingeborg Boyens notes that the first indications of a farm crisis emerged in the year 2000, when “Statistics Canada’s Labour Force Survey reported that there were 22,100 fewer farmers on the Prairies than there had been the year before” (7). Vanderstoop’s novel reflects the historical and ongoing farm crisis, as she depicts rural depopulation, collapse of family farms, and environmental devastation.

water is transported by tanker and deposited in farmers' cisterns, and in cities people collect their water from Crystel water stations. Water collection can be dangerous, as "thugs" roam the streets looking to steal water. As a means of protection, Calgary police approve the use of pepper spray by civilians for self-defence (Vanderstoop 94). The high price of water leads to violence and unrest in the city, resulting in the declaration of a state of emergency. In response, federal Armed Forces patrol the downtown core. The dangers of water collection and the presence of "Tent Town," the homeless encampment east of the city, suggest that the price of water and its purification is prohibitive for many people.

To some extent, an eco-nomic critique sounds self-evident in a post-Marx world; of course environment and economics shape domestic life and relationships. However, given the apocalyptic or post-apocalyptic settings of many works of climate fiction, few works depict domestic life, whether rural or urban. This leaves a gap in representations of climate change and the significance of climate justice for people who may consider themselves "ordinary," especially in the global north. *Watershed* helps to fill this gap not by depicting a climate apocalypse and social collapse, but by depicting the more mundane impacts of climate change, including on economics and mental health. Writing of *The Sea and the Summer* by George Turner, Trexler notes that "people's self-awareness and sense of worth, grounded in the home, workplace, and social class, are highly vulnerable in the Anthropocene" (180). Vanderstoop demonstrates this vulnerability through climate anxiety and Willa's struggles with her mental health. As one of the novel's two focalizers, Willa's deteriorating mental state is apparent from the first chapter of the novel. She is plagued by terrifying, threatening hallucinations that she

struggles to differentiate from reality. Willa's mental state is fractured, leading to internal, psychological divisions, as she struggles to trust her vision, and as she grapples with and resists the reality that she and Calvin may need to abandon the farm. Willa's hallucinations reflect the uncertain state of the environment and Alberta politics, suggesting that the natural world and her home are both threatened and threatening. In her first hallucination, the water tanker that arrives to deliver water to her farm becomes an army tank that "ripped through the barbed wire fence around the field" and "bounced wildly through fallow ruts and divots" with its "main gun pointed at her" (Vanderstoop 10). This vision foreshadows not only Willa's deteriorating mental state, but also the connections between conflict and climate change that are explored in the novel's subsequent chapters.

Thinking eco-nomically makes clear how economics, environment, the legal system and domestic life cannot be untangled from one another, and all have a bearing on people's mental health. These connections are not unique to the context of climate change, however. Vanderstoop's depictions of Willa's mounting anxiety and increasing hallucinations can be understood as repeating a trope of prairie fiction: "prairie madness." Vanessa Steinroetter explores this trope in the literature of the Great Plains from the 19th to the 21st centuries, explaining that "prairie madness" is a "catchall phrase popularly used to refer to any severe mental or emotional decline in white settlers, which was attributed to the harsh living conditions of early homesteading and farming in the plains" (291-92). While this was initially a settler phenomenon, she notes that the "theme of prairie madness" continues to resonate with 20th-and 21st-century authors, and not only those whose works are about the early settler experience. Prairie madness can include

symptoms such as “madness, isolation, feelings of entrapment [and] characters haunted by visions or hallucinations” (Steinroetter 292), as Willa is. These symptoms are brought on by the land, and descriptions of prairie madness entail a “recognition of a clear power and agency of the landscape itself ... exerting its influence over the characters” (Steinroetter 292). In *Watershed*, then, the agency of the land has been irrevocably altered due to human actions, and yet, as in early Plains literature, there seems to be the belief that the landscape is “inherently deficient, threatening, and in direct opposition to the personal goals of the settlers” (Steinroetter 293). Willa’s family has owned the farm for three generations, and she is not a first-generation settler; however, the land, or more accurately the climate, is nevertheless in direct opposition to her economic and domestic goals.

Willa’s anxiety and hallucinations seem a direct result of her stress over the farm. As “the word ‘foreclosure’ rear[s] in Willa’s mind,” a jade vine painted on her teacup becomes a snake, writhing its body around the “delicate bird” also depicted on the mug, and Willa is so startled that she shatters the mug (Vanderstoop 20). Thus, whereas prairie madness as described by Steinroetter is a result of the challenges of settler life in the Great Plains, Vanderstoop depicts a modern version shaped by climate anxiety and Willa’s desire not to give up on her grandparents’ and her father’s dream. Steinroetter notes that prairie madness remains relevant today due to its “imaginative and literary potential” for authors interested “in a deep sense of place...and the fragility of local ecosystems in a time of environmental precarity” (303). This is certainly true of Vanderstoop’s novel: sense of place is a central issue, apparent through Willa’s characterization of the changes to southern Alberta’s climate and ecosystems, as well as

the deep attachment to place that Willa feels. Writing of the farm crisis in southern Alberta,⁴⁷ Roger Epp notes that the crisis is not only about the future of work, but also about “the immense psychological burden of keeping a third-or-fourth-generation family farm, that is not merely a business, but a physical, historical anchor of home and identity” (146). Epp elaborates, noting too that “farm people are ‘placed’ people with stubborn attachments” whose “identities are invested in known places that they do not easily abandon” (161). Through Willa, Vanderstoop points to how climate change will raise impossible questions for people who rely on the land not only for their livelihoods, but also for their identities, an issue which I also touch on in my analysis of Peter, below.

Writing of madness in literary and non-fictional depictions of prairie life, June O. Underwood finds that the “causes for mental breakdown range from economic frustration, personal displacement and loss of identity, to guilt and isolation” (51-2). In the context of climate change these causes are not due to the challenges of prairie homesteading; rather, they are the result of a *loss of home* due to economic frustration, which can lead to displacement and loss of identity. Willa is in a precarious economic situation and climate change and the possibility of foreclosure could result in displacement from her home, which would lead to both loss of identity and feelings of guilt for letting her father down. Furthermore, despite Willa’s love for the land, her hallucinations render it even more foreign and dangerous than the perpetual drought and

⁴⁷ There has been talk of a “farm crisis” since the year 2000, as farming has become an increasingly challenging way to make a living for Canadian farmers, while agribusiness corporations’ profits skyrocket. For information on the farm crisis, see “The Farm Crisis and Corporate Profits: A Report by Canada’s National Farmer’s Union” and *Another Season’s Promise* by Ingeborg Boyens. For more recent information, see Sam Samson’s *CBC* article “Canada’s Farming Future in Trouble Unless 30,000 Immigrants Fill Gap of Retiring Farmers, Report Says.”

dust storms. Hiking with her dog one day, she sees “the flick of a cougar’s tail” and “two glinting yellow eyes[,] glaring, assessing, analyzing” (Vanderstoop 69). Cougar sightings have been on the rise lately in the novel, as drought forces the predators to leave “their traditional mountain habitat in search of food” (Vanderstoop 69); however, Vanderstoop suggests that Willa’s cougar is not real. Her dog, Saskia, does not react, and Calvin can find no sign of the cat. Later, when Willa looks at the farm she sees “fire [leaping] from the windows of the house...onto the roof of the barn and toward the row of skeletal lodgepole pines” (Vanderstoop 130). Climate change defamiliarizes Willa’s home, well before they decide to leave the farm; its flora and fauna are no longer recognizable, and Willa’s psyche responds to the changes by conjuring threats that match her fear and anxiety regarding the future.

When Willa meets with her doctor, it is apparent that she is not the only person in the region suffering from psychological distress. He tells her that “a lot of [his] patients have been coming in with problems associated with extreme stress” (Vanderstoop 127). Willa’s neighbour Logan is also struggling. Logan is not a character in the novel; however, after his death, Willa and Calvin become the guardians of his son, Peter, and prior to his death, there are several references to Logan’s declining mental health. Reflecting on Logan, Willa says, “he’s not the man he was. Remember what a rock he and his father were for Papa and me?” (Vanderstoop 49). By including references to another farmer struggling with the mental health consequences of climate change, Vanderstoop makes clear what climate anxiety researchers have already found: “climate change is not just an environmental problem, but also a psychological problem” (Clayton 5). Unsurprisingly, the people who experience the impacts of climate change also tend to

experience greater anxiety due to the issue (Clayton 3). Clayton cites Ellis and Albrecht, who find that “for some people, the negative emotions related to climate change are likely to be intense enough to contribute to mental illness,” looking specifically at Australian farmers who have experienced “local changes from a disrupted climate” (qtd. in Clayton 3). Ellis and Albrecht find that these farmers “report an increased self-perceived risk of depression and suicide” due to the impacts of climate change on their livelihoods (cited in Clayton 3). Initially, it is suspected that Logan has died by suicide or negligence, as he is found dead due to a gas leak with a whiskey bottle next to his body (Vanderstoop 90); ultimately, the death is deemed accidental, but the spectres of suicide and mental illness haunt the novel.

In depicting the mental health of prairie farmers, *Watershed* raises and fails to address certain questions about agricultural and rural life which are pertinent to an economic reading. For instance, for a novel depicting a continuation of the Prairie’s historical and ongoing farm crisis, that sees family farmers like the Van Bruggens leaving their land for urban centres, it seems odd that Vanderstoop does not address the larger state of Canadian agriculture; who is producing food, and where, in this imagined future? Trexler writes that “climate change refocuses attention onto questions of where our bread will come from and who will drive it to us, not to mention what species of grains might yet thrive” (172). These are not questions that Vanderstoop addresses directly, but they are still important when thinking eco-nomically: one must consider not only ecological questions, but also the means of production and consumption. By extrapolating the current farm crisis to a near-future shaped by climate change, Vanderstoop raises, but does not answer, important questions about the future of Canadian agriculture by

ultimately suggesting that family farms may not survive the climate crisis unless policies shift.

It is not only national or provincial policies that will need to shift to accommodate the climate crisis. Though Willa's relationship with her son Dan, Vanderstoop demonstrates how agricultural production and familial relationships will also have to change to accommodate intergenerational climate justice. Their relationship is turbulent throughout the novel, as Dan opts to work for Crystel rather than return to the farm. Through Willa and Dan, Vanderstoop joins other recent cli-fi authors who have begun grappling with intergenerational injustice in the context of climate change.⁴⁸ Because the Van Bruggens run a family farm, there is the expectation that after completing his university education, Dan will return to work on and eventually take over the farm from his parents, as Willa did from hers. However, the severity of the drought means that this is no longer desirable, never mind economically feasible, for Dan. The novel begins with conflict between Dan and Willa, as Dan shares the news that he will be interviewing for a position with Crystel in Calgary, rather than returning to the farm.

Willa and Dan's viewpoints are irreconcilable, and the conflict over Dan's choices demonstrates the need for intergenerational climate justice and points to how older generations will have to demonstrate flexibility and grace to ensure their children's futures. Dan sees working for Crystel as an opportunity to keep "Southern Alberta from turning into Death Valley" and cannot understand why Willa does not see things his way (Vanderstoop 7). Conversely, Willa sees Dan's refusal to return to the farm as dooming

⁴⁸ C.f. John Lanchester's *The Wall*, Emmi Itaranta's *Memory of Water*, Preece Mohamed's *The Annual Migration of Clouds*, Saci Lloyd's *The Carbon Diaries 2015*, Diane Cook's *The New Wilderness*, and Emmi Itäranta's *Memory of Water*.

the enterprise to failure. Although from economic and lifestyle perspectives Willa is a sympathetic character, her stubbornness and unwillingness to see Dan's perspective render her less so. Willa cannot see beyond her own desire to maintain the farm, and her treatment of Dan makes her seem selfish and unwilling to adapt to new environmental conditions. Explaining his family dynamics to a co-worker, Dan contrasts his grandfather and his mother. Whereas Dan's grandfather "was a pragmatist," Willa refuses to leave, even now that "there's hardly a drop of water to be had above or below ground, and ... no money to fill the cistern" (Vanderstoop 247). Dan continues: "She won't admit that the farm is finished; she wants to keep it all going for the sake of his memory" (Vanderstoop 247). For Willa, the farm is an important family legacy; Dan, however, has different memories of his Opa, who told him to leave the farm for a degree in hydrogeology. Vanderstoop clearly supports family farms and seems to favour policies that would benefit them; nevertheless, the conflict between Willa and Dan over Dan's future and the future of the farm suggests that familial relationships, like everything else, will need to change to accommodate the new reality of climate change. This requires an acknowledgement that the future will not resemble the past, and the need to balance which elements of the past can and should be preserved, and which should be abandoned in a climate-changed future. Both issues (preservation and abandonment) are related to the importance of intergenerational climate justice in the novel: young adults like Dan, who wish to leave the farm but are pressured to remain due to economic factors, suggest the importance of self-determination and adaptation in the face of climate change, and children like Peter, who wish to stay on the farm but are forced to leave for economic reasons, point to the challenges of preserving ways of life in degraded environments.

The generational divide between Dan and Willa stems, in part, from different views of what constitutes a good life. For Willa, maintaining her family's legacy on the farm is a key priority, and a good life is one where she can hear her goats bleating and the tinkling of their bells. Willa's desires are not necessarily selfish, but they *are* centred around herself and her family, and building a good life for them and their animals; her goals are more domestic than Dan's. Dan's desires, by contrast, are shaped by his family's struggles on the farm in the context of climate change. Dan is driven by the larger goal of keeping Alberta from drying out, and ensuring that rural, southern families like his do not lose their access to water. Unlike some of Crystel's employees who are simply in it for the money, Dan is the "genuine article" (Vanderstoop 216); he truly believes that water will return to Alberta and feels that "majoring in hydrogeology [is] more of a calling than a post-secondary choice" (Vanderstoop 97). Willa feels that Dan is being selfish, but it is clear that Dan is motivated by empathy and optimism as he interacts with other desperate farmers at Crystel's water talks. Having grown up in a world shaped by climate change, Dan is not only interested in enacting justice and fair access to water for his family, but for families in similar situations. Despite his good work, and his desire to contribute to the farm financially, if not with his labour, Willa resents Dan, creating a double bind of injustice. If Dan stays on the farm, there will be no water, and no money, and thus no possibility of a good life; in leaving the farm, he earns his mother's resentment as he is made to feel like a disloyal son, even as he attempts to improve conditions for rural families like his. Due to the economic and environmental constraints of the climate crisis the opportunities available to Dan are limited, and his forced choice between two bad options points to how younger generations are forced to

live with the consequences of previous generations' actions.

The importance of intergenerational climate justice is reinforced through Peter. While Dan is a young adult, ready to make his way in the world, Peter is Willa and Calvin's thirteen-year-old neighbour. When his father dies unexpectedly and Peter is orphaned, "Aunt Willa" and "Uncle Calvin" become his legal guardians. Peter's biological Aunt and Uncle also seek guardianship, however. It is agreed that Willa and Calvin will remain the boy's legal guardians, but that Peter can choose where he wishes to live: in Fort Macleod on the Van Bruggen farm, or in Fort McMurray, in Lily and Roy's luxurious home and neighbourhood. Peter's trip north makes apparent the stark economic differences between Fort McMurray and Fort Macleod and how location plays a key role in economics, and thus domestic life. Willa is convinced that Peter will choose to remain on the farm because of his affinity for animals; before the visit, Willa thinks: "Fort McMurray wasn't for Peter. It wouldn't take him long to realize how much he missed his old friends. The farm animals. The open expanse of prairie and sky he'd known his whole life" (Vanderstoop 176). However, although Peter loves the farm there are more opportunities for him in Fort McMurray; in Fort Macleod, Peter's love of the animals and Willa and Calvin would be tempered by hard work and economic hardship.

When Willa accompanies Peter to Fort McMurray, the economic differences are an injustice she feels acutely. The differences are visible from the air as Willa and Peter fly north. When they take off, the view is of "dull squares" where "plentiful harvests remained a pipedream," but as they fly north into "pipeline land" there are "green circles—fields watered by circle irrigation" (Vanderstoop 207). The differences on arrival are even more stark; Peter says it is so wet in Fort McMurray that you could

drown by breathing (Vanderstoop 252), and Willa is taken aback that Fort McMurray is “studded with lush green yards and sports fields, all anointed by water flowing from Bruderheim and supplemented by Slave Lake” (208), and cannot help but think that “the beauty before her would have to be curbed once the southern pipeline extended to the Lethbridge area” as “Alberta could hardly afford to squander productive grain fields in favour of upkeep on Fort McMurray’s postcard parks” (Vanderstoop 210). Peter’s uncle works in environmental restoration, and, as their family does not struggle to manage a farm in a desert, they are much better off than the Van Bruggens. Peter decides to remain in Fort McMurray, and having learned from her experience alienating Dan, Willa does not protest. The complicated feelings surrounding intergenerational climate justice and connections to family and the land are made clear when Willa feels a conflicted shame recognizing guilt on Peter’s young face, as though “it were a sin to want a better life for himself” (Vanderstoop 250). Willa’s thoughts here reflect the challenges of intergenerational climate justice; Willa recognizes that Peter’s desire for a better life is justified, even as she struggles to accept the sacrifice this will require on her part (the loss of Peter’s help on the farm, in this case, although more broadly enacting intergenerational climate justice will involve sacrificing certain elements of life in the Global North).

After a few short weeks in Fort McMurray, however, Peter wants to return to the farm. Unfortunately, like Dan, whose life has been shaped by drought, Peter’s future is also constrained by climate change, and the option of returning to Fort Macleod and the farm is lost when Willa and Calvin decide to accept the buyout. Thinking eco-nomically, the inter-generational conflict in the novel is about more than a single family farm, but also about the loss of a way of life due to climate change. Although fictionalized in

Watershed, generational conflict over family farms is an ongoing, rather than future, issue in rural Alberta, and has been since the late 1990s. A CBC opinion piece written by Mark Olson outlines similar financial challenges to those depicted in *Watershed* currently impacting Alberta farmers. Haven taken over his family farm twelve years prior to writing the article, and Olson writes that despite the opportunity to confront some of today's major problems such as climate change, food security and the energy transition, he cannot now "unconditionally advise" his nineteen-year-old son to remain in rural Alberta, due to lack of resources and support for the province's rural residents and farmers.

Ultimately, climate change may lead not only to the loss of family farms across the country and major lifestyle changes for those farmers, but also a loss of connection with the land, and an increase in corporate, less sustainable agriculture. This loss, of a lifestyle and connection to the land, is apparent through Peter. By the end of the novel, the Van Bruggens are forced to leave the farm, which is a significant loss not only for Willa and Calvin, but also for Peter, who says, "I really thought I could move back" and who had dreams of "buy[ing] a piece of land" someday or taking over the Van Bruggen farm (Vanderstoop 338). Willa and Calvin's decision to move to Fort McMurray renders this dream an impossibility, at least for the foreseeable future. The lack of water in Southern Alberta and lack of government aid for family farmers result in intergenerational injustice for rural youth like Peter and Dan, who are forced to abandon the worlds they grew up in.

2. Eco-Nomics: Ecology, Economy and Infrastructure

The contrast between Fort McMurray and Fort Macleod, and the unequal futures

they offer their young people, raise additional economic concerns for climate justice: namely, the environmental impacts of oil and agriculture, and how the oil industry continues to benefit, even after the end of oil, while farmers are left to survive on their own. These two cities are not only emblematic of Alberta's two largest industries; their names also point to how these industries emerged in the context of Canada as a settler-colonial state, as they reflect their development as colonial outposts in the eighteenth and nineteenth centuries.⁴⁹ Vanderstoop's inclusion of Fort McMurray in the novel (which otherwise devotes little space to Alberta's abandoned oil economy) can be read as a microcosm of global climate justice, wherein polluters continue to benefit and experience climate change to a lesser degree than developing nations. This is, of course, not to say that Fort Macleod is on par with a developing nation, nor am I discounting the negative impacts of agriculture on the environment. However, Fort McMurray remains lush and continues to prosper, while Fort Macleod suffers a literal and economic drought. This contrast reflects historical, current, and possibly future government spending on these

⁴⁹ Fort McMurray was established in 1789 as a Northwest Company fur trading post, on the territory of the Mikisew Cree and Denesuline (Chipewyan) peoples. By 1891, settlers realized the land contained potential mineral and oil reserves, and used Treaty 8 to gain access to the land "before Indigenous people discovered its monetary value" (Pannekoek and James-Abra), as touched on in the previous chapter. Fort Macleod was incorporated in 1892, and developed around the first police post established in Alberta in 1874 by the North-West Mounted Police (Pannekoek). The post was established to "protect Canadian sovereignty in the west," effectively opening the west to settlers ("History and Heritage"). Fort Macleod was established in Blackfoot and Cree territory ("History and Heritage").

two industries, which does not reflect the urgent nature of the climate crisis.⁵⁰

As alluded to by the Van Bruggen's struggles to supply their farm with adequate water, the agriculture industry is highly reliant on freshwater. In 2017, the Food and Agriculture Organization reported that 70% of freshwater withdrawals worldwide are used for agriculture (Pogue et al. 152). In Canada, because prairie agriculture accounts for over half of the country's agricultural production (Kulshreshtha 22), the impacts of climate change will not only impact the prairie provinces, but the country as a whole. The effects of climate change on Alberta remain uncertain, but crop production is predicted to decrease on average, with large losses accompanying severe climatic events, such as droughts and excessive moisture (Sauchyn et al. cited in Kulshreshtha 26).

In addition to depicting the use of water by the agricultural industry, *Watershed* alludes to the impacts of the oil industry on Alberta's freshwater supply. Vanderstoop's novel is not the only work of Canadian literature included in this project to explore the impacts of the oil industry, which should come as no surprise given that the world's largest deposit oil sands are found in Alberta. The tar sands produce bitumen, a process touched on in the previous chapter on Thomas King's *The Back of the Turtle*. In that chapter, I focus on how the tar sands contaminate the region's fresh water. In addition to this contamination, large amounts of water are required to separate oil from bitumen; Gabrielle Slowey and Lorna Stefanick report that "three to four barrels of water are

⁵⁰ According to Statistics Canada, the Canadian federal government spent \$35.1 billion in 2022 in the oil and gas extraction industries. According to reporting by Marc Fawcett-Atkinson, the Canadian federal government spent roughly \$3 billion on agricultural subsidies in 2021. This suggests that oil and gas industries, despite their negative environmental impact, and immensely lucrative, and that this profit exceeds environmental concerns.

needed for each barrel of oil” produced (207). 2007 data from Alberta Environment outlined the diversion of “550 million cubic meters of freshwater from the Athabasca River basin” for the oil industry, which is twice the annual amount used by Calgary (cited in Griffiths and Woynillowicz 35). The amount of water diverted will increase as oil production increases, especially as unconventional extraction methods are increasingly used.

Fort McMurray is the “service area” of the Athabasca tar sands, which is, by some estimates, the “largest industrial mega-project in our planet’s history” (Dorow and O’Shaughnessy 121). According to Dorow and O’Shaughnessy, Fort McMurray has become synonymous with the tar sands, and “conjures the whole of the oil/tar sands, invoking larger than life scales of work, money, opportunity, destruction, development, environment, [and] “the North” (121). Fort McMurray owes its infrastructure, development, and prosperity to the oil industry, whether directly or indirectly (Dorow and O’Shaughnessy 126). In 2015, residents of Fort McMurray had the highest income in Canada, with an average household income of \$191,507 (Steward n.p.). Fort McMurray remains prosperous in *Watershed*; despite the collapse of the oil industry in the 2040s, Fort McMurray’s oil prosperity seems to persist. Ironically, this city that is prosperous thanks to its role in oil production does not suffer the consequences of climate change and drought in the same way as the southern half of the province. Rather, following the move away from oil, the city’s economy does not collapse, but continues to thrive, as “money pour[s] in to facilitate the clean-up of tar ponds” (Vanderstoop 208). The provincial and federal governments seek not only to restore Alberta’s environment, but also its reputation, and thus fund the clean-up to “demonstrate to the world their commitment to

healing the scars of unconventional oil extraction” (208). Although *Watershed* is not a novel about the oil industry, it haunts the novel’s pages through its recycled infrastructure. As Malewitz argues, examining the “‘slow violence’ of climate change as it appears in regional literature” requires looking for it “in its metonymic relationships with new infrastructural projects” (717). Given the use of oil infrastructure to adapt to drought, it is impossible to read the novel and not think about the impacts of fossil fuels on the environment, and how these play into intra-provincial division in the novel. Likewise, it is impossible not to consider the questions of food production and sustainability, with which I opened this section.

Unlike Fort McMurray, Vanderstoop does not imagine Fort Macleod and other rural, agricultural areas in Alberta receiving government funding; rather, they are left to their own devices to adapt to climate change. This history of government neglect leads to the distrust of rural Albertans of Crystel’s pipeline plans, despite the fact that it will benefit them. More significantly, the contrast between government subsidies for oil extraction, and then tar sand reclamation, and lack of aid for farmers points to the challenges of developing sustainable agriculture in Canada. Initially, it seems that there was government aid for farmers; a participant at one of Dan’s water talks mentions how the government subsidized putting in cisterns at farms “during the storm years” (Vanderstoop 188). In the subsequent drought, however, it seems that aid has also dried up. The same woman continues: “vessels designed for capturing rain don’t do one whit of good when there is none. Filling them now is taking every last penny we’ve saved” (Vanderstoop 188). The Van Bruggens are in a similar position and have paid out of pocket to adapt to climate change in order to run what would be a sustainable operation,

if not for the drought.

The Van Bruggens' adaptations and attempts at sustainable farming result in a life that is not sustainable. Because their water bill is nearly \$4,000 a month, they have had to cut back on everything else (72), and have done "everything right," yet continue to struggle (73). Calvin outlines how they "converted to wind power and nano-solar panels," purchased an electric truck, and give back "more to the grid every month than [they] use in a year" (Vanderstoop 73); they have also installed a composting toilet and a grey water filter, and have "dug a hole the size of Vancouver Island to put in [a] cistern" (Vanderstoop 73). While the Van Bruggens have made these changes out of necessity, Kulshreshtha notes that "adaptive capacity is lower among farmers with lower income" and that climate change "adaptation measures impose cost on the producers" (38). Thus, although Vanderstoop does not explicitly advocate for subsidies for Alberta farmers, the fact that there is aid for the oil sands but not for agriculture suggests the need to reassess government spending priorities and climate change adaptation strategies. As Calvin wonders what else they are "supposed to do to stay off the street" (73), Vanderstoop indicates that these failures of individual actions arise because they are simply too little, too late. What is needed is an earlier adoption of the proposed solution that comes in the 2040s in the novel: the early, and widespread abandonment of fossil fuels. Through the Van Bruggens, who live sustainably on their family farm, Vanderstoop makes clear that individual actions in response to a climate crisis that is well underway are not the solution; systemic change is required.

Reading *Watershed* eco-nomically raises questions about economic distribution and the distribution of climate change effects that cannot necessarily be answered by the text

itself. At its most basic, *Watershed* points to how domestic life will be impacted by these factors. Turning to the other meaning of eco-nomic, however, which focuses on the ecological, tar sands reclamation can be seen in a more positive light. Because the “large-scale open pit mining of oil sands is destroying boreal forest and wetlands in northern Alberta” (Raab and Bayley 43), environmental restoration in the province can be understood as enacting both ecological justice (justice for the environment in itself), and justice for the Indigenous peoples in Alberta. Tar sands reclamation is not a major element of *Watershed*’s plot, but Vanderstoop imagines the future of Alberta’s oil sands through Peter’s uncle, Roy Many Horses. Whereas presently Fort McMurray is an oil boomtown (Dorow and O’Shaughnessy 127), Vanderstoop envisions a “new boom” based on tar sands reclamation (209), which allows entrepreneurs like Uncle Roy to prosper. Roy holds a PhD in environmental engineering and chose this specialty because he “figured the oil industry would be dead by 2045” (Vanderstoop 228). Roy is from the Tsuut’ina Reserve near Calgary, which is part of the Dene Tha’ First Nation (Vanderstoop 238), and his cultural values shape his restoration work in Fort McMurray. This work centres both ecological justice and environmental justice for Indigenous peoples, whose traditional territories have suffered the negative impacts of the oil industry, as outlined in the previous chapter. Schlosberg outlines Low and Gleeson’s “first and central principle of ecological justice” which is that “every natural entity is entitled to enjoy the fullness of its own form of life” (qtd. 136). Restoring the Athabasca region will ultimately allow for this possibility, as Roy outlines how “the land bore the brunt of [the] thirst for oil sands crude” (Vanderstoop 230). Because of their reliance on the land, Indigenous peoples in the region are impacted by the environmental devastation of tar sands

extraction. Extraction has negative health consequences for Indigenous peoples in the Athabasca region, as it results in “high concentrations of heavy metals and arsenic in traditional First Nations food like muskrat, duck, and moose” as well as “bird’s eggs in the Athabasca region” (Vanderstoop 230). Indigenous peoples’ reliance on traditional foods make clear how environmental and ecological justice are connected, as both the land and its human, animal, and plant inhabitants will benefit from restoration projects.

As an environmental engineer and entrepreneur who manages tar sands reclamation projects, Roy explains the process to Willa and Peter. His company uses a combination of solidification and stabilization to fill in the tailings ponds, adding a mixture of cement and other compounds to solidify the ground, prior to adding soil and vegetation (Vanderstoop 231). Although this is better for the environment than abandoned tailings ponds, Roy notes that while his work is based on his heritage and his need to “fight for the land,” his father argues that “concrete factories aren’t great for the environment either” (Vanderstoop 239). Roy’s father is correct; tar sands reclamation projects, while better than tar sands, nevertheless have their challenges. As Raab and Bayley outline, “restored and reclaimed wetlands struggle to reach equivalent levels of health to pre-existing natural wetlands,” and even fifteen years post-reclamation, some sites remain in “poor ecological health” (49). Part of the challenge of restoring tar sand mines and tailings ponds has to do with the loss of Boreal forest and marshland, which are devastated by the extraction industry. Rooney, Bayley, and Schindler outline how, currently, reclamation guidelines do not require “the restoration of previous land cover or the restitution of lost carbon formerly stored in soils and vegetation” (4933), and, as such, operators can replace peatland (a valuable carbon sink) with upland forests, which has the

potential to dramatically alter ecosystem services and biodiversity. Just as Vanderstoop depicts a government trying to equitably manage water for all of its citizens, she also points to the challenges of ecological justice in a world that has already undergone so much damage. If ecological justice entails a “recognition of [nature’s] autonomous integrity” and an allowance “for the unfolding or realization of the potential of nature” (Schlosberg 137), then restoring an ecosystem that is not native to a region may not truly enact ecological justice.

Regardless of its ecological challenges, Vanderstoop envisions restoration as a collaborative process that counters oil companies’ monopoly of the region: this element of collaboration is critical for climate justice. Because clean-up costs total over \$260 billion and the government takes oil companies to court for their failure to account for the environmental liability of their projects, restoration falls largely on a Joint Action Group comprised of “environmentalists, health workers, business people, labour, education and religious reps, Indigenous people, and every level of government” (Vanderstoop 230). As Kyle Whyte (Potawatomi) argues, climate justice means that Indigenous peoples become “leaders in energy transitions” (2) and that relationships must be established to connect “diverse social institutions” without “further perpetuating harmful injustices” (2). The Joint Action Group is one way that such relationships may be established. In contrast to the oil industry’s unilateral control of the region, this group defends the public interest by “monitoring everything from health studies to [the] contaminant solidification process” (230). This consultation and monitoring benefits and enacts justice not only for Indigenous peoples and the environment, but for the people of Alberta more broadly.

Like the water-talks process that consults Alberta’s southern inhabitants about the

pipeline construction, tar sands reclamation, too, gives the people of Alberta a voice. Both of these processes enact “‘procedural equity’—the opportunity to participate in democratic decision-making ... [and] for individual’s participation in determining the course of a community’s common activities” which is “crucial to ensure social justice” (Bullard qtd. in Mehnert 194). Vanderstoop’s collaborative and consultation-based processes that develop in response to the climate crisis-related issues demonstrate how such crises need not lead to social collapse; rather, they demonstrate how environmental justice can still be enacted in degraded environments. Schlosberg outlines how “an engagement of issues of individual meaning and identity” are “central to environmental justice struggles” as struggles for environmental justice do not occur in isolation, and “environmental justice activists often see their identities devalued and make a direct connection between the defence of their communities and a demand for respect” (51). Like Thomas King, who depicts a community coming together to enact ecological justice, Vanderstoop, too, envisions community cooperation and multiple perspectives as being important for ecological and climate justice.

Vanderstoop is not naive about this process, however. She recognizes that environmental justice success often only comes after a long process, and outlines how Indigenous peoples and “water warriors” in Alberta were at the forefront of this process. Based on Canadian history, Vanderstoop envisions these successes coming only after “blockades and legal action” by Indigenous peoples (239). Published in 2020, the same year as the Wet’suwet’en land defence movement and blockades against the Coastal

GasLink Pipeline,⁵¹ *Watershed* is optimistic about the power of Indigenous-led land and water defence movements. Vanderstoop imagines movements like the Wet'suwet'en protests and the Idle No More movement that rose to international prominence in 2012 as being successful, and many of the people at the forefront of that movement are employed by companies like Roy's. These protests are not depicted in the novel, and *Watershed* only touches briefly on tar sands reclamation, but it is important that Vanderstoop includes that these protests were part of the novel's pre-diegetic past. By acknowledging the impacts of climate change and the tar sands on Indigenous peoples, *Watershed* does not use structural appropriation to increase the urgency of its climate change plot.

3. Eco-Nomics: Beyond the Home

In addition to depicting the eco-nomics of domestic life in southern Alberta, *Watershed* also includes a broader provincial perspective that situates the challenges the Van Bruggens are facing within the political climate, as well as the longer-term impacts of climate change. Vanderstoop's depictions of climate change in Alberta conform to climatic projections, which suggest that by the 2080s "mean precipitation may be 10% below or 20-30% above the 1961-1990 baseline" (Griffiths and Woynillowicz 4). In Willa's youth, "life bulged with the presence of ample water" as "glaciers ebbed away each year in overflowing rivers" and "sometimes too much rain fell" (Vanderstoop 58).

⁵¹ The Wet'suwet'en land defence movement is based in British Columbia and protests the development of the Coastal GasLink pipeline through Wet'suwet'en territory. According to Shah, Coastal Gaslink is "violating the Wet'suwet'en and Gitksan nations aboriginal title, as affirmed in *Delgamuukw v. British Columbia*, and their rights as outlined in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), by developing projects without free, informed and prior consent" (n.p.).

While flooding presents its own challenges, it results in a longer growing season, which ultimately benefits Alberta's agriculture. However, by the time the novel begins, southern Alberta resembles Death Valley due to increasing temperatures and drought (Vanderstoop 7). Roughly eleven years prior to the novel's beginning, "global temperatures had risen by four degrees from the year 2000" and water levels in the Oldman River are declining (Vanderstoop 97). By the time the novel begins, water is rationed: "every Calgarian [has] a water allocation permit for 140 litres per week," which equals "364 dollars per person," per month, if they draw their full allotment, as water costs sixty cents per litre (Vanderstoop 94). Making matters worse is the fact that Crystel's water is not yet potable; the "end-user" must add disinfectant "at ten times the price of water" to make it so (Vanderstoop 95). The cost of water means that life, especially in southern Alberta, is challenging.

Although life is challenging throughout Alberta, it is significantly less difficult in the north, where the pipeline already reaches, and where aquifers have not yet dried up. Despite having an adequate water supply, the North does not want water to reach the South, fearing that there will not be enough to go around, and that by sharing "their" water, their economic situation will be reduced to that of the south. The Northern Water Army (NWA) is a terrorist organization that would preserve quality of life in the north by hoarding their water, even if it results in the collapse of southern Alberta. The NWA grew out of the Water Conservancy Alliance at the University of Alberta, which originally focused on "restoring balance to Alberta" (Vanderstoop 266). However, the group eventually becomes more radical, promoting the message that the south "squandered" their water, regardless of the fact that the glaciers in both the north and the

south melted at the same rates (Vanderstoop 266).

This response to the drought and southern Alberta can be understood in terms of what Christian Parenti calls the politics of the armed lifeboat: a response to climate change that is based on “exclusion, segregation, and repression” (11), and that seeks to protect one’s resources at the expense of others. These politics are apparent when the NWA becomes a terrorist cell, shaped by violent rhetoric and action. They launch a “Welcome to the Province of Northern Alberta campaign,” and talk of splitting from the south to protect “northern interests” (Vanderstoop 267). The campaign is launched with the creation of a “giant fabric cut-out in the shape of Alberta” that is set on fire; the map burns up to Red Deer, “above which it had been made fire retardant” (Vanderstoop 267). This is not only talk, however. This alarming rhetoric comes to bear in the novel when the NWA begins a series of violent attacks on Crystel’s infrastructure. An NWA suicide bomber takes control of a Crystel van and blows up a section of the pipeline, killing two employees in the process, while another group of NWA militants kills a security officer and overruns the desalination plant in Bruderheim (150). Later, an NWA agent shoots a Crystel spokesperson at the water talks, and later still, Dan and a colleague are kidnapped and used as bargaining chips as the NWA attempts to end the construction of the pipeline to the South.

What the development of conflict over water, in addition to the eco-nomic challenges explored above suggest, is that attempts to prioritize climate justice will be unsuccessful without systemic change. Whereas in *The Back of the Turtle*, King depicts rampant neoliberalism unhindered by government intervention and regulation, in *Watershed* both Alberta’s provincial government and the federal government take steps to (attempt to)

prevent unequal experiences of climate change and drought, although the existence of Tent Town and the divisions between south and north indicate that the government has not yet succeeded. The commodification of water remains an issue in terms of climate justice, yet the governments' response to the NWA demonstrates that it is a fringe group that is not representative of broader society, and resource protectionism will not be tolerated by the provincial or federal government.

Despite its fringe status, the NWA raises pertinent points regarding climate justice; they point to the fact that water should not be commodified, and suggest that as long as water is a commodity in a neoliberal regime, there is no guarantee that it will be affordable. Part of the NWA's resistance to Crystel emerges from their belief that Crystel will sell Canadian water to the United States, who may be willing to pay more for the resource than Canadians. This attitude is expressed by Dan's friend Percy, who gets him the job at Crystel, and who is later instrumental in kidnapping Dan. Percy tells Dan to keep an eye on Crystel, as "the corporation has its own ... coffers at heart, not the plight of Albertans" (Vanderstoop 41), and that it will "divert our water to the thirsty U.S." (Vanderstoop 41). Dan shares Percy's desire to protect Alberta's water; when kidnapped with his colleague Ursula, he confides that he had "wanted to stop Cystel from siphoning off water to the states," but Ursula struggles to see Dan's perspective. She argues that "resources need to be regulated to make them sustainable and protect the people who need them or make their living from them" and that if Alberta has "enough water to sustain all [its] needs, and [it] can pad its coffers by selling to the States" it should do so (Vanderstoop 292). Ursula speaks rationally and makes points that seem reasonable, yet Vanderstoop seems to advocate for keeping Canadian water in Canada. The

commodification of Canadian water can be problematic, because as the NWA worries, there is no guarantee that enough water will remain for those in local communities.

The problems with the commodification of water are clear through Nestlé's operations across Canada. Nestlé has been the subject of controversy in Canada since 2000, due to their low cost of access (\$503.71 for every million liters of groundwater (Shimo n.p.)), and their continuing operation even in times of drought. For example, in the summer of 2016, southern Ontario was dealing with drought; however, despite a City of Guelph report that found that "Nestlé's water takings pose[d] a risk to Guelph's drinking water security," Nestlé continued pumping during the drought, removing "up to 4.7 million liters of water per day from the Guelph region" (Council of Canadians). The commodification of water can lead to water rights being sold to the highest bidder, even when that means that necessary water will not remain in the community, as is feared in *Watershed*. This occurred in the township of Centre Wellington, which lost a bidding war with Nestlé, who purchased the nearest well to the town, impacting the availability of local water (Kerins n.p.). Although Vanderstoop does not mention Nestlé explicitly in *Watershed*, the fears regarding water commodification and access point to this issue, especially given the fact that in 2011, Nestlé's Chairperson of the Board, Peter Braebeck, sparked controversy and criticism over talks with the Alberta government regarding the possibility of establishing a "water exchange" that "would allow water to be sold as a commodity" (Council of Canadians).

Although the NWA fears that Crystel will sell Alberta's water to the United States, there is no evidence within the novel that there is any basis for these fears. In fact, Vanderstoop's depictions of policies that attempt to foreground climate justice suggest

that this is not a likely outcome. Along with efforts to manage drought by transporting and desalinating ocean water, the government also attempts to legislate a more just distribution of water by changing the regulation of water licensing in Alberta. Today, Alberta's water licensing system is based on priority determined by seniority, in a system called "First in Time First in Right," or FITFIR. This system applies to all uses of water, with the exception of household use (Alberta 1). According to the FITFIR system, in times of drought, the most senior licensee is granted priority access,⁵² which may result in junior licensees being left waterless. According to the government of Alberta, water allocation decisions are based on "historical available water supply, river system modelling, and current environmental flow needs" (1). As climate change impacts the "historical availability" of water, Vanderstoop envisions a change to this system, premised on the "emergency powers provisions of the water act of 1999" (Vanderstoop 190). In *Watershed*, the government suspends "all provincial water licenses between the 49th and 52nd parallel" as an addendum to the "Water Scarcity Act," which replaced the 1999 Water Act (Vanderstoop 190). These changes are implemented as the exhaustion of Alberta's aquifers renders the FITFIR system obsolete, as there is no longer enough water even for the most senior licensees. Rather than leaving disputes over water during times of scarcity to be settled between licensees (as in the FITFIR system), water becomes regulated by the government, to "ensure that market prices don't inflate beyond the consumer capacity of those least about to pay" (Vanderstoop 191). Unlike other markets, water pricing is based on "the actual cost of desalination and distribution" rather than its

⁵² In the FITFIR system, water licenses are granted based on a first come, first served basis. Thus, the first person granted rights to a given water source is the senior licensee, and has priority access.

market value (Vanderstoop 191). Through these measures, the Canadian government attempts to ensure fair access to water for all of its citizens, even as its water pricing inevitably leaves those in precarious financial situations struggling to access water, which is not only a commodity, but also a necessity of life.

Vanderstoop realistically imagines how governments may attempt to negotiate changing environmental conditions due to climate change, and the challenges of doing so without systemic change. The government seems to have the best interest of its citizens at heart, and the dystopian conditions are environmental, rather than political, although these environmental conditions negatively impact many facets of life in Alberta. The fact that the government relies on the commodification of water undermines its aims to ensure fair access to water across the province. According to the Bali Principles of Climate Justice, “climate justice affirms the rights of communities dependent on natural resources ... to own and manage the same in a sustainable manner, and is opposed to the commodification of nature and its resources” (n.p.). The imagined emergency measures act suspends individual (and therefore community) ownership of water, as there is no longer any water in the sources historically used by the right-holders; however, water is nevertheless commodified, which has negative financial and health consequences across the province. Rather than being owned by the individuals who rely on it, water transportation and sale is managed by Crystel Canada, a crown corporation.

In depicting the challenges of enacting climate justice in the province of Alberta, Vanderstoop’s novel manages to avoid the issues regarding climate justice in climate fiction outlined in the introductory chapter by envisioning adaptation, rather than widespread crisis. *Watershed* is an important book for this project because it explores the

impacts of climate change without resorting to apocalypticism. It depicts a new normal, rather than envisioning the end of the world, and does not efface historical and ongoing issues of environmental justice, particularly with regard to Indigenous peoples in Alberta. However, the question remains as to whether the adaptations depicted in *Watershed*, despite their good intentions, are just. Drought can be understood as a form of slow violence, an “attritional violence” that can lead to conflict in “situations where the conditions for sustaining life become increasingly but gradually degraded” (Nixon 3). In *Slow Violence and the Environmentalism of the Poor*, Rob Nixon notes that the poor “face the double challenge of invisibility and amnesia” as “they remain on the margins in terms of visibility and official memory” (65). This is true of both the urban and rural poor in *Watershed*, which depicts the injustice of water commodification on the poor. In Calgary, the urban poor are relegated to Tent Town where they are kept out of view, while those in rural areas are already politically and economically marginalized, a result of the lack of subsidies for Canadian farmers and the shift away from an agricultural economy. The slow violence of drought results in the loss of a way of life and intergenerational injustice in rural areas, and increasing violence and desperation in urban areas, issues which are either invisible or are deliberately overlooked by Crystel and the federal government.

The desperation of both urban and rural residents raises questions about attempts to equitably manage Alberta’s water supply. Although a Crystel spokesperson says that they want to ensure that the cisterns of southern Albertans are filled with “reasonably priced water” (188), it seems that “reasonably priced,” has different meanings for the crown corporation and Alberta’s residents. Vanderstoop’s depiction of access to and

commodification of water is nuanced, and grapples with how to implement changes deemed necessary for living with climate change. The challenges of climate justice surrounding access to water are exemplified by the fact that “security [becomes] a growth industry as mountain snowpack and ancient glaciers evaporated” (Vanderstoop 42). As the high price of water results in a state of emergency, normal law is suspended, signalling the immanence of wild time; this is how law shapes and is shaped by economics in *Watershed*. The declaration of the state of emergency signals a breakdown of law and order, and in response, the increased presence and militarization of law enforcement and, perhaps more significantly, private security firms. The fact that the security industry grows as the climate crisis intensifies signals both a breakdown of public trust in law enforcement and the desire to protect private property as unrest mounts. Securitization, or the discourse of security, is an increasingly prevalent response to climate change, and Vanderstoop explores its consequences within the province of Alberta. Security is more typically considered a national issue, but like many works of climate fiction, *Watershed* demonstrates how provincial or state borders may become more significant as climate plays an increasing role in shaping people’s lives; geography and access to water are paramount.

Security, as defined by the Copenhagen School,⁵³ is discursive. It relies on a “specific logic common to security practices in which securitizing speech acts legitimate exceptional political measures by successfully positing an existential threat to a valued

⁵³ The name Copenhagen School was coined by Bill McSweeney in 1996 (Floyd 328); it refers to a group of scholars “formerly based at the Copenhagen Peace Research Institute” who are recognized for developing securitization theory, which argues that security is a speech act (Floyd 329).

referent object” (Corry 236). Security then relies on emergency measures to protect the referent object. Increasingly, security scholars are exploring the implications of security for climate change.⁵⁴

In *Watershed*, the valued referent object is water. The logic of security and its connection to law is apparent on two levels: the personal and the provincial. On the personal level, securitization is legalized, as citizens become legally entitled to carry pepper spray in public for defence of their persons and their water. On the provincial level, Crystel responds to growing unrest by increasing the number of armed police officers at their water talks, and by partnering with the Department of National Defence to protect its assets. In response to terror threats by the NWA, the Canadian Forces begin flying additional militarized drones over the pipeline extension project, which are monitored from Ottawa and using army reserves to patrol construction sites (Vanderstoop 139). This suggests that as order breaks down in the lead up to wild time, law may attempt to assert itself by criminalizing poverty, lack of water, and homelessness, all consequences of climate change that Vanderstoop envisions. While the NWA is a criminal organization that takes people hostage and destroys infrastructure, the majority of people depicted interacting with the law are not, but have simply fallen on difficult times due to the exorbitant price of water. Nomos, then, conflicts with “eco-,” as ordinary people struggle economically and legally in desiccated ecosystems, and should they lose their home as a result, they are criminalized and marginalized.

⁵⁴ For example, Warner and Boas outline how “preventing violent ‘green’ (environmental) conflict, especially ‘water wars’ ... became a security policy priority” which led to the creation of a U.S. departmental division and the “deployment of military advisors in potential environmental conflict ‘hotspots’” (204).

In the era of climate conflict, security becomes a pre-emptive tool, focused on “prevention, probabilities, possible future scenarios and managing diffuse risks” (Corry 236); the militarized response to the water conflicts in the novel highlights the challenges of implementing climate justice and raises the question of whether such measures would be necessary, were climate justice truly being foregrounded. The logic of securitization has been criticized as fostering “us vs. them” thinking and militarization (Corry 238), suggesting that a response to the climate crisis that prioritizes securitization may be short sighted; Vanderstoop’s novel explores how securitization could, in fact, lead to conflict, rather than prevent it. In a context where emotions are fraught and conspiracies surround Crystel, securitization does little to allay concerns over access to water, and, in fact, exacerbates these fears, as groups like the NWA act proactively to prevent the loss of “their” water, using exceptional measures to keep their water “secure.” The fact that security becomes a growth industry in response to climate change suggests that the logic of securitization may have a catch-22; the need for security only increases as the security industry and mentality grows.

Ultimately, *Watershed* depicts the challenges of enacting climate justice in a region where the impacts of climate change are unequal. Despite the government’s efforts to ensure fair access for all Albertans, Vanderstoop condemns commodifying water. The conspiracy stemming from the development of a crown corporation to manage water, and prices that leave some Albertans high and dry, point to the need for alternative solutions for managing limited natural resources. This need is reinforced through the fact that the policies Vanderstoop envisions lead to additional tensions between northern and southern Alberta, resulting in securitization, and leading to additional violence and instability in

the region. The conflict over water in the novel is dystopian, yet Vanderstoop does not rely on structural appropriation or apocalypticism to convey the urgency and severity of climate change. Thus, *Watershed* takes a unique approach to promoting climate justice. By focusing on how procedural equity and participatory politics can help counter unjust neoliberal policies, *Watershed* realistically grapples with the challenges of enacting climate justice. Further, the novel's focus on domestic life makes clear why climate justice should matter for all Canadians. Climate change will impact all facets of life, as an eco-nomic reading shows. *Watershed's* realism also points to the challenges of enacting ecological and climate justice, as the proposed solutions come too late, and fail to take into account how local issues are imbricated in larger systems. The pipeline comes too late for the Van Bruggens, tar sand reclamation projects may introduce new issues, and important questions about food production and water commodification are left unanswered. Nevertheless, *Watershed* raises these important questions, encouraging the consideration of how these issues could be mitigated by an earlier response to the climate crisis, as well as raising questions of climate justice in the Canadian context, and for bringing these issues home through its focus on the domestic.

Chapter Four

Water In Wild Time: Climate In/Justice and Representation of Crisis in *The Water Knife*

In the first two chapters I read works set on the cusp of wild time, arguing that the continued commodification of natural resources has problematic implications for climate justice. Both *The Back of the Turtle* and *Watershed* represent issues of climate, environmental, and ecological injustice that occur through the commodification of waste, water, and oil, and how these issues will be exacerbated with climate change. They point to the need to combat climate injustice in the present, lest such injustices continue and worsen as the climate crisis intensifies. This chapter, about Paolo Bacigalupi's *The Water Knife*, and the following chapter, on Sherri L. Smith's *Orleans*, explore works that are more recognizably cli-fi, as they are set squarely in wild time: social systems, democracy, and many institutions have collapsed as a result of the climate crisis, leading to a state of emergency. Through these works, I consider the implications of wild time for climate and environmental justice, building on my analysis of commodification in the previous two chapters to look at ecological apartheid, climate migration, and medical and environmental racism.

Bacigalupi is a well-established name in the cli-fi "canon," making his dystopian thriller, *The Water Knife*, an exemplary work through which to consider questions of genre, canon building, and climate justice in climate fiction. Bacigalupi's work is known for its focus on the effects of climate change and environmental sustainability, to the extent that Bryan Yazell argues that "Bacigalupi's body of work has become synonymous with cli-fi itself" (156). Matthew Schnieder-Mayerson elaborates, arguing that "Bacigalupi has established himself as among the most innovative, entertaining,

provocative, and widely read American authors of environmental literature in the twenty-first century” (“Just As” 339). In the same article, Schneider-Mayerson identifies *The Water Knife* as a rare work of climate fiction that is explicitly concerned with climate justice, given its focus on climate refugees. My reading of Bacigalupi’s novel builds on and responds to Schneider-Mayerson’s claims, and suggests that its engagement with migration and climate change within a U.S. American context obscures the role played by the United States in creating the very conditions of climate injustice the novel critiques. I include this work, even though I point to some of its shortcomings in terms of environmental justice, because it has been flagged in cli-fi scholarship as one of very few works of cli-fi that engages with climate justice.

The Water Knife depicts a dystopian Southwest United States rendered nearly uninhabitable due to climate change and wild time. The federal government appears to have disintegrated, and militarized groups vie for control, power, and access to water, creating dystopian social and environmental conditions. As the title suggests, water drives the plot; as drought intensifies, three factions vie for access to the Colorado, the only viable source of drinking water in the region: Phoenix, California (AKA the Calis) and The Southern Nevada Water Authority (often referred to as Vegas and headed by Catherine Case). In this context of drought and climate change, water is commodified, and access to water is directly tied to class and citizenship.

The novel is focalized through three characters with vastly different politics, class positions, racial identities, and reasons for being in the drought-shaped region. Lucy is a White, Pulitzer Prize winning journalist, who is in Phoenix by choice; her family lives in the Pacific Northwest, which is lush and green, yet Lucy remains as the situation in

Phoenix becomes increasingly dire, dedicated to telling the story of its collapse and the material consequences for those who live there. Maria is a sixteen-year-old, Latina Texan refugee, orphaned and trying to survive through sex-work and illegally selling water. Her family waited too long to escape Texas and could only get as far as Phoenix before neighbouring states implemented tight border controls and anti-immigrant policies. Finally, Angel is the titular water knife, who works for Catherine Case, the head of the Southern Nevada Water Authority (SNWA). Angel is a Mexican ex-convict, hired by Case out of prison and is essentially her enforcer; he is responsible for enacting the violence required by Case to maintain her hydrological and political control.

To fully explore Bacigalupi's treatment of climate justice, my analysis considers not only what is present within the text, but also what is conspicuously absent. These absences are telling about U.S. American cultural anxieties in the context of climate change and suggest that even as the content of the novel expresses anxiety that climate change may result in the loss of American exceptionalism, the belief that America is exceptional may persist and have implications for climate justice. Absent from *The Water Knife* is a sustained exploration of colonialism, despite the important role that Indigenous water rights play in the novel. Also absent are Mexican migrants, despite Bacigalupi's reliance on stereotypes about Mexican migrants to set the dystopian scene. These absences paint America not only as a victim of climate change, but also an undeserving victim of neocolonialism, simultaneously pointing to America's fragility in the face of climate change and reinforcing its power, through what David M. Higgins calls "imperial

masochism” (*Reverse 2*).⁵⁵

While *The Water Knife* is concerned with representing the struggle of climate migrants both through its plot and its references to media designed to decrease xenophobia, focusing on these issues exclusively in the context of the United States neglects consideration of how that country’s policies have been responsible for historical climate apocalypse and forced displacement/migration both within its own borders, as well as in Mexico, to its south. Although *The Water Knife*’s plot hinges on Indigenous water rights that have the potential to save Phoenix from drought, the novel also obscures the history of water appropriation that led to the forced migration of the Pima tribe from their traditional territory. Furthermore, the dystopian conditions in the novel are built using racist stereotypes of Mexico and Mexican migrants and on fears of a neo-imperialist China and loss of U.S. American hegemony as a direct result of climate

⁵⁵ Per Higgins, “imperial masochism” refers to “the way subjects who enjoy the advantages of empire don the fantastical role of colonized victims to fortify and expand their agency” (*Reverse 2*).

change.⁵⁶ While the novel does emphasize the need for climate justice from a class-based perspective through the exclusionary arcologies,⁵⁷ and Maria Pérez Ramos has praised the novel for including a “multi-ethnic coalition” of characters fighting the consequences of climate change,⁵⁸ in other ways it falls into the trap that Hee-Jung S. Joo has identified: representing the end of the white world as the end of the world (75). In its representation of the end of the white world, the novel points to how the depicted dystopian conditions are not unprecedented; through its references to the Hohokam people, as well as through its depiction of climate migrants’ reliance on stereotypes about Mexican migrants in America, the novel obliquely points to how America has, in fact, been responsible for creating dystopian conditions for “Others,” since before it was America.

Despite its awareness of historical precedents, the dystopian setting of *The Water*

⁵⁶ While Hannah Boast and Sharae Deckard, who I rely on in my analysis below, trace a history of China’s appearance in hydrological fiction, science fiction also has a history of relying on China and Japan, or Asia more broadly, as a threatening Other, while also relying on orientalist tropes. Carter F. Hason traces the relationship between the “racial tensions of 1920’s America and the ‘Yellow Peril’ focus of the emerging science fiction” (312). This tradition, as in *The Water Knife*, constructed China as an imperial threat, as “American [SF] writers appropriated the ‘invasion motif’ from British writers, who had imaged German invasions to express their nationalism (Hanson 312), but American authors instead envisioned attack by “Asiatic hordes” (Clareson qtd. in Hason 321). As in Bacigalupi’s novel, in the SF of the 1920s, America was colonized by “the Asians” (Hanson 326). More recently, cyberpunk fetishizes Japan and Asia more generally, in what David Morely and Kevin Robins call “techno-orientalism” (T. Rivera 71). George Yang argues that despite cyberpunk’s message that “technological advancement doesn’t necessarily lead to a higher quality of life” (Yang n.p.) its themes of “class and social inequality” may be lost in the genre’s fixation on a “foreign, racialized other, whose sudden capitalist dominance is both uncanny and extra-terrifying” (T. Rivera qtd. in Yang n.p.). This can also be said of *The Water Knife*.

⁵⁷ “Arcology” is a portmanteau between architecture and ecology, and designates the “triple filter apartments” (Bacigalupi 89) available to those who can afford them in Las Vegas, Phoenix, and California. These buildings are closed systems, where water is recycled, and contain everything a person needs to survive in the desert.

⁵⁸ Maria, Angel and Lucy are joined by Toomie, a Black man and Maria’s neighbour, rounding out the “multi-ethnic coalition.”

Knife is developed through fears of the collapse of the United States and the novel pays little attention to issues of climate justice beyond the nation's borders. As a work of cli-fi that also participates in a history of noir works about water rights in Los Angeles,⁵⁹ *The Water Knife* appeals to a wide range of readers, seeking to educate about climate change and create empathy for climate migrants; however, the novel's US-centric focus falsely suggests that climate change is a problem of the future, in that it minimizes the country's colonial past, as well as how the conditions depicted in the novel are the current reality of countries such as Mexico. Furthermore, it expresses not only anxiety that climate change will create conditions like those currently experienced in Mexico, but also anxiety that climate change unsettles U.S. American hegemony, forcing the United States to rely on aid from countries it formerly dominated, as well as rendering it vulnerable to Chinese colonization. By considering what is excluded from Bacigalupi's novel, in addition to what appears in the text, it becomes apparent that focusing only on climate change in a U.S. American context is a means of trying to maintain hegemony, even as it is clear that it is these very hegemonic lifeways that have led to the crisis depicted in the novel.

1. Water / Knife: Cli-Fi, Noir, and the Violence in/of Genre

Although in what follows I will complicate the idea that *The Water Knife* promotes climate justice, I nevertheless include it in this project because it is one of the few works of cli-fi that critics have identified as focusing on climate justice. Furthermore, unlike some of the other authors whose works are included herein, Bacigalupi is an extremely well-known author within the genre. In his exhaustive survey of climate

⁵⁹ I return to this analysis later in this chapter, in my discussion of genre.

fiction, *Anthropocene Fictions*, Adam Trexler identifies Bacigalupi's novel *The Windup Girl* as an early example of climate-change fiction in a spike of cli-fi publication around 2008, which he traces to "George W. Bush's reelection in late 2004, when there appeared to be little hope of American leadership on environmental issues" (8). Trexler categorizes Bacigalupi's work as belonging to "a new body of climate fiction...that begins to describe the complex reconfiguration of human ecology" which "integrates new concerns into an Anthropocene age that has already arrived" (Trexler 26). While Trexler bases these claims on *The Windup Girl*, these concerns are equally visible in *The Water Knife*— although it is situated in the near future and not the present, it is clear through the state of wild time in the novel that the Anthropocene or the effects of climate change are already here; its setting in the near future turns the present into "the determinate past of something yet to come" (Jameson "Progress" 152). By defamiliarizing the present and dominant expectations of the near future, Bacigalupi's work allows contemplation of the present moment, ordinarily "unavailable to us for contemplation because the sheer quantitative immensity of objects and individual lives it comprises is untotalizable and hence unimaginable" (Jameson "Progress," 152). In this case, defamiliarization prompts questions about how the effects of climate change are already being felt, and critical thinking about the viability of climate change solutions that are not available to everyone.

Arguably, even more than *The Windup Girl*, *The Water Knife* warns that the effects of climate change are not limited to a *potential* future but are all but guaranteed. Whereas *The Windup Girl* is clearly set in the future, signaled by future technologies such as human-like robotic AI and genetically engineered megodonts (elephantine animals used in energy production), as well as a global restructuring that sees Thailand

replace America as the global superpower, *The Water Knife* is set in a world that is more recognizable. Although America is collapsing in the novel, and China is rising as a notable power in the text, Bacigalupi does not include science-fictional technologies, and the global changes in the novel (i.e. climate change and increasingly militarized borders) are clearly connected to an early twenty-first century world. The novel's nearly recognizable setting is an important element of my analysis as it situates the work not only in a recognizable world, but also in a historical context of ongoing struggles against drought and resource colonialism.

The dystopian environmental conditions in Phoenix are reflected by online discourse in the novel, with popular hashtags reflecting the cynicism of Phoenix's poorest residents, as seen in the following post: "How you know you're at the end: You're drinking your own piss and telling yourself it's spring water. #PhoenixDowntheTubes #ClearsacLove" (Bacigalupi 25). This post makes use of the popular hashtag "PhoenixDowntheTubes," indicating the widespread feeling that Phoenix is on the verge of collapse, as well as referring to the Clearsacs used by characters who cannot afford water to filter their urine. Texas has already collapsed, and the similarities between Phoenix and pre-collapse Texas foreshadow not only the collapse of Phoenix, but the new realities of global warming. Pulitzer Prize winning journalist Lucy believes that her journalism on Phoenix's collapse is "excavating a future as it yawned below" and feels "as if she were saying, *This is us. This is how we all end. There's only one door out, and we all use it*" (Bacigalupi 26, italics original). Like Lucy's journalism, Bacigalupi's novel connects the tangible local effects of climate change to the broader, global issue.

The Water Knife is set squarely in wild time, the time of runaway climate change

that Nicole Rogers argues is best explored through climate fiction (128). As Rogers writes,

Climate fiction generally does not provide narratives of planetary redemption. In much climate fiction, the reader...is plunged into the post-midnight zone, into a world irreparably damaged by climate change. The possibility of individual or communal redemption is, however, another matter. Such climate fiction addresses the question of whether humanity has any sort of future in wild time, and what such a future might look like. (128)

In *The Water Knife*, the future relies on access to fresh water, and the novel grapples with how to distribute a scarce natural resource. As indicated through Lucy's comments about her journalism, above, Bacigalupi is interested in "excavating a future" (26); however, as I argue, his vision for the future is ultimately cynical, and offers little chance for individual or communal redemption.

While Rogers' claims about climate fiction and representations of climate change call for an investigation into the genre(s) of Bacigalupi's novel, Bacigalupi himself is wary of generic labels, saying in an interview with Amelia Urry that any label is both "an invitation and a wall" because science fiction "conjures certain images in people's head...Similarly with cli-fi...for someone who either thinks that global warming is a farce or who just doesn't like political writing generally, or thinks that cli-fi indicates political agenda writing, and therefore didacticism, and therefore stupidity, you're in a different space." He thus prefers to think of his writing as "broken" or "accidental futures" (Urry 7). Despite Bacigalupi's resistance to generic labels, *The Water Knife* is most frequently described as cli-fi as it belongs to a "distinctive body of cultural work

which engages with anthropogenic climate change, exploring the phenomenon not just in terms of setting, but with regard to psychological and social issues” (Goodbody and Johns-Putra 2). Bacigalupi explores the social issues that emerge through drought, namely climate justice and access to water, as well as the attendant psychological issues, as chapters are alternately focalized through Maria, Lucy, and Angel, showing the impacts of class and social positioning, and the desperation that emerges as the crisis intensifies.

Although water shortages in the Southwest states and resulting conspiracy are not new (as allusions throughout the text to Polanski’s *Chinatown* and the frequent references to Marc Reisner’s *Cadillac Desert* show), in *The Water Knife* they are directly linked to climate change. This is why the majority of scholarship on Bacigalupi’s novel is framed through cli-fi, despite the novel’s participation in other genres. Drought, in *The Water Knife*, clearly happens in a broader context of climate change; it is not a localized issue, and it is not the only issue confronting a collapsing America. While drought devastates the Southwest, tornados ravage the Midwest, floods destroy both Mississippi and Manhattan, and in the Gulf, there are not “enough FEMA staff to handle [the] hurricanes” (Bacigalupi 167). In fact, it is this context of catastrophic climate change impacting all areas of the United States that makes the drought depicted in the novel so catastrophic. Phoenix is “eternally hazed” by dust and smoke from California forest fires (Bacigalupi 69), and “Snowpack up in the Rockies...might as well be zero...all the dust is speeding snowmelt, so even when [there is a year with good precipitation], it melts too fast or else evaporates” (Bacigalupi 59). Conditions are so bad that Lucy questions the use of the word “drought” to describe them: “*drought* implied that *drought* could end; it was a

passing event, not the status quo” (Bacigalupi 27). Climate change intensifies the drought, not only through the typically dry conditions in the region, but through broader, ecological connections, such as lack of snow in the Rockies; the widespread effects of climate change create a new normal, or a new status quo, as Lucy puts it.

As this comment by Lucy indicates, especially when combined with the clear attention to genre, Bacigalupi’s novel concerns itself with the representation of climate change and its associated effects, such as climate migration. The theme of representation is foregrounded in the novel in three ways: through Lucy’s journalism, through Angel’s favourite television show, *Undaunted*, as well as through comments made throughout by other characters. As a journalist, Lucy struggles with conflicting feelings regarding her work on the collapse of Phoenix. Is she simply writing “#CollapsePorn” (Bacigalupi 26)? Or does her writing serve a larger purpose? It is possible that Bacigalupi himself grapples with this conflict, and as Schnieder-Mayerson points out, the fast-paced, violent and cynical plot of *The Water Knife* was felt to be a distraction for many readers; while scholars and critics read the novel as a “blunt message about the threat of climate change,” his survey of eighty-seven readers of the novel found that “a minority of readers agreed” with this assessment. As one conservative attorney who read the novel put it, the message of *The Water Knife* is that “we can ‘trust people to behave in their own self-interests’” (Schnieder-Mayerson 354). If only “a minority of readers” took away a message about climate change, what is the value of cli-fi? Is it, like Lucy wonders of her own journalism, nothing more than collapse pornography? Or can cli-fi help to “excavate a future” (Bacigalupi 26)?

Lucy ultimately contends that “she wasn’t so much eroticizing a city’s death as

excavating a future as it yawned below them. As if she were saying, *This is us. This is how we all end*” (Bacigalupi 26 emphasis original). However, Lucy’s view that she is “excavating a future” contrasts with her belief that “this is how we all end,” a view which suggests a pessimistic apocalypticism— a representational challenge with which authors of cli-fi also must contend. This delicate balance between representing apocalyptic, climate-changed futures, and giving readers hope has been commented on by several scholars. As Buchell, Buisson, Workman and Colley argue, “alarmism is generally an ineffective way of creating urgency... While alarmist language can attract people’s attention to climate change, it rarely leads to genuine personal engagement,” instead making people feel hopeless, overwhelmed, and distanced from the issue (43). Whiteley, Chiang, and Einsiedel agree, noting that “negative expectations in the form of apocalyptic scenarios may not necessarily function to positively engage the public in climate change issues or activism” (31). In the case of *The Water Knife*, it is possible that the novel’s cynicism interferes with its potential to promote change, despite Bacigalupi’s desire to write a work of cli-fi that would foster empathy for climate migrants.

In addition to including a metanarrative about representations of climate change through Lucy’s journalism, *The Water Knife* explicitly links art and climate justice through Angel’s favourite show, *Undaunted*. Bacigalupi’s novel is clearly concerned with representing the plight of climate migrants, or refugees, as seen through Maria’s narrative, and as Bacigalupi himself has stated in interviews. Bacigalupi makes a meta-commentary on this role of fiction through *Undaunted*, whose protagonist, Relic Jones is an “ex-recon marine” who “returned from his Arctic tour to his home on the Texas coast, only to find his family missing from a hurricane” (Bacigalupi 135). Angel loves Relic,

relating to the character's "soul" and "depth," feeling that like Angel, Relic (and Tau Ox, the actor who plays him) have also "been through the wringer" (Bacigalupi 135). He finds the character so relatable that he is surprised to learn that the show is propaganda, funded by the "UN High Commissioner for Refugees" in an attempt to make the plight of Texan refugees more relatable to "Americans in the Northern States" (284). It is clear from interviews that Bacigalupi aims for *The Water Knife* to have a parallel impact on readers.

Furthermore, Bacigalupi's novel can also be read as commentary on the importance of cli-fi as a genre, based on comments made by characters in the novel. Catherine Case, Queen of the Colorado, claims that the reason that people fail to prevent catastrophes is because they don't see them coming, citing a theory that suggests "that if we don't have the right words in our vocabularies, we can't even see the things that are right in front of our faces. If we can't describe our reality accurately, we can't see it" (Bacigalupi 59). This argument is reinforced through Maria's plot line in Bacigalupi's novel. Maria is the only character who can truly see the world for what it is; having grown up during the novel's dystopian times she has no historical reference for anything better. Maria blames her father's death and failure to escape to a better life on his "old eyes," a problem shared by all the adult characters in the novel. Like Maria's father, "Toomie had fooled himself the way her father had. Somehow they hadn't been able to see something that was plain as day, coming straight at them" (Bacigalupi 92). Whereas all of the other characters in the novel make frequent reference to Marc Reisner's *Cadillac Desert: The American West and Its Disappearing Water*, Maria is not interested in the work of history, telling Ratan: "I don't need books about how things used to be.

Everybody talks about how things used to be. I need a book about how I'm supposed to live now" (Bacigalupi 181); this comment suggests that a work of cli-fi could be that book. By depicting climate-changed futures extrapolated from information such as emissions and climate data from the author's present, works of cli-fi could be the book Maria desires; cli-fi suggests that change is needed if we want to avoid climate catastrophe, or alternatively, can offer models of what surviving the catastrophe could look like.

In addition to being categorized as cli-fi, *The Water Knife* has also been described as "pulpy" (Campbell n.p.) and "noir" (Yazell 167). Noir works well as a genre addressing the impacts of climate change due to its "infrastructural ethic" (Durham qtd. in Rowan 391); climate change's effects on infrastructure are apparent in Bacigalupi's novel, as access to water through infrastructure and legal rights underpins all other issues in the novel. Furthermore, Matthew Schneider-Mayerson suggests that Bacigalupi's stylistic choices may have been deliberate to "[facilitate] *The Water Knife's* ability to attract moderate and conservative readers" ("Just As" 342), not only readers who already believe in climate change, thereby allowing Bacigalupi to attempt to get his message about climate justice to a broader audience.

As a climate change thriller, *The Water Knife* draws on elements of noir fiction such as a subjective point of view, the "shifting and unstable of the protagonist, and the ill-fated relationship between the protagonist and society" (Horsley 137). As Schneider-Mayerson writes:

The novel is an effective exercise in placing a pulpy, hard-boiled, and often violent thriller in a climate-changed future. It keeps the pages turning through a

central who-dunit, conspiracies galore, shifting allegiances, and a cliff-hanger at the end of every chapter. As a speculative environmental thriller, *The Water Knife* carries the potential to reach a broad audience and seems to have succeeded in doing so. (“Just As” 339-40)

The novel’s noir elements are primarily reflected through the water knife, Angel’s, storyline; he is the character whose roles “shift” between villain and victim and whose relationship with society is “ill-fated” (Horsley 137). At the beginning of the novel Angel is portrayed as aggressive and powerful, cutting Carver City’s water and working as Catherine Case’s right-hand man. However, as the novel progresses and conspiracies around the mysterious water rights deepen, Case turns on Angel, cancelling his credit cards and attempting to kill him, believing that he has betrayed her. After Angel learns that another character has betrayed him and Case, going behind their backs and trading with the Calis for the mysterious water rights, Angel kills him to save Lucy, who is being tortured for information, and is forced to go into hiding with her. As the conspiracy thickens and everyone is after the water rights, it seems that the entire society is set on preventing Angel from finding the water rights and clearing his name with Case.

In his survey of eighty-six readers of *The Water Knife*, Schnieder-Mayerson found that Angel’s noir plot of violent intrigue resonated with “males, moderates, and conservatives” who were drawn to his “masculine aggression” (“Just As” 351). Building from this data, he suggests that “the hardboiled thriller style of *The Water Knife*... might be seen as effective at appealing to moderates and conservatives, whom the author can then educate about the dangers of climate change and the likelihood of climate injustice” (“Just As” 355). Although *The Water Knife* is most frequently described as a work of cli-

fi, the noir elements of its plot make the novel appealing to a wider range of readers, while simultaneously situating the novel in longer history of water conspiracies, pointing to how mismanagement of the resource will be exacerbated by climate change.

Noir conventions do more than make the novel more accessible. Jamin Creed Rowan looks at the utility of noir conventions in the Anthropocene, as noir and hard-boiled crime fiction “enable readers to perceive the ways in which extractivist infrastructures are frequently built upon and facilitate the exploitation of both human and environmental resources” (391). Rowan notes that these genres expose “the environmental costs of US capitalism’s extractivist infrastructure” through their attention to “the networks through which people, objects, information, and energy move and connect” (393). Bacigalupi’s novel makes visible not only the water infrastructure that makes life in the desert possible, but also the freeways, apartment complexes, and gas stations that characterize modern life in the Global North, as well as the “disaster barrios” (Bacigalupi 257) that emerge due to drought in the novel. Its emphasis on extractivism and infrastructure, through its use of noir conventions, facilitate *The Water Knife*’s critique of the unequal impacts of climate change due to class, race, and other forms of privilege, and make visible otherwise overlooked elements of the infrastructure of extraction that would be mundane for contemporary readers. All of these interlocking elements of climate justice hinge on access to water, not only for individuals, but also for states, and this access occurs primarily through the novel’s central infrastructure, the Central Arizona Project (CAP), which transports water from the Colorado River.

Rowan suggests that *The Water Knife* “invite[s] readers to see capitalism’s extractivist infrastructure as a type of material and intellectual entrapment that ultimately

undermines the common good and the planetary commons” (394). Understood in these terms, or expanding these terms to imaginative entrapment, it is possible to understand the characters’ (and Bacigalupi’s) recourse to armed life-boat politics as a result of extractivist infrastructures shaped by capitalism; in a capitalist system, there are no other options, and so beyond the level of plot, Bacigalupi may be making a more covert critique of capitalism. Bacigalupi’s future Phoenix “collapses upon its residents by failing to provide them with viable alternatives to a lifestyle dependent upon the intensive consumption of fossil fuel and water” which ultimately “collapses the realm of agency within which its residents operate, constricting their ability to adapt to new environmental circumstances” (Rowan 405). Although in later chapters I push back against our purported inability to imagine an end to capitalism, *The Water Knife* reflects imaginative entrapment and constrained agency, not only of its characters, but also of those who write about climate change.

As a work of noir cli-fi, *The Water Knife* is critical of responses to climate change on two levels, using two different generic conventions. Like much cli-fi, noir, too, offers a socio-political critique; as Robert Snyder notes, American noir fiction “extended the modernist sense of fragmentation, entropy, alienation, and despair” (12) through its “presentation of shadowy business interests and organized crime” (Yazell 167). Rowan also notes that in the 1960s and 70s, authors of noir turned their attention to advancing an “environmental paradigm” (398), pointing to Roman Polanski’s *Chinatown* as an exemplary work that “showcase[s] the hard-boiled crime narrative’s evolution toward a sharper and more deliberate environmentalism—an environmentalism that remains particularly attentive to infrastructure and that is, as a result, poised to interrogate the

crimes at the heart of the Capitalocene” (399). More specifically, *Chinatown* represents water infrastructure, as access to water was instrumental in the development of Los Angeles, as depicted in Polanski’s film. Bacigalupi’s novel, then, extends this tradition. Not only does it depict the “crooked society” of the Southwestern United States, which can be understood as one of the novel’s antagonists, but it also advances the environmental message that action must be taken to prevent the consequences of climate change that it depicts.

Noir has a history of dealing with water conspiracies and intrigue, famously seen in *Chinatown*, inspired by the California water wars in the early twentieth century. Ian S. Scott traces *Chinatown’s* influences and influence, writing that despite its basis in historical events the film presents a “prophetic vision of L.A. to come” while simultaneously reflecting the recent developments in the region (Scott 3). He argues that due to “the prophetic and timeless quality of the pictures” the film has become a “historical signifier for a series of developments that...delineate the identity and outlook of California in general, and Los Angeles in particular” (Scott 4). *Chinatown’s* formal and thematic influence on Bacigalupi’s novel is clear. As Deckard writes of *Chinatown*: “the ‘water grab’ is the structuring violence in the film noir, exceeding the individual crimes that the investigator sets out to track. The overarching ‘mystery’ in need of disclosure is the sacrifice of the public good of the rural hinterland to the profit of the LA city-system” (114). *Chinatown* is based on the Owens River Valley conflict in the early twentieth century, a land deal that resulted in water for Los Angeles by purchasing thousands of acres of land in the San Fernando Valley and water from the Owens River, to the detriment of farmers in Inyo County, California, who lost access to water that had

previously been available (Graham). Bacigalupi's novel reflects this history in terms of content and genre, and the parallels suggest that the connections between capitalism, injustice, and development linked to access to water in the region cannot be reduced to climate change alone, but require a broader reconsideration of capitalist expansion in the face of limited resources.

Generically, Bacigalupi's use of noir tropes help situate *The Water Knife's* plot as a familiar story to readers acquainted with the history of Los Angeles, which as Schneider-Mayerson notes, may help attract readers skeptical of climate change or cli-fi.

Furthermore, as Horsley writes of noir, while the "forces acting on the noir protagonist can be manifestations of life's randomness...there also tends to be a strong sense that his fate is driven by the injustice and failures of his own society" (137). In *The Water Knife*, the foundational injustice is lack of access to water, which is both a social and environmental issue, as my brief analysis of *Chinatown* suggests. Thus, the genre can help drive home the novel's social critique, even if readers are skeptical of its environmental critique.

2. Class and Migration in *The Water Knife*

In *The Water Knife*, drought and desertification lead to the collapse of the Southwest U.S., and the commodification of water deepens social and class divisions. The Southwestern United States are nearly uninhabitable, and neighbouring states are on the verge of war over access to the Colorado River, which is the only remaining water source. Climate change induced drought and increased temperatures have caused all other water sources to dry up, including aquifers. Conditions are so dire that Texas has

collapsed and Texan refugees flood the surrounding states after “the guardies had come ... and said everyone had to leave” because water would no be trucked to the state” (Bacigalupi 180).⁶⁰ Only the wealthy are immune to the effects of climate change; they live in arcologies where recycled, filtered water is available, while the poorest characters in the novel, climate refugees from Texas, use Clearsacs to filter their urine in order to drink the recycled water. The novel is set in Phoenix, which is on the verge of following in Texas’ footsteps; collapse is imminent if a water source cannot be found. Unless something changes, the only way to survive will be to afford a luxurious apartment in an arcology, where there is “clean air, perfectly recycled water...farms, everything...needed to survive, even if Phoenix [is] going to shit right outside” (Bacigalupi 89).

Despite the lack of water rendering the Southwest nearly uninhabitable, development in desert cities persists, in both Bacigalupi’s novel, and in the real world.⁶¹ So, too, do corruption and conflict over water, as I outline above in my discussion of noir. Several recent works of climate fiction explore the potential of water wars breaking out as a consequence of climate change, including *Watershed* and *Corvus*, both of which I read in this project. Water wars and lack of water more generally lead to climate migration in these novels, and in the real world. In *The Water Knife*, Michael Ratan outlines the problem: there are simply too many people “fighting over too little water” (Bacigalupi

⁶⁰ “Guardie” is the colloquial term used in the novel for members of the Nevada National Guard. Because Texas relied on water from the Colorado River, which is controlled in the novel by Nevada, the guardies shut off water to the state, leading to its devastation.

⁶¹ For a contemporary example, see the January 16, 2023 *Washington Post* article, “Arizona City Cuts Off a Neighborhood’s Water Supply Amid Drought” by Joshua Partlow, which details the consequences of development in a desert community near Scottsdale Arizona, which disturbingly echoes Bacigalupi’s fictional projections of Phoenix’s future.

45). The only solution to this crisis depicted in Bacigalupi's novel is the development of arcologies, which are constructed in arid regions as the desert becomes uninhabitable. Arcologies are self-sustaining buildings from which no resident will ever have to venture outdoors. In the arcologies, "life could still be good, even in Hell," thanks to "A/C and industrial air filters and 90 percent water recycling" (Bacigalupi 349). Arcologies, then, allow the development of the desert to persist, despite climate change and earlier warnings against the sustainability of desert life. The arcologies reveal the contradiction of continued development in the region, as seen through Angel's conceptualization of them. While he condemns states like Nebraska, Kansas, Oklahoma and Texas for "pretending greenery and growth as they mined glacial water from ten-thousand-year-old aquifers" and dreamed of "being different from what they were" (*Water* 80), Angel sees the arcologies as "offering salvation" through "technological wonders" (*Water* 52). Angel does not see the contradiction of his own thinking; he does not recognize that arcologies enable Phoenix and other regions in which they are being developed to likewise pretend to be different from what they are, allowing the region's wealthy residents to continue living as normal, while ignoring the consequences of climate change. In terms of climate justice, it is important to note that it is only the wealthy residents of the Southwest who are able to ignore the consequences of climate change and continue living with minimal adjustment to this new reality. The arcologies are prohibitively expensive, and thus introduce Bacigalupi's primary focus in terms of climate justice: class and privilege and how they facilitate access to the necessities of life in the midst of the climate crisis.

Bacigalupi makes his most evident critique of environmental injustice through the arcologies. Maria Pérez Ramos writes that Bacigalupi's arcologies are a "symbol of eco-

apartheid” (47), a term used by environmental justice activists to refer to “the increasingly unequal distribution of environmental benefits and burdens” (Checker 391). The arcologies prove Sharae Deckard’s point that “water captured by extraction schemes no longer flows freely, but rather ‘flows uphill, towards money’” (Shiva qtd. 111). Those unable to afford a luxurious arcology apartment constantly contend with the drought and dust; the blocks around the water pumps are the only “oases of life and activity in the drought savaged wilderness of the Phoenix suburbs,” and they are clogged with refugees and migrants (39). Many of the people living in the Phoenix suburbs are Texan refugees, whose situations are rendered even more precarious by their limited access to adequate housing and the exorbitant price of water, pointing to how the effects of climate change are compounding, particularly for people who are already in precarious situations. Texan refugees, who typically belong to the lowest class in Phoenix, are often forced to choose between water, housing, and other necessities, pointing to how climate change is a humanitarian issue.

Many Texan refugees and others struggling to make ends meet live in makeshift slums; the contrast between life in an arcology and life in a slum is evident when Maria and her friend Sarah spend a night at Ibis executive Michael Ratan’s Taiyang apartment.⁶² At home in their shared shack, the girls wake up with gummy eyes and hacking coughs (73), beat their clothes with sticks each morning to remove the dust, and use Clearsacs to extract water from their urine, which contrasts drastically with life in the Taiyang. In Ratan’s apartment, Maria sits on his toilet, “hyperaware of the cool porcelain against her

⁶² The Taiyang is a Chinese corporation that is building arcologies in the southwestern desert; throughout the novel, “Taiyang” is used interchangeably to refer to the corporation, and its finished arcology.

skin as she peed, trying to remember the last time she hadn't used the squat latrine out behind her and Sarah's basement hideout," relishing in the water used to flush (Bacigalupi 176). Maria is awed by the water that pours out of Ratan's tap, drinking three glasses of water in a row before taking a shower, where "gallons and gallons and gallons of water poured over her. More water than all of her score at the Red Cross pump" (176). Maria also takes advantage of the shower to scrub her underwear clean, wishing she had somehow been able to sneak in her other laundry, too. The fact that Maria must painstakingly save for a few liters from the metered water pump, and even then only has enough water to drink or sell, and none for bathing, whereas Ratan has gallons of water available to him based on his ability to afford a Taiyang apartment, not only points to the injustice of the commodification of water, but also the privilege afforded to the wealthy, who are not forced to pay for individual liters of water, but are afforded unlimited access, even in times of drought. This chapter is the only time when life in an arcology is described in any detail, and its focalization through Maria brings home the inequality and "eco-apartheid" that the arcologies represent.

Because of its representation of the unequal impacts of climate change based on class and its depiction of climate migration, Bacigalupi's novel has been identified as one of a small group of works of climate fiction that promotes themes of environmental justice. Schneider-Mayerson writes that *The Water Knife* is "unusual in its spotlight on climate justice and the plight of climate migrants" ("Just As" 338), and Pérez Ramos suggests that Bacigalupi presents a "multi-ethnic coalition...implying...that cross-cultural communication is key in the path to a future of inclusive, sustainable, and just urban plans" (60). While both of these comments are strictly true, I build on and complicate

Schnieder-Mayerson and Pérez Ramos' claims about Bacigalupi's message of environmental justice, which notably focus on race and migration. Although *The Water Knife* undeniably points to the importance of climate justice in terms of climate migration for the migrants depicted in the novel, it is important to note that all of these migrants are Texan or Zoners (from Arizona), migrating *within* the United States. Bacigalupi relies on stereotypes of Mexican migrants, and applies these stereotypes to his Texan refugees, but the novel does not imagine the consequences of the battle for water in the American Southwest on those south of the border who rely on the same water sources, and who will feel the consequences of climate change earlier and more severely than their more northerly counterparts.

In order to understand the connections between water, migration and environmental justice in *The Water Knife*, it is helpful to consider the novel's setting in the midst of wild time, which can potentially account for the myriad of environmental justice issues in Bacigalupi's novel. During wild time, divisions between and within communities can become stark. Bacigalupi's novel demonstrates division along class and racial lines, emphasizing the lack of human rights protections for the most vulnerable people through their lack of access to potable water. In her work on "water wars" novels, Hannah Boast outlines how "water is central to the production of modern liberal citizenship," linking "the relationship between a domestic water connection and national inclusion, with water materially and metaphorically connecting members of a national community while offering evidence of their protection by the state" (5). Both the ability of citizens to have a domestic water connection and the affordance of national inclusion and state protection from this connection have broken down in *The Water Knife*; the state

no longer protects its members, but rather its own interests, and the nation has all but collapsed; it is evident from the closed and militarized borders between states that national citizenship no longer offers any protection—the climate crisis has led to the breakdown of the national community shaped by water connection, outlined by Boast. This has serious implications for climate migrants, who, no longer afforded protection by their national citizenship, find themselves unwelcome or criminalized as they migrate seeking access to water.

While climate change has the potential to lead to wild time in and of itself, as resources become scarce and infrastructure is damaged, wild time can also be ushered in by political responses to the climate crisis, as “climate exceptionalism and official recognition of the climate emergency can potentially usher in the totalitarian state, setting aside the rule of law and the erosion of human rights safeguards” (Rogers 156). Giorgio Agamben’s analysis of the state of exception helps make sense of how this occurs: in totalitarian states, the exception becomes the rule. The state of exception describes the attempt to impose order over chaos, as because “there is no rule that is applicable to chaos,” “order must be established for juridical order to make sense” (Agamben 16). The state of exception is characterized by a temporary suspension of normal law, ostensibly for the public good; this exception should be temporary and based on “a factual state of danger,” but in totalitarian states, the state of exception can be confused with the juridical order itself (Agamben 169). Wild time can thus lead to climate exceptionalism; the climate chaos that leads to wild time constitutes a real danger, or a state of emergency in which the temporary suspension of normal laws may be justified; however, as demonstrated by Bacigalupi’s novel, this suspension may lead to the utter breakdown of

law and the end of protected human rights. Water rights are privileged over human rights. In Bacigalupi's novel, America is on the verge of collapse, so it is not national law that is in question, as it seems to no longer apply, but the states who take the laws into their own hands, leading to corruption and climate injustice. This collapse is demonstrated by Catherine Case's reaction to the fact that her daughter says the Pledge of Allegiance at school: "I've got three different militias assigned to hunting down Zoners and Texans who cross over the border ... Every single state has its own border patrol, and my kid still calls herself an American" (Bacigalupi 59). This points to how "in the state of exception, it is impossible to distinguish transgression of the law from execution of the law" (Agamben 57); the use of militias to protect their borders from citizens seeking refuge from climate change becomes acceptable, given the rules of climate exceptionalism.

Climate exceptionalism and its potential to lead to totalitarianism can also be explained by Christian Parenti's "politics of the armed lifeboat," a politics which responds to climate change by "arming, excluding, forgetting, repressing, policing, and killing" (Parenti 11). This response prioritizes protecting resources over people and is the driving force of the conflict in *The Water Knife*. As the metaphor implies, some people (typically the wealthy) can be understood as having a lifeboat with adequate provisions to survive the crisis and arm themselves to ensure their survival by protecting their limited resources. In *The Water Knife*, states are governed by similar politics, wherein they view water as "theirs," and are willing to use violence and exclusion to protect "their" water, by hunting down illegal immigrants who may strain their resources. These politics lead to the erosion of human rights through "climate exceptionalism"; as Rogers puts it, "the individual as rights bearer has no role to play in wild time" (183), as the typical rule of

law is suspended in response to the climate crisis. Climate exceptionalism has serious implications for climate justice. The erosion of human rights due to armed life-boat politics is clearly visible in *The Water Knife*, where states (or more accurately, the corporations or militias that run them) are the primary actors seeking to control a limited resource, and there are no protections for vulnerable people.

In *The Water Knife*, Bacigalupi is clearly concerned for the plight of climate refugees, as evidenced by the novel's sympathetic treatment of Maria, a refugee from Texas. Climate migration will only increase with the effects of climate change: the Internal Displacement Monitoring Centre already estimates that between 2008 and 2016 roughly 21.7 million people were displaced annually by "weather-related disasters" and the UN High Commissioner of Refugees estimates that from 2008-2015 22.5 million people left their homes due to climate change. Despite the urgency of the issue, Saleh Ahmad notes that "climate migration is likely to lead to repressive policies against migration," as "many people and politicians perceive climate-induced migration from climate-affected regions as a security threat" (139). While Ahmad is referring to migrants from the Global South, who are already suffering the consequences of climate change, Bacigalupi does not include characters from these affected regions; rather, his novel depicts this response in regard to internal migration, as citizens of the United States attempt to traverse state lines. By focusing on inter-state migration in a near-future U.S. American context, *The Water Knife* potentially suggests that climate change and climate migration are issues of the future, and not ones that already impact many people.

Furthermore, despite his efforts to foster empathy for climate migrants, which Bacigalupi explains in an interview with Amelia Urry (9), he relies on "outdated migrant

typologies” (Yazell 155) as a shorthand. According to Christopher Rivera, dominant representations of Latinx immigrants in the United States include seeing them as dangerous “social deviants” (46). Ted Brader, Nicholas A. Valentino and Elizabeth Suhay note that Latinx migrants tend to be characterized as poor, “low-skilled laborers” who will be a drain on society (961, 969). Bacigalupi’s characters likewise view Texan migrants as being a drain on society due to their poverty and precarity; they rely on aid from the Red Cross and Salvation Army (167), “crawl[ing] on their bellies and beg[ging]” for aid (282). They are also depicted as violent, routinely participating in brawls, and are responsible for a fire fight and setting a fire that engulfs Phoenix at the novel’s climax. Further, in *The Water Knife*, Texan refugees are visibly identifiable, even as “all the Texans look the same” (93), just as in the United States ethnic affiliations are subsumed by skin color, as Latinx migrants “all look alike” (C. Rivera 47). Finally, the novel relies on “common stereotypes about Latinos’ ... subhumanity” (C. Rivera 53) to characterize Texan migrants. Christopher Rivera notes that Latinx migrants have been compared to “an infestation of cockroaches” (53), language Bacigalupi echoes when one character describes Texan migrants as “roaches” that you “can’t smash ... fast enough” (85). The characterization of Texan refugees using stereotypes of Mexican migrants essentially warns readers that if climate change is not taken seriously, people in the first world will be reduced to the status of Mexican migrants in the United States; that is, climate change will usher in the third-worlding of America, a critique in line with Joo’s critique of apocalyptic climate fiction (75). Mitchell and Chaudhary argue that works using a climate justice framework must go beyond depicting future catastrophes, to consider the ongoing consequences of climate change; however, by relying on outdated

migrant typologies, Bacigalupi glosses over how people in Mexico already may be experiencing and migrating due to shifting environmental conditions.

Bryan Yazell explores how “public imagination in the Global North around an issue like climate migration already lags behind the reality” using Bacigalupi’s novel as an example. Yazell argues that *The Water Knife* showcases how migrant life is characterized by alluding to the world outside of the text. Where the novel depicts social upheaval and a large population of climate refugees due to drought in the United States, Bacigalupi relies on “the readers’ own sense of migrant life and the underlying assumptions about race and geopolitics that inform it” to “make this social picture cohere” (Yazell 164). In terms of climate justice, this can be read in two ways. On the one hand, reliance on readers’ pre-existing views on migration (and the racial and geopolitical assumptions informing these views) could inadvertently *increase* anti-immigrant sentiment, especially as the novel ultimately concludes with parties protecting their own self-interest, especially as anti-immigrant rhetoric is already rampant within the United States. On the other hand, as Bacigalupi explains to Urry, it is possible that by putting American readers into the “skin of a climate refugee” (9), even if his understanding of climate refugees is outdated, as Yazell suggests, he challenges the idea of national borders, especially in the context of climate change, pointing to how the climate crisis will not respect national boundaries. Both arguments can be further supported by the fact that Maria, the only character who is explicitly characterized as a climate migrant, is Latina, linking Texan migrants explicitly to the readers’ understandings of Mexican and South American immigrants.

As a Texan refugee, Maria’s narrative shows the degeneration of human rights

characteristic of wild time (Rogers 183). Before her family could leave Texas the “State Independence and Sovereignty Act” puts up nearly impassable border walls (Bacigalupi 42). States take their security seriously, policing borders and resources and participating in the politics of the armed lifeboat. In Vegas, Case has “three different militias assigned to hunting down Zoners and Texans who cross [the] border” (59), and when Maria’s family leaves Texas they go “west because everyone knew Oklahoma was stringing people up, and Louisiana was full of hurricane refugees...[and] how bad New Mexico had been. Bodies thrown over barbed-wire fences” (180). These vignettes bring home the collapse of national jurisdiction and point to the violence used to enact climate exceptionalism between states; without the human rights protections guaranteed by the nation state,⁶³ once a state collapses as Texas has, its former residents are at the mercy of state militias. Even if they are able to enter a neighbouring state, refugees remain in precarious positions due to their lack of resources (both financial and natural); even in the relative safety of Phoenix, sixteen-year-old Maria is at the mercy of slum lords and pimps due to her poverty, making it impossible for her to escape to a better life.

Ironically, even as the novel relies on its setting and similarities between its new dystopian environment in the United States and U.S. American understandings of Mexican and South American migrants, down to the level of language (i.e. the inclusion of Spanish words and the role that “coyotes” play in getting migrants from the southern states to Canada), essentially demonstrating how climate change will collapse these

⁶³ Although human rights are international in theory, Linda Bosniak argues that international human rights have “limited empirical application” (460), as even in cases where rights are conferred by the international human rights regime, they are “made available to individuals only by way of their states” (468).

distinctions, it also fosters a sense of division between America and Mexico. This division is worsened by resource protectionism and the politics of the armed lifeboat, which impact not only state relations, but national politics as well. The water wars between California, Nevada and Arizona over access to the Colorado River are limited to American states. The river once reached Mexico, but “[t]hese days Mexico never saw a drop of water hit its border, no matter how much it complained about the Colorado River Compact and the Law of the River. Children down in Cartel States grew up and died thinking that the Colorado river was as much a myth as the *chupacabra*” (Bacigalupi 12). Due to U.S. American armed lifeboat politics, Mexico’s drought is intensified, as it loses access to a historical water source. Through hints dropped by Angel, the novel suggests that Mexico has collapsed, becoming a group of Cartel States, an image that plays into common stereotypes of Mexico as violent and corrupt. Not only are U.S. American policies directly responsible for the worsening of climatic conditions in Mexico, impinging on climate justice, but then the chaos and violence of climate-change induced wild time are used to further stereotype and misapprehend Mexican people.

Schneider-Mayerson makes a similar argument to Yazell, who suggests that *The Water Knife* only makes sense if the reader can draw on the specific associations that Bacigalupi employs. Schneider-Mayerson suggests that by making “Texas and not Mexico” the failed state in the novel (although Mexico too seems to have failed, despite not being given space in the narrative), Bacigalupi plays on “a familiar and false American trope—Mexico as a corrupt, violent, and backward place whose ethnically alien residents are desperate to migrate North” (345). However, he suggests that in doing so Bacigalupi demonstrates the arbitrariness and unfairness of “climate injustice” and

“xenophobia” (345). While this may be true, I, along with Parenti and others, suggest that “climate injustice” and “xenophobia” are not arbitrary, and by representing them as such Bacigalupi’s novel may inadvertently suggest that readers in the Global North should only care about climate change selfishly— that is for their own good, with no regard to those south of the U.S. border who will suffer more intense and immediate effects of the climate crisis, which undermines my suggested reading, above, about how the novel points to how climate will not respect national borders.

By projecting drought and climate chaos into a US-centric future, *The Water Knife* ignores how ongoing drought *already* affects Mexico, causing displacement and migration,⁶⁴ and evades culpability for policies that worsen climate change, and xenophobic policies that make migration from Mexico increasingly difficult. Parenti uses the term “catastrophic convergence” to describe the “collision of political, economic, and environmental disasters” (7). Parenti explores catastrophic convergence in Mexico, considering how the crisis of climate change interacts with “already existing crises of poverty and violence” (12), and how “border militarization and xenophobia [in the United States] are increasingly shaped by the meltdown in Northern Mexico” (12). Parenti links ongoing violence in Mexico to the convergence of neoliberal policies which

⁶⁴ As Parenti outlines, the Northern half of Mexico is in the midst of the worse drought in over sixty years, while the Southeast is experiencing devastating storms and flooding. These effects of climate change are impacting crop yields, which impact migration. Parenti cites a study by Shuaizhang, Krueger, and Oppenheimer, which found that “for every 10 percent decrease in crop yields, 2 percent more Mexicans will leave for the United States” and that “10 percent of the current population of Mexicans aged fifteen to sixty-five could attempt to emigrate north as a result of rising temperatures” (cited in Parenti 223).

“create poverty and violence” with “the new realities of climate change” (223). Thus, neither climate migration and injustice nor xenophobia are “random,” but are shaped by historical, political, and economic factors influencing U.S.-Mexico relations.

As Yazell outlines, *The Water Knife* relies on stereotypes of Mexican migrants, but other than references to the violence of the cartel states and an intimation that criminals are shipped to Mexico (“Vegas was going to lock them all into eighteen-wheelers and drive them south” [53]), Mexico, like Indigenous peoples, does not feature in the narrative. Stereotypes of Mexican migrants as violent fail to consider how this violence might already be a side effect of climate change, and how that violence may be, in fact, an American product. Parenti makes this link clear, explaining that climate change is already “undermining agriculture and fishing” and notes that a recent study found that “for every 10% decrease in crop yields, two percent more Mexicans will leave for the United States” (181). By setting the novel “sometime in the near future” in the Southwestern United States, Bacigalupi suggests that climate migration and drought are problems of the future. However, as The World Watch Institute outlines, “desertification affecting [Mexican] drylands is leading some 600,000 to 700,000 people to migrate annually” and as Parenti writes, “in many parts of Mexico, ownership of water has been even more important than ownership of land” (187). Thus, while Bacigalupi’s novel suggests these conditions lie in wait for America, conditions like those depicted in the novel already impact many people; although Bacigalupi draws attention to the future issues of climate justice that may plague a collapsing America, given the novel’s high profile, it is equally important to consider how the novel elides America’s historical and ongoing role in creating negative environmental impacts.

Although Bacigalupi's novel may have aimed to increase sympathy for the migrant as such, and, as Pérez Ramos suggests, it could be read as suggesting that multiethnic coalitions can play a key role in creating more just futures, the novel's final chapter challenges these readings. Ultimately, Bacigalupi's rag-tag group of characters who come together at the end of the novel do not form a coalition, as they remain dedicated to their own self-interests, and there is not a true alliance between the different groups of characters. Additionally, the future suggested by the end of the novel is not just, as characters repeat the novel's conflict and inequities on a smaller scale.

After finally finding the water rights at the heart of the novel that would "allow the pumps of the Central Arizona Project to roar fully to life" (Bacigalupi 363), the group of characters that comprise Pérez Ramos' multiethnic coalition find themselves together, only to repeat the novel's conflict over water. Maria shoots Lucy to prevent her from returning the water rights to Phoenix, allying herself with Case and Angel, and securing herself an escape from Phoenix and a space in an arcology. The end of the novel may ultimately suggest that, rather than cooperation, the only way to survive the climate apocalypse is to closely guard your own self-interest. Ending on this note, the novel suggests the need to adapt to a climate-changed world but warns that adaptations might be ugly. This was the primary takeaway from the novel for a group of eighty-six U.S. American readers surveyed by Schneider-Mayerson. Many self-identified liberal readers found the novel so conservative that they expressed disgust with "the anti-liberal cynical rhetoric" espoused by the characters (355). Thus, while Bacigalupi may have aimed to write a novel that alerted readers to the threats of climate change and increased their empathy for climate migrants, whether he succeeded remains in question, as the novel

may reinforce anti-immigrant sentiments, especially given the fact that the novel must contend with restrictive immigration policies and xenophobia already present at the US-Mexico border.

3. Displacement and Colonialism

In addition to presenting challenges based on class and migration, water transportation and access in *The Water Knife* also point to issues of resource colonialism and forced displacement. In this section, I analyze how Bacigalupi's treatment of access to the Colorado River through the CAP and water rights efface histories of colonialism, while simultaneously expressing anxiety that drought and climate will open the door for colonization of the U.S. by China. The CAP and rights to water from the Colorado are central to the novel. "The CAP is Arizona's IV drip...It pumps water up out of the Colorado River and brings it three hundred miles across the desert to Phoenix" (Bacigalupi 45), and it is critical to Phoenix's survival as "[a]lmost everything else that Phoenix depends on for water is done for. Roosevelt Reservoir is about dried up. The Verde and Salt Rivers are practically seasonal. The aquifers around here are all pumped to hell. But Phoenix still has a pulse because of the CAP" (Bacigalupi 45). However, Phoenix is not the only city relying on the Colorado River; California and Nevada battle over access to the river, too.

To understand the central role that water rights play in the novel, and how they are related to displacement and colonialism, it is helpful to understand the real-world system that governs water rights in the US Southwest; thus, a brief overview of prior appropriation is necessary. The Law of Prior Appropriation, also known as First in Time, First in Right (FITFIR), governs access to water in the Southwestern states. Prior

Appropriation, or FITFIR, was implemented to encourage development in arid states, where most land is not near a water source. As J. R Schutz writes, “prior appropriation worked well in the West because it was a satisfactory means to allocate a scarce resource” by granting “relative priorities...to all who claimed an interest in water” (702). These “relative priorities” are the source of name First in Time, First in Right; “the first, or most senior [appropriator] was able to have all of [their] beneficial needs for water met prior to the next in line...and so forth, until all of the water within the system was exhausted” (Shutz 702). As Shutz’s definition implies, this system is inherently unsustainable, as it allows of the “exhaustion” of “all of the water within the system”; this exhaustion has occurred by the time of Bacigalupi’s novel, pointing the issues with this system and development in the desert, more broadly.

Historically, in order to receive water rights, the appropriator had to physically divert water from the source, although this is no longer the case (Shutz 701). Once an appropriator had diverted a source for the first time, their rights were “perfected” (Shutz 701). This means that the licensee is given exclusive rights to use their water allocation in a system of seniority, based on the age of the license. Water rights are obtained by using water for a purpose that the state deems beneficial, such as for domestic, agricultural, or industrial purposes (Shutz 702); once water rights have been determined on this basis, they cannot be defeated by a junior appropriator, even if those uses are considered more socially or economically important (Sea Grant Law n.p.). According to prior appropriation licensing, during times of water scarcity, the senior appropriators, or the first users of the water source, will be allowed to use all of their allotted water, whereas junior users (those with newer licenses to the source), may only receive some, or none, of

their allotted water (Sea Grant Law n.p). Water rights are central to *The Water Knife*, as the drama at the heart of the novel is based on the relation back principle. In a system of prior appropriation, the relation back principle allows the appropriator to use the date that the intent to appropriate was issued as the priority date (National Agriculture Law Center), rather than the date of appropriation itself, allowing appropriators to amend claims that would otherwise be barred by the statute of limitations.

In *The Water Knife*, the relation back principle could grant desperate states the most senior water rights available, giving them sole access to the Colorado River and allowing them to survive against their competitors. The plot hinges on the discovery of senior water rights to the Colorado, and the bid between the novel's three factions to find, and keep, these rights. Several issues of environmental justice converge through the relation back principle and the quest to control access to the Colorado, including issues of commodification, colonialism, and, as in *Watershed*, armed lifeboat politics. It is through this principle that the novel introduces the history of colonialism in America, alluding to the theft of land and water from the Indigenous People in the region, and suggesting that America, too, may have its natural resources stolen in a similar manner, through Chinese neo-colonialism facilitated by the climate crisis. Furthermore, this principle promotes scheming, conspiracy, and murder in a quest to secure state's access to the river, even before the mysterious water rights are introduced in the novel.

More generally, Bacigalupi's novel demonstrates the problems that can arise due to how water rights are governed in many Western American states and Canadian prairie provinces, especially as the climate crisis impacts the available water supply. Doreen Vanderstoop's *Watershed*, analyzed in the previous chapter, depicts similar challenges,

although it depicts these conditions pre-wild time; thus, read together, these works can be seen as depicting a continuum of conflict over water rights in arid regions as drought intensifies, a theme which is also extrapolated beyond wild time in Harold Johnson's *Corvus*, read in the final chapter. All of these works point to how the First in Time, First in Right principle promotes a selfish and individualistic approach to water that treats water as a commodity to be hoarded and exploited; in Bacigalupi's novel, this is seen in both the history of the region in and through the arcologies in the imagined future which lead to "eco-apartheid" in the novel.

Although intensified due to climate change in Bacigalupi's novel, drought and water wars in the Southwest United States are certainly not new, as alluded to by the novel's frequent references to Reisner's *Cadillac Desert*. Reisner's work plays a central role in Bacigalupi's novel. Michael Ratan, an Ibis water executive who hires Maria as a sex worker, describes *Cadillac Desert* as "the bible when it comes to water ... Old Testament. The beginning of everything" (181). Catherine Case, Queen of the Colorado, makes all her new hires read it. She "likes [them] to see this mess isn't an accident. [That they] were headed straight to Hell, and didn't do anything about it" (Bacigalupi 160). However, as one of Lucy's friends points out, this is not news: "John Wesley Powell saw it coming way back in 1850. So it's not like no one had warning. If that fucker could sit on the banks of the Colorado River a hundred fifty years ago, and know there wouldn't be enough water to cover everything, you'd think we'd have figured it out too"

(Bacigalupi 30).⁶⁵ *Cadillac Desert's* importance is reinforced at the end of the novel, when it is revealed that the water rights everyone has been searching for have been hidden in Ratan's copy of *Cadillac Desert*, which he gave to Maria as payment. This connection between the mysterious water rights and Reisner's work gestures toward questions of justice that are otherwise glossed over in the novel. If Reisner warned against the development of the region, the deliberate location of the water rights in his book suggests that water should not only not be commodified, but also points to the necessity of re-evaluating life and especially factionalization in the desert. The frequent references to *Cadillac Desert* suggest that drought and displacement in the Southwest are not inevitable; as Case puts it, it is not an "accident." Rather, the failure to heed Reisner's warning, and Bacigalupi's frequent return to it, points to issues of environmental and ecological justice; that is, it reflects the attitude that the natural world is nothing more than a resource to be developed or exploited for profit, as well as how this short-sighted focus on profit can lead to devastating consequences for those who rely on, but have limited access to, water in the region.

Bacigalupi's references to *Cadillac Desert* and John Wesley Powell connect *The Water Knife* to the history of water politics in Los Angeles, implying historical precedents for the events in his novel. *Cadillac Desert* was published in 1986 and outlines the

⁶⁵ John Wesley Powell was an American geographer, geologist and anthropologist. He is well known for his contributions to the fields of natural resource use and land use planning (Lee n.p.). In 1868 he mapped the Colorado River, and a decade later published a report entitled "Report on the Lands of the Arid Regions," about agriculture in those areas (Lee n.p.). He argued that due to the lack of water, agriculture should be managed differently than in Northern regions, with small farms and collective irrigation systems, and individual land owners, and not corporations, in charge of the region's water (Lee n.p.).

detrimental impacts of the developmental policy in the Western states on the environment and the availability of water. These historical precedents point to the importance of learning from the past, even while suggesting a cynicism regarding humans' ability to do so. Perhaps the most famous historical precedent for Bacigalupi's fiction is the development of Los Angeles, popularly represented in Roman Polanski's *Chinatown*, an intertextual reference which I outline above. Los Angeles' history is shaped by water politics; the city annexed the San Fernando Valley and "murdered the Owens Valley in its first great raid of hinterland waters under William Mulholland [the city's chief water engineer]," so that "its hydrological frontier is now on the Colorado River" (Banham 13). Thus, the environmental injustice of Catherine Case's ability to simply shut down cities by controlling their water is not a fictitious exaggeration; it is based on historical precedent. The commodification and control of water through finance is also based in historical reality; as Mike Davis writes:

Water ... was becoming scarcer as protracted drought escalated the water wars that pitted Southern California against Northern California and Arizona. As the withdrawal of Los Angeles water from Mono Basin on the eastern flank of the Sierras threatened local ecological catastrophes, Los Angeles water authorities debated the unsavory last resort of purchasing water allotments. (199)

Referring to a water shortage in the region as early as 1987, Davis points to Los Angeles' belief that its sustainability relies only on its ability to purchase water and its failure to account for the fact that water may not be a renewable resource. The reality of the limits of purchasing power in the face of scarce resources is reflected and extrapolated in Bacigalupi's novel, which raises questions about our continued behaviours and lifestyles,

and suggests that the belief that natural resources are mere commodities to be sold to the highest bidder has severe consequences in terms of justice.

The water politics in the novel, which are based on the relation back principle, bring in the history of colonialism and theft of water and land from the Indigenous people in the region, as the novel's various actors attempt to appropriate the mysterious rights to the Colorado River. Unfortunately, Bacigalupi glosses over this history for the purpose of the narrative in a way that misrepresents it and the actions of the U.S. government, and in so doing universalizes the exhaustion of water as a human trait, rather than as a feature of capitalism and colonialism. As Hannah Boast writes,

In spite of his conscientious depiction of the capitalist causes of water crisis, Bacigalupi offers this as a vision of Phoenix's future that deterministically affirms exhaustion of water as a universal human trait... Such a narrative echoes predictions of water wars that share an "underlying assumption...that sooner or later humans will have to engage in a war against droughts, as if the latter were driven by some sort of divine or natural process over which humans have no control." (Menga and Swyngedouw qtd. Boast 8)

This cynical narrative that sees exhaustion of resources as an inherently human trait is not only false, but can be self-reinforcing, as when viewed as inevitable, rather than a product of human actions, there is little reason to change one's behavior.

Bacigalupi situates *The Water Knife* in a broad context of drought and resource wars in the U.S. American Southwest and raises questions about environmental justice should development continue; however, the novel's plot discounts the history of settler-colonialism in this region. Despite making frequent references to the Hohokam and Pima

people who once occupied the land, the reasons for their struggles with drought and ultimate decision to leave the region are fictionalized in such a way that minimizes settler-colonialism. For this reason, despite its goal of encouraging readers to consider environmental justice, *The Water Knife* “temporally displace[s] the apocalypse into the present or the future,” ignoring past apocalyptic scenarios and evading culpability for them by “enacting...[an] ironic reversal of historical and ongoing apocalyptic realities” (Gergan, Smith and Vasudevan 91). This can be understood as “structural appropriation,” that is, the projection of “world-threatening structural violence,” of the kind already “experienced by colonized and postcolonial populations” onto “American (and predominantly white) characters and readers” (Hsu and Yazell 347). Structural appropriation is common in post-apocalyptic narratives which “center the future suffering and struggles of US spaces and characters without sufficiently attending to how apocalyptic environmental violence has already affected a range of colonized and post-colonial populations” (Hsu and Yazell 347). The “ironic reversal” or “structural appropriation” that the novel relies on to drive its plot, create a sense of urgency, and point to issues of climate justice within an U.S. American context ultimately undermines its climate justice work.

The novel makes frequent reference to the Hohokam and Pima people of the region yet treats them only as historical precursors to current American civilization who disappeared from the region due to drought, suggesting a cycle of inevitable resource exhaustion. This reading, however, is overly simplistic, as it glosses over the colonial and racist water policies that resulted in water shortages in the region, and ultimately forced the Pima from their land. Throughout the novel, characters refer to the Hohokam, an

ancient civilization who lived in the Phoenix Basin from approximately A.D. 200-400 to A.D. 1450 (Shaul and Hill 375). The Hohokam were “masters of the desert,” according to archeologist Emily Haury; they constructed the most complex irrigation system in North America, and villages that were continuously occupied for upwards of 1,500 years (National Park Service). The Hohokam civilization is believed to have come to a mysterious end roughly 90 years before Spanish explorers arrived in the Southwest, and the mystery of the reason for their “disappearance” has yet to be solved; however, the fact that the Pima people are the presumed descendants of the Hohokam people (Ezell 61, Bahr 245) challenges this “disappearance.” “Hohokam” is an O’odham language term for “those who have finished” (Shaul and Hill 375), but in Bacigalupi’s novel characters translate it as “all used up” (348), implying that the civilization collapsed due to lack of water. In the novel, Hohokam is used as a shorthand for the collapse of civilization due to drought. In the final, apocalyptic scene of the novel, Bacigalupi describes the landscape: “Outside it looked as if Phoenix were about to become the next Hohokam civilization” (347).

The problem with using Hohokam as a metonym for the collapse of U.S. American civilization is that it does not account for the ways in which the Hohokam civilization persisted through the Pima people, and how the tale of their so-called mysterious end perpetuates the myth of the “Vanishing Indian.” This myth is “a recurring trope in American cultural history” and is a form of Indigenous erasure “whereby settler societies discount and eliminate the presence of American Indian peoples, cultures and polities”; thus, the myth is linked to the larger colonial project to access land and resources (Orr, Sharratt and Iqbal 2078). In Bacigalupi’s novel, this erasure occurs on

two levels. Firstly, Bacigalupi does not include any Indigenous characters in the novel, despite his frequent references to both the Pima and Hohokam; rather, his narrative perpetuates the belief that the region's Indigenous people are historical remnants who left of their own volition, discounting the impacts of settler colonialism on their absence. Furthermore, this belief is replicated in discourse between characters, who relegate the region's Indigenous inhabitants to a long-forgotten past. Indigenous peoples are viewed, on the level of the plot and through the novel's characters, as a means to an end; that is, Bacigalupi's factions are fighting to claim Indigenous water resources long after the Indigenous peoples have been driven from their traditional territory.

The water rights in question belong to the Pima tribe. Lucy explains this history to Angel, as she outlines the value of the mysterious water rights at the heart of the novel.

Lucy tells Angel:

Years ago [the Pima] made a deal with Phoenix to shift all their tribal water rights over to the city. The Pima had water rights to the Central Arizona Project water because of old reparations; Phoenix needed that water when the rivers around here started drying up, so it was a win-win. Phoenix got the water it wanted to keep growing, and the Pima got a massive cash settlement they used to buy land up north. (Bacigalupi 232)

According to Lucy, the Pima thought they were getting a good deal; they thought that they “just owned a piece of the Central Arizona Project's supply...A cut of Arizona's cut of the Colorado River. Pretty junior rights...Lots of people have older, more senior rights, so you're always in danger of getting cut off by someone else” which is why the Pima decided to sell their rights and “bail” (Bacigalupi 232). However, before his murder,

Lucy's friend Jamie worked in state archives, where he had access to all of the "intersecting agreements that the Pima had with the fed and the Bureau of Indian Affairs...from when the reservations first were getting set up" and he found that "the Pima have rights that go way back" (Bacigalupi 233). As it turns out, the Pima had rights to the Colorado River dating to the late eighteen-hundreds, making them "some of the most senior rights on record" (Bacigalupi 233), but, as outlined above, in the novel they believed that they only held junior rights. Before he was murdered, Jamie believed that the Pima themselves were not aware of their own water rights because these records had been deliberately buried, as they were "an inconvenient agreement that the bureau regretted...and for a while it probably wasn't even relevant, because it wasn't like Arizona could touch the Colorado back then" (233). Now, however, thanks to the CAP, Arizona has direct access to the Colorado River, meaning that whoever can get their hands on these rights would have unlimited access to its water.

Although Bacigalupi's novel relies not only on the diegetic conspiracies surrounding the water rights, but also alludes to an actual historical conspiracy to limit the Pima tribe's access to their own water rights, this representation is problematic in terms of environmental justice, as it misrepresents the Pima's decision to leave their land, and suggests that Indigenous rights to land and water can be overlooked in a climate-changed future, as long as they are sold to the highest bidder. This outlook fails to account for the historical challenges the Pima people encountered due to settler-colonialism and appropriation of their water resources. As David Marinex outlines, "the story of the Pima ... is the story of a world violently thrown out of balance ... the Pima were steadily crushed by thirst and starvation as they faced the dire consequences of

losing their access to the river water that had sustained them through countless generations” (145). David H. Dejong outlines the history of water deprivation on the Pima Reservation, using a combination of “Pima voices and modern GIS analysis” (36), and traces how in the late nineteenth century Pima society and economy were interrupted by a series of settler-colonial policies, including the Bureau of Indian Affairs’ attempts to “civilize and assimilate” Indigenous peoples into “the social and political fabric of the nation by transforming them into Jeffersonian yeoman farmers” (Dejong 37). Additionally, the US reclamation service, despite its responsibility to construct irrigation projects in “Indian Country,” cared little for the welfare of the Indigenous peoples it was supposed to serve and Anglo and Mexican immigration strained Pima agriculture by diverting water resources historically used by the Pima (Dejong 37). This resulted in “a deep and long-lasting strain on the Pima that, in time, deprived them of much of the water on which they had relied for centuries” (DeJong 38). Finally, the division of land owned by the Pima through the General Allotment Act of 1887 “affected traditional familial land holdings” and “further discouraged farming” (Dejong 38). Thus, the Pima of Bacigalupi’s novel may have made a decision that was a “win-win” (Bacigalupi 232), but the novel elides or erases the material history of the Pima being forced from their land and into a position where this deal was necessary.

Furthermore, in addition to using the Hohokam as a metonym of a dying civilization and by portraying a Southwestern U.S. as being devoid of Indigenous peoples, Bacigalupi further perpetuates the myth of “the Vanishing Indian” in the novel’s explanation of why the Pima chose to leave, which does not account for the current presence of the Pima people in Arizona. While *The Water Knife* suggests that the Pima

were intelligent enough to leave Arizona before the drought became too severe, moving north to where “it actually rains” (Bacigalupi 232), it simultaneously suggests that the tribe could not negotiate or scheme their way into water access in the manner of California or Vegas, suggesting that they did not have what it takes to survive the modern world of cut-throat water scheming. Likewise, in the early twentieth century, Indigenous people were believed to be “vanishing” through assimilation, or due to the belief that “they were incapable of ... coping with the modern world” (Maroukis 23). Bacigalupi’s novel furthers this myth of a lack of Indigenous modernity. Furthermore, the novel describes the Pima as being duped by the BIA, who deliberately buried their water rights. Like Bacigalupi’s reason for the Pima leaving, this portrayal also oversimplifies their relationship with water and with bureaucracy and does not account for the different laws that govern Indigenous access to water on reserves, which is governed by Federal Reserve Right, rather than the First in Time, First in Right system. Federal Reserve Right, “first established in 1908 in *Winters v. United States*...held that when land was withdrawn and reserved from the public domain, such as for an Indian reservation, enough water to fulfill the purposes of the reservation was implicitly reserved” (Nuñez and Wallace n.p.). It is highly unlikely that the Pima tribe would not have been aware of this doctrine, given the long history of disputed water rights and legal action in the region.⁶⁶

Thus, the novel misrepresents Indigenous peoples in three ways: firstly, it represents the Hohokam civilization as having disappeared, rather than having changed;

⁶⁶ For a detailed history of the Pima Tribe’s legal action to secure the water rights granted to them by the Winters doctrine, see Shelley Dudley’s article, “Pima Indians, Water Rights, and the Federal Government: *U.S. v. Gila Valley Irrigation District*.”

secondly, it uses them as a metonym for drought and destruction, thus treating them as natural objects rather than agential subjects in their own lives; and finally, it misrepresents the Pima and their decision to sell their water rights. These misrepresentations not only fictionalize the future, but by fictionalizing the present and past as well, obscure the connections between settler-colonialism and drought in the novel, and climate change more broadly. This has implications for climate justice within cli-fi, as *The Water Knife* is a well-known example of the genre, and its use of structural appropriation and obfuscation of historical and ongoing environmental injustices help to lead to the critiques of the genre to which this project responds.

Ironically, as Bacigalupi's novel fails to address the connections between colonialism, displacement, and climate change by continuing to appropriate Indigenous resources, it expresses anxiety that the climate crisis will create opportunities for neo-colonialism and thus the destabilization of U.S. American power and hegemony through global restructuring and the rise of China as a global power. This anxiety is apparent in the role that China plays in creating the dystopian conditions of *The Water Knife*, an issue raised by both Sharae Deckard and Hannah Boast in their surveys of hydrological fiction. In her critique of environmental apocalypse narratives, April Anson traces the history of apocalypse, and how, importantly, "apocalyptic emergency appeals reinforce [the] exclusionary violence and ecological devastation they so often seek to diagnose and disrupt" (61). Furthermore, Anson links this history of apocalypse to "colonial and capitalist epistemologies associated with the Western literary tradition" (61). Anson's ideas align with my reading of how the state of exception works in Bacigalupi's novel, but I use them here to explore another absence in Bacigalupi's novel. Anson notes that in

the Jewish and Christian traditions, apocalypse promises “the end of the world and a new beginning for a *particular* people” (61). *The Water Knife* grapples with the anxiety that in the aftermath of the climate crisis, Americans will no longer be the chosen people.

Another definition of apocalypse is a revelation or disclosure, and I argue that what is revealed by the apocalypse is a “hegemon crisis” (Deckard 111) precipitated by peak water⁶⁷ and the fear of Chinese neo-colonialism. Anson writes that “fictional appeals to the apocalypse...are wedded to the exceptionalism of the white settler state” (62); part of the dystopian nature of Bacigalupi’s novel is the loss of this exceptionalism. It is possible that the novel’s shortcomings in its representations of climate (in)justice arise due to attempts to hold on to American exceptionalism; by glossing over or leaving out the impacts of climate change on Indigenous peoples and Mexican migrants, which I explore below, the novel suggests that the consequences of climate change will be uniquely U.S. American, and the novel maintains this focus, perhaps to counterbalance the rise of Chinese power it envisions.

As America collapses in *The Water Knife*, China steps in, offering humanitarian aid and building arcologies in Phoenix. Early in the novel, America and China are compared directly, when Lucy reflects on how “China knew how to see the world clearly and [plan] ahead...China was resilient in comparison to [this] broke-back version of

⁶⁷ As Sharae Deckard explains, “peak appropriation signals the moment in an accumulation cycle in when the least amount of capital investment can release the greatest amount of water, oil, or food” (110). “Peak water” plays off “peak oil,” (also called Hubbard’s peak), the “geological limitation to the oil supply in the ground” (Deffeyes ix). Writing of *Mad Max: Fury Road*, Deckard argues that “peak water does not replace peak oil as the object of anxiety and desire, but their symbolic regimes and technics are interknitted, enhancing each other’s extremity” (121), an argument that can also be applied to *The Water Knife*, given its emphasis on the cost of water and increasing challenges of its extraction.

America” (Bacigalupi 22). Chinese hegemony is demonstrated through the use of Chinese language throughout the text and the importance of Chinese currency:

A ragged gouge cut the face of the Red Cross/China Friendship water pump ... the price blazed through the scratched plastic: 6.95/liter—Y4/*gong jin*. *Gong jin* meant “liter” in Chinese. Y was for yuan. Everyone who lived anywhere near the Taiyang arcology knew that number and that cash, because all the workers got paid in yuan, and the Chinese had built the pump, too. (Bacigalupi 36)

The importance of Chinese currency in Phoenix is reinforced when Lucy tries to bribe a bartender with American currency; the bartender “look[s] at the money like it was dog shit,” and asks Lucy if she has any yuan, instead (Bacigalupi 15). It is not only Chinese currency that plays a key role in the landscape of the novel, but also language. Maria is learning Chinese, as she sees it as the only way to get ahead in this new America. China’s increasing dominance as the United States collapse suggests fear of neo-colonialism—the recognition that the U.S. would not wish to endure the conditions it has forced on other countries, itself. As Boast writes, “the water wars novels...[tell] us more about anxieties of the world’s core and elites about loss of power and status than about geopolitical futures of the periphery” (3). Water shortages can lead to geopolitical upheaval, and novels like *The Water Knife* express anxiety about the “destabilization of the developmentalist hierarchies that have served to ‘justify’ [America’s] hegemony” (Boast 5). Similar to how *The Water Knife* relies on stereotypes of Mexico to create its dystopian conditions, “third worlding” America, the Chinese hegemony has a comparable effect, creating a dystopian environment by demonstrating the colonization of America by a foreign power.

The reliance on the third-worlding or reverse colonization of America in Bacigalupi's narrative has two possible effects. Reverse colonization narratives like *The Water Knife* "speculatively switch the roles of perpetrator and victim ... to provoke audiences to identify with (or as) colonized victims" (Higgins, *Reverse* 1). Thus, on the one hand, the loss of U.S. American hegemony suggests the impermanence of the nation, an idea explicitly verbalized through Angel, who says: "countries ... come and go" (Bacigalupi 232). This impermanence would represent what it may mean for American readers (and Americans, more broadly) to be othered and oppressed. This literary othering could lay the groundwork for a progressive, anti-imperial and empathetic politics, that resists armed lifeboat politics. This is what Bacigalupi hopes for; as he tells Amelia Urry, writing fiction allows the author to place characters in imagined futures, which means "the reader gets to live viscerally in that world ... they have to live that life and experience what it's like to be a refugee ... with very little hope, living as a second-class citizen ... how does that change their perspective?" (Urry 9). Bacigalupi continues: "I think the genius of fiction is that it generates empathy" (Urry 9). However, as explored in my chapter on Thomas King's *The Back of the Turtle*, it is possible that dystopian fiction can shut readers down, rather than engaging them, as they can feel too powerless to enact change. Thus, it is possible that the loss of hegemony depicted in Bacigalupi's novel could foster, in white subjects/readers, what David M. Higgins calls "alt-victimhood." Higgins argues that "in contemporary mainstream science fiction victims are frequently the ultimate heroes, and white men are often (astonishingly) the ultimate victims" and that "to occupy the position of the victim is often to be absolved of guilt and invested with the moral authority of retributive agency" ("Survivance" 51). In the case of

Bacigalupi's novel, so-called victims, of both climate change and neo-colonialism, use their status to close their borders against those they have historically victimized, enacting armed lifeboat state or exception politics as a means of "self-protection."

The anxiety surrounding loss of U.S. American hegemony and the depiction of alt-victimhood is further reinforced when Toomie suggests: "If I was conspiracy minded, I'd say it wasn't Vegas or California that sabotaged the CAP. It was the Taiyang. Just to put the rest of us out of business. All of a sudden, their expensive apartments and condos looked real cheap, when everyone else was scrambling around trying to find a kitchen tap that would still dribble out some water" (Bacigalupi 92). While the novel glosses over the roles of colonialism and the theft of water in the history of Los Angeles, through this conspiracy introduced by Toomie, it suggests anxiety about these kinds of colonial water grabs, and of reverse-colonization more broadly.

Deckard links hydrological crises, as depicted in *The Water Knife*, to "financialization," which creates not only new geopolitical relationships, but also "socio-ecological relations between water and money, integrating the flows of finance capital with the flows of the liquid resources necessary for social reproduction" (109). The commodification of this natural resource, integrating finance and water, opens the space for conspiracies like those suggested by Toomie. It is no surprise the perpetrator in this would-be conspiracy is China; both Boast and Deckard identify "anxiety about the rise of China...figured in hydrological terms" in hydrological fiction (Boast 7). Boast traces this anxiety back to Wittfogel's *Oriental Despotism*, which argues "the need for a huge workforce to manage water produced centralized and socially repressive governments, a 'hydraulic society' which he saw as persisting in present-day" (Boast 4). Wittfogel's

work is a product of Cold War ideology (Boast 4), yet, as Boast points out, “his identification of water management as fundamental to the consolidation of state power remains important” (4). This is evident in *The Water Knife* as states seek to maintain their power in the context of a crumbling nation by controlling and commodifying water.

Boast suggests that China’s prominence in Wittfogel’s analysis can account, in part, for its “repeated appearance in the water wars novel as a country able to opportunistically take advantage of water crisis in the core” (4). She also suggests that China’s prominence in hydrological fiction, is due, too, to “present-day fears in the core of its expansionist international ambitions” and the fact that China seems “poised to exploit environmental crisis” whereas the core is “typically depicted as mired in a refusal to recognize climate change” (7). These issues are at the heart of *The Water Knife*; as explored above, the novel’s central issue is ongoing development of the desert, which can be understood as a form of climate denialism. In response, Bacigalupi imagines “a world dominated by a transition from American to Chinese hegemony, driven by China’s innovation of new technologies that enable superior water productivity” (Deckard 121).

By creating dystopian conditions based on the loss of U.S. American hegemony, through both the third worlding of the United States by comparison to Mexico, and by China’s rise to power, Bacigalupi’s novel ultimately reinforces an American hegemony that has led to climate change, even if the novel seems to do so, paradoxically, in the name of combatting climate change. While it does express anxiety over the effects of climate change in and of themselves, his warnings about climate change are overshadowed by the political warning that America will lose its dominance if climate change is not prevented. Because Bacigalupi emphasizes genre and representation in *The*

Water Knife and makes a compelling argument for the role that cli-fi can in excavating futures, it is doubly important that climate fiction represent climate justice.

As I have argued, climate justice, especially access to water, the treatment of climate migrants, and resource colonialism are issues that *The Water Knife* explores; the novel suggests the need for a more equitable distribution of resources, and a more welcoming approach to climate migrants. However, despite its good intentions, *The Water Knife* potentially hinders its own goals; not only might its cynical plot reinforce the politics of the armed lifeboat by suggesting that the only way to survive in a climate-changed world is by looking out for one's own self-interests, but its use of structural appropriation may have a similar effect. By eliding the effects of colonialism and border politics on the Pima and Mexican people the novel does not represent, Bacigalupi paints America as a victim not only of climate change, but of neo-colonialism. This simultaneously naturalizes drought and suggests that climate change is a problem of the future, while serving as a justification for armed lifeboat politics as a way of dealing with the climate crisis. *The Water Knife* is a prominent work of cli-fi, and although it does not always succeed, is one of the first works of cli-fi to explicitly deal with climate justice themes. Sherri L. Smith's *Orleans*, explored in the following chapter, is a lesser-known work of YA that is more successful in its depiction of the cooperation of a multi-ethnic coalition, envisioning how climate justice may be enacted to counter exclusionary politics stemming from the climate crisis.

Chapter Five
Climate Change and Fever Dreams: Hope for Environmental Justice in Sherri L. Smith's *Orleans*

In representing the effects of climate change, often through the lens of future catastrophe, climate fiction critiques our current world and systems; this critique is not limited to a critique of environmental policy (or lack thereof), however. *The Back of the Turtle*, *Watershed*, and *The Water Knife* focus on specific environmental issues, including global flows of waste and chemicals, the commodification of water, and drought exacerbated by climate change. These works bring specific issues of environmental injustice to light that are directly tied to the environmental issues they depict. Sherri L. Smith's *Orleans* takes a different approach to cli-fi, focusing more explicitly on environmental and climate justice by critiquing social systems that reinforce racial or class-based divisions, rather than a specific environmental issue. Climate fiction is often seen as representing what has been changed or lost as a result of the climate crisis, but cli-fi can also make visible, through what remains, the haunting of the future by the past, whether in the form of waste generated through industrial processes or the consumption of fossil fuels, or through the persistence of ideologies and environmental racism. *Orleans* shows how the past or present, which becomes “the determinate past of something yet to come” in science fiction (Jameson 152), haunts climate-changed futures, demonstrating how the history of racism in America renders certain groups more vulnerable to the effects of climate change.

Published in 2013, *Orleans* is a young-adult novel set in a dystopian world that envisions Hurricane Katrina as only the first of seven devastating hurricanes to hit the Gulf Coast. The final storm, Hurricane Jesus, is so powerful that it requires the

development of a “new Saffir-Simpson Scale” and results in the death of an estimated 8,000 people (Smith 3).⁶⁸ The hurricanes, which Smith links to climate change, are only the beginning, as in their wake comes a deadly fever. Delta Fever is so virulent that it results in the quarantine of the Gulf Coast region until a cure can be found. Five years later, in 2025, when no cure has been found, “the United States Senate ... withdraw[s] [its] governance of the affected states of Alabama, Florida, Georgia, Louisiana, and Texas” as “the shape of [America] has been altered irrevocably by Nature, and now Man must follow suit in order to protect the inalienable rights of the majority, those being the right to Life, Liberty, and the Pursuit of Happiness, the foremost of those being life” (Smith 7). After the quarantine and jettison of the Gulf States, the government constructs a border wall separating the Outer States from the Gulf States; the wall is patrolled by soldiers and sniffer drones able to smell the Fever. The novel is squarely set in wild time; responding to the twin crises of climate change and Delta Fever, the United States Government enacts a state of exception. By revoking the citizenship of the residents of the Delta States, the United States Government essentially revokes their rights, reducing them to what Agamben terms “bare life,” an analysis to which I will return.

Despite the state of exception and quarantine, life in Orleans persists, and the residents of the region develop a new social system in order to live with the Fever. While there is no cure for Delta Fever, its severity can be curtailed by preventing its spread between blood types. Delta Fever is a blood disease, and “if folks keep to themselves by

⁶⁸ The Saffir-Simpson Hurricane Wind Scale is a “1-5 rating based only on a hurricane’s maximum sustained wind speed” and is used to estimate potential property damage. Hurricanes are classified as “Major” if they exceed a category three on the scale (National Hurricane Center and Central Pacific Hurricane Center).

type of blood, then it slow down somehow” (Smith 15). Thus, tribes based on blood type are central to Orleans’ society; the “Rules of Blood” are designed to keep tribes apart and healthy:

Types AB, B, and A
Need to stay away
From O and from each other,
Plus from minus, sister from brother.
O positive can feed
All positives in need,
But O neg is the one
For all tribes beneath the sun. (Smith 17)

The ABs suffer the most from the Fever, requiring frequent blood transfusions or even the consumption of blood to keep the disease under control, whereas O-types are the least affected. O-types carry the disease, but “it ain’t eating O blood up from the inside like it do other types” (16), which means that blood (especially O-type blood) is a commodified renewable resource; O-types must be wary of blood hunters and blood farms, where kidnapped victims’ blood is harvested, and either used to treat the Fever in infected ABs directly, or sold by other tribes to the ABs for this purpose.

The novel’s protagonist, Fen de La Guerre, is an O-Positive (OP), and the right hand to the OP Tribe’s leader, Lydia. Lydia dreams of uniting the tribes. While the tribes would have to remain physically separate to prevent the spread of the Fever, Lydia dreams of a peaceful society where blood hunting ceases and tribes coexist. However, during a peace talk with the O-Negs, both tribes are attacked by the ABs. During the

attack, Lydia dies giving birth to Baby Girl (later named Enola), leaving sixteen-year-old Fen to care for the unnamed child. Before Lydia's death, she makes Fen promise to care for her child and give her a better life. However, as Fen puts it, "ain't no such thing as a better life in Orleans. Not really. Only chance this baby got be in the Outer States. So I gotta get her there" (Smith 60). Thus, Fen begins a quest to send Baby Girl to the Outer States, hoping that her former sponsor family will raise the child.

Daniel, a military scientist from the Outer States, is the novel's secondary protagonist. He has devoted his life to finding a cure for the Fever and believes he is close—he has developed a vaccine that kills the disease, but it also kills the host. Worried that his "cure" will be used as a weapon, Daniel climbs over the wall and enters the Delta illegally, hoping to find the missing piece of his cure by connecting with researchers at the Institute of Post-Separation Studies in Orleans, who he believes are also looking for a cure for the Fever. He encounters Fen shortly after entering Orleans, and the two form a tentative agreement and bond. Fen agrees to help Daniel reach the institute, if Daniel agrees to get Baby Girl to safety.

Smith uses the division between Orleans and the Outer States to comment on climate injustice, through the regions' differential climate vulnerability (both before and after the hurricanes) and the perceived disposability of Orleans' population. In addition to pointing out climate injustice, Smith's novel suggests new, more just ways forward, both by challenging the supposed need to participate in a capitalist economy by representing what Patricia Yaeger calls "dirty ecology," and by offering an alternative to Parenti's politics of the armed lifeboat, suggesting that in order to overcome the climate crisis, we must overcome societal divisions. As Mr. Go tells Daniel in the novel, echoing Abraham

Lincoln, “a house divided cannot stand. We are divided...and so your homeland dies, while ours flourishes, and yet we die, too ... for want of the things your world could provide” (Smith 253).⁶⁹ The novel suggests that only by cooperation and a just distribution of resources will we survive the climate crisis, and pushes back against more mainstream cli-fi that projects the end of the world into the future, ignoring “historical and ongoing apocalyptic realities” (Gergan, Smith and Vasudevan 91). In this work of Afrofuturism, which depicts the challenges and triumphs of the primarily Black city of Orleans, Smith shows how historical and ongoing unjust and apocalyptic conditions such as environmental and medical racism will make certain populations more vulnerable to climate change, while simultaneously showing that catastrophe does not mean the end of the world; *Orleans* suggests that even after the climate apocalypse, hope for a better future is still possible through collaboration and sacrifice.

1. Writing Back and Writing Forward: Genre, Environmental (In)justice and (Un)natural Disasters

Much of the scholarship on *Orleans* reads it through the lens of young-adult dystopian literature, with a particular emphasis on the role race plays in the novel. Sarah A. Wise argues that *Orleans* is dystopian as it pins the “survival and health of the dominant society on the separation and elimination of those who are different” (3). Sean P. Connors and Roberta Seelinger Trites argue that *Orleans* critiques the neoliberal logic

⁶⁹ In his 1858 speech at the Republican State Convention, Abraham Lincoln encouraged the unification of the house, saying: ““A house divided against itself cannot stand. I believe this government cannot endure, permanently half *slave* and half *free*. I do not expect the Union to be *dissolved* - I do not expect the house to *fall* - but I do expect it will cease to be divided. It will become *all* one thing, or *all* the other” (NPS).

and politics that allow the Outer States to view the residents of Orleans (who are predominantly people of colour) as “disposable” (55). They suggest that works like *Orleans* can be used as tools to teach high-school-aged students to recognize the difference between systemic and individual problems and begin to understand how the “core assumptions [of neoliberalism], including its commitment to postrace discourse, shape their experiences in the world” (58).

Orleans is not only a dystopian YA novel that centers issues of racial injustice and discrimination; it is also a work of Afrofuturism which “uses the fantastic to center the liberation and celebration of Black girls while also critiquing anti-Blackness” (Tolliver 133). Like Sam Morris, who looks at the role of hope in Smith’s novel, Tolliver writes that, in addition to commenting on “the negative ways in which institutional and individual bodies have attempted to control the bodies of the othered,” Smith also “celebrates the ways in which Black people and other minority groups come together, find community, and battle oppression as a collective” (Tolliver 145). Sam Morris compares the utopian impulses in *The Hunger Games* and *Orleans* and contends that *Orleans* “represents a shift in the adolescent dystopian genre away from a single story of White adolescent experiences by showing how concepts of race, wealth, ecology and climate change fundamentally affect adolescent agency” (Morris 267).

Thus, given its emphasis on dystopian climate conditions and racial discrimination, *Orleans* is an example of climate fiction that is concerned with climate justice in America. Little scholarship identifies *Orleans* as climate fiction, but given its

extrapolation of the catastrophic effects of Hurricane Katrina⁷⁰ and the racial make-up of Orleans, its interest in climate justice is unmistakable. While the primary conflict in the novel revolves around Delta Fever, Smith makes it clear that the Fever and climate change are not distinct problems; the Fever is a direct result of the Hurricanes that devastated the Gulf coast between 2005 and 2019. In their review on climate change and its effects on human health, Gutierrez and LePrevost show how climate change in the rural and Southern United States will result in an “increase in the inequality of health status and healthcare access” (8). The plausibility of the connection between the Fever and climate change in Smith’s novel is supported by Gutierrez and LePrevost’s study, as they find that with climate change “flooding may overburden water treatment facilities and waste lagoons for animal agriculture, exposing populations to pathogenic viruses and

⁷⁰ Hurricane Katrina was a Category 5 hurricane that struck in 2005 and caused over 1,800 fatalities and over \$125 billion in damages (COPRI iii), with most damage impacting New Orleans and the surrounding areas. In her study of Hurricane Katrina, Anna Hartnell notes that while some initial responses to the storm expressed disbelief that such a disaster could happen in America (933), others pointed to how the storm “brought to the surface material that had long been a repressed element of the US cultural imaginary” such as the existence of “widespread racialized poverty” (933). The connections between race, class and storm damage have been thoroughly outlined; Adeola and Picou conduct a systematic analysis of environmental injustice from the perspective of survivors of Hurricane Katrina, finding that “people of colour ... middle to working class citizens, women, and other vulnerable populations” were more likely to “connect environmental injustice to their experiences post-Katrina” (229), and that “racial minorities and the poor were disproportionately affected” by the storm (229). Similarly, Forgette, King and Dettrey find that “minority populations” were more environmentally and socially vulnerable to Katrina (673), and Rosemary Reuther notes that the most vulnerable groups were “Black women and dependent children,” as they were the least likely to possess cars in which to escape the flooding (178), a significant finding as Robert Bullard argues that the storm “demonstrated to the world the race and class disparities that mark who can escape in a car” and notes that over one third of the New Orleans African American residents did not have cars, and thus were failed by the evacuation response, which “worked relatively well for people with cars, but failed to serve people who depend on public transit” (756).

micro-organisms” (Gutierrez and LePrevost 8). Likewise, after the historical Hurricane Katrina, analyses of soil and air quality revealed “dangerously high levels of diesel fuel, lead, and other contaminants” (Bullard 774), which presented a long-term health risk for the region’s residents. Due to the health risks and the scale of the toxic clean-up required to “handle the untold tons of ‘lethal goop’ left by the storm and flooding,” Hurricane Katrina was categorized as “one of the worst environmental disasters in American history” (Bullard 769). In *Orleans*, Smith connects the Fever to the toxic aftermath of the storms: “after the storm deaths came other casualties: death by debris, toxins...or just as often from the lack of medicines used to treat common ailments” (5). Because of the shortage of medication, “the list of no-longer treatable diseases grew: diabetes, asthma, cancer...and then came the Fever” (5). Later, Fen tells Daniel, “so many people be dead when [Jesus] finally fade and move north that survivors be getting sick, with bodies clogging the water and the pipes, and things all broken, and chemicals and sewerage filling up the place” (Smith 173); the aftermath of Jesus mirrors that of Hurricane Katrina, where the slow response to the storm and cleanup exacerbated health concerns (Cruz qtd. in Bullard 776). In *Orleans* the Fever is linked to the contaminated water following Jesus; although this is not explicitly stated in the novel, Baby Girl, who is too young to have the fever, can drink formula made only with bottled water, and Daniel’s encounter suit captures his sweat and urine, filtering it so that he can drink uncontaminated water.

In addition to connecting the Fever to environmental degradation, Smith situates the novel within the larger context of global climate change. For instance, from Fen we learn that it is not only the Gulf Coast that has been lost or damaged due to climate

change, tropical storms, and sea level rise, but that “nothing [is] left of Hawaii or the Caribbean since the water rose and the storms grew heated” (Smith 14). Daniel’s references to the Outer States provide even more context. Although the conditions in the Outer States are decidedly better than they are in Orleans, honeybees have gone extinct, resulting in riots and migration, as people in the Outer States “[flee] the countryside in search of jobs and food” (Smith 252). While the immediate issue in the novel is getting Baby Girl to safety, the larger threat is related to climate change. Daniel is in Orleans not just in the hopes of perfecting his cure, but because he is driven by the fear that his failed cure will be weaponized by the Outer States government, killing the residents of Orleans so that their abundant natural resources can be harvested to save the U.S. economy, which is floundering due to the climate crisis.

Orleans then, like *Watershed*, is a work of climate fiction that is concerned with environmental justice on a predominantly local scale, but unlike *Watershed*, *Orleans* uses its local focus to make a broader critique of institutional and environmental racism, as the localized focus is a direct result of the government’s failure to protect the citizens of New Orleans. As scholars of Hurricane Katrina and other (un)natural disasters argue, such catastrophic weather events are not unfortunate acts of god or nature but demonstrate the unequal effects of climate change on the poor and people of colour (Gutierrez and LePrevost, Bullard, Ruether). Rob Nixon understands differential vulnerability to (un)natural disaster in terms of “slow violence,” “a violence that occurs gradually and out of sight, a violence of delayed destruction that is dispersed across time and space, an attritional violence that is typically not viewed as violence at all” (2). Slow violence can occur through the “discrimination [that] predates disaster” (Nixon 59); failure to maintain

infrastructure, failure to plan for hazard mitigation or for evacuation of those who rely on public transportation results in increased vulnerability for racial minorities and the poor in the face of “natural” disasters or catastrophe. Sam Morris writes that Orleans’ identity as a “collection of castoff states” is not a “geographical coincidence” but that the ability of the United States government to jettison these states is tied to the identities of those who live there (273), emphasizing the racial makeup of Orleans, and suggesting that systemic racism shapes the disaster response in the novel.

To understand the historical basis and precedent for Smith’s novel, I look to the differential impacts of Hurricane Katrina and the differences in post-storm recovery between the Black and White communities of New Orleans, which, in the novel, result in the Outer States government’s ability to abandon the predominantly Black Gulf Coast region in *Orleans*. Robert D. Bullard situates the devastation of Hurricane Katrina in a longer history of environmental racism in New Orleans; he argues that the region is unique because of “the legacy of slavery, Jim Crow Segregation, and entrenched white supremacy” (754). The intersections of poverty and race greatly impacted not only which neighbourhoods were hardest hit by the storm, but also who was able to evacuate prior to it. When an evacuation order was issued for New Orleans on August 28, 2005, there was not a plan for the 100,000 residents who did not have a car (Bullard 756). This population included more than one-third of New Orleans’ African American residents, many of whom lived below the poverty line (Bullard 756). As Rosemary Radford Ruether notes, before Katrina the population of New Orleans was 67% Black, with 34% of Black residents living below the poverty line (177). This means that 84% of the people living below the poverty line in New Orleans before Katrina were Black (177); race and class

combined to make that population more vulnerable to the storm. Despite a 2001 FEMA study that ranked a hurricane striking New Orleans as one of the top three disasters likely to occur in America, there was inadequate disaster planning, especially to help those already in vulnerable positions (Berger qtd. in Bullard 768). By relying on evacuation plans dependent on the use of personal vehicles, the government overlooked poor, Black citizens, many of whom relied on public transportation, leaving them stranded in areas more prone to flooding.

In addition to the fact that poor, Black residents of New Orleans were less likely to be able to evacuate the city, they also lived in lower-lying neighbourhoods that were more prone to flooding. As Bullard notes, “communities are not created equal”; those that are poor or Black receive less protection, and are thus more vulnerable than white, suburban communities (756-7). Generally speaking, Bullard notes that “rich people tend to take the higher ground” leaving the poor more vulnerable to flooding (757), although there were also other, historical factors that led to this disparity, such both *de jure* and *de facto* segregation. As Kristen L. Buras writes, “the history of slavery, legalized segregation, ongoing racism, and white flight from the city has translated into strategic state neglect and disinvestment” in social services and in neighbourhood resources for African Americans (431). Adeola and Picou connect the inequitable outcomes of Hurricane Katrina to “an enduring system of southern apartheid, involving racial segregation and consequent established patterns of community settlement of people of colour in less desirable, low-lying, flood prone environments” (230). This legacy shapes the world of *Orleans*, wherein the majority of the characters in the flooded region are racialized.

The Outer States government is willing to simply abandon the residents of Orleans rather than invest in the recovery of the coast and the aid of its people, thus echoing the actual disaster planning and evacuation during Katrina which abandoned those residents who relied on public transit, leaving them to face the storm in areas that were already at greater risk. The effects of Hurricane Katrina were compounded by the history of the Lower Ninth Ward, which had previously been devastated by Hurricane Betsy in 1965. Bullard outlines how the “mostly Black and poor” Lower Ninth Ward was hit particularly hard by Betsy, which accelerated outmigration of long-term residents; because of outmigration, by the time Katrina hit, the neighbourhood was over 98% Black, with a third of those residents living below the poverty line (761). Furthermore, neighborhood decline from Betsy made the Lower Ninth Ward more vulnerable when it was flooded once again by Hurricane Katrina.

Hurricane Betsy is of interest to my analysis of *Orleans* since, as Bullard outlines, many Black residents believe “the flooding of the Lower Ninth Ward and other Black areas after Betsy was a deliberate act stemming from New Orleans Mayor Victor Schiro ... [who ordered] the levees breached and floodwaters pumped out of his well-to-do white subdivision ... and into the Lower Ninth Ward” (Bullard 761). Smith’s representation of the Outer States’ response to the hurricanes and the Fever closely echoes this historical precedent. The Outer States prioritize the “many,” in the Declaration of Separation, demonstrating the same rationale ascribed to Victor Schiro. As Bullard concludes in his study of differential vulnerability to “unnatural” disasters, “government response to weather-related (natural disasters), epidemics, industrial accidents, toxic contamination, and bioterrorism threats point to clear preferences given

to whites over Blacks,” and a “differential response...linked to ‘white privilege’ that provides preferences for whites while at the same time disadvantaging Blacks, making them more vulnerable to disasters and public health threats” (777). Smith’s fictional United States government mirrors this differential response identified by Bullard.

Differences in governmental response based on race were visible during Hurricane Katrina, and Smith extrapolates from them in *Orleans*. This response is evidenced by the government documents included in the pages before the story begins, the first of which states: “For the safety *of the population at large*, we deem it advisable to seal off all storm-affected areas... The Quarantine will be reevaluated as the disease runs its course and we make progress toward treatment and a cure” (Smith 6, italics added). In this document and the one that follows, the rationale for sealing off the region is based on the well-being of the population of the United States at large, valuing their lives over the poor, Black residents of the region. Not only that, but, as Micah-Jade Coleman notes, by describing plans to let the Fever “run its course” in the region, when there is no cure for the fatal disease, the document implies that the government intends to let infected residents perish, eliminating the disease by eliminating its hosts (13). Furthermore, the follow-up statement released five years after the first suggests that the residents of the Gulf Coast are second class citizens, not worthy of life:

It is with great regret and pain for our fellow citizens that the United States Senate has agreed to withdraw our governance of the affected states of Alabama, Florida, Georgia, Louisiana, and Texas. The shape of our great nation has been altered irrevocably by Nature, and now Man must follow suit in order to protect the inalienable rights of the majority, those being the right to Life, Liberty and the

Pursuit of Happiness, the foremost of those being Life. (Smith 7)

This document, too, refers to the majority, of which the disenfranchised people of the region are clearly not a part. Furthermore, by emphasizing “Nature” as being to blame, it disavows any government responsibility for the catastrophe; Bullard notes that “what many people often call ‘natural’ disasters are in fact acts of social injustice perpetuated by government...on the poor, people of color, the disabled, the elderly, the homeless...” (757). In clear echoes of the history of Hurricane Katrina, Smith implies that the “natural” disasters of the series of Hurricanes could have been mitigated or reduced by better government planning or intervention.

Smith depicts what Christian Parenti refers to as “catastrophic convergence,” the collision of climate change with other, pre-existing crises such as poverty, and how these problems “compound and amplify each other” (7). To this equation I would also add race. In Smith’s novel, poverty, class and racism converge⁷¹ with inadequate infrastructure and government response, resulting first in a climate change induced natural disaster, and then in a deadly pandemic. These problems amplify one another and the resulting violence ultimately demonstrates how the government views certain citizens as

⁷¹ Walda Katz-Fishman and Jerome Scott outline the “historical and structural economic and political inequalities embedded in ... racial/ethnic/cultural differences among peoples in America” (569), and find that even with the civil rights reforms of the 1960s and 1970s, “American institutions and American culture could not break free from the historic legacy of slavery, sharecropping, Jim Crow, and white supremacy” as African Americans were “located at the bottom of their respective classes” and “segregation...continued to be the American way of life” (576). Rosemary Radford Ruether explores the relationship between race and class, finding that “race is a key factor in who is poor in America,” and that almost a quarter of African American households live below the poverty line and that a “slightly lower percentage” of Hispanic households live below the poverty line, which contrasts with only 8% of white households falling below the poverty line in America (177).

disposable, especially when faced with the climate crisis or a state of emergency.

2. Life in a Wasteland: Disposable People, Deep, and Dirty Ecology

Orleans draws not only on the historical precedent of Hurricane Katrina, but also on the larger history of environmental racism in America,⁷² which can be understood through the lens of waste: who lives near or handles waste, who makes use of versus who “wastes” natural resources, and finally, who is considered “waste” or is seen as disposable. However, Smith not only critiques these environmental injustices, but through her emphasis on hope and collective action, as well as her representation of new ways of relating to the waste of our consumer culture, she also centers climate justice and hope for a better future.

When the United States Government withdraws from the Gulf Coast States, the rationale stated in the “Declaration of Separation” is that “the shape of [its] great nation has been altered irrevocably by Nature” (Smith 7.), implying firstly that nature is responsible for the disaster, and secondly that nature has taken over the region, creating an unsalvageable wasteland. Since John Locke’s writing on the subject in the seventeenth century, wastelands have been understood to be “empty” lands available for “improvement” (Baka 977). Wastelands are, by definition, uninhabited (OED 1a), and Orleans is treated by the government as a wasteland—empty and available for economic exploitation. The ideological construction of the wasteland is apparent in the conspiracy that pervades Smith’s novel. Orleans is understood to be a dead city, uninhabited and

⁷² For this history, see: Robert D. Bullard, Daniel Faber, Rob Nixon, Dorceta E. Taylor and Carl A. Zimring.

devastated after being ravaged by hurricanes and Delta Fever and banished from the United States. Despite banishing Orleans, the United States covets the region's natural resources, which challenges the government's narrative that Orleans is a wasteland and raises questions about who benefits from the belief that a land is "waste."

Smith demonstrates how the Outer States perceive Orleans through Daniel. Daniel breaches the wall that separates the Delta from the Outer States in his search for a cure for the Fever that has taken so many lives, including the life of his younger brother, Charlie. However, in his quest for a cure, Daniel inadvertently creates an even deadlier virus; where Delta Fever had taken over a week to kill Charlie, "Daniel's virus would have killed him in less than twenty-four hours" (Smith 46). Worse still is the fact that the virus kills Delta Fever Carriers— "it was a weapon, a time bomb" (Smith 46) —that has the potential to kill the inhabitants of the Delta Coast. When Daniel breaches the wall separating Orleans from the Outer States, he initially believes that "Orleans [is] all but deserted" (Smith 70) and that navigating the streets of the "necropolis" (Smith 109) would be a simple task. However, Orleans is not dead, and *Orleans* tells the story of a corrupt government more concerned with hoarding natural resources than with providing for its citizens. In order for the government to profit from these resources, however, the people of Orleans must be eliminated, and one of the ways that this is facilitated is by the rhetorical construction of Orleans as nothing but an empty wasteland. Because the novel is focalized through Fen for the majority of the novel, it is initially unclear whether Daniel's belief that the government might use his "cure" for the Fever is realistic or paranoid. However, as more about the Outer States and life in Orleans is revealed, it becomes clear that the Outer States' government views the citizens of Orleans as a

disposable population on whom the region's natural resources are wasted.

Daniel ventures into the Delta looking for the Institute of Post-Separation Studies, believing that the researchers there will be able to help him finish his cure. He worries that "if the military knew about [the] virus, they might well use it. Genocide in the name of money" (47). Daniel fears this possibility because, while socially the Delta is seen as a wasteland, in terms of resources the Delta is seen as *wasted* land. The land is seen as wasted on its decimated population, given that the United States economy has been hit hard by climate change. In the Outer States bees are extinct and agriculture and the economy have been impacted, but the Delta could offer a solution: "if the Delta could be recovered, stripped of Delta Fever and harvested for its natural resources—timber, oil, shipping lanes," the economy might be able to recover (Smith 47). However, as the *Declaration of Quarantine* suggests, the only way the government envisions stripping the region of the Fever is by stripping the region of the Fever's hosts. Not only do the Outer States hope the Fever will wipe out the region's inhabitants, but when that seems unlikely, they begin "arming residents of the region with military-grade weapons in a cynical gesture designed for these diseased people of color to exterminate each other" (Connors and Trites 55). Fen and Daniel discover this plot when using a library computer, carelessly left logged on. An email addressed to "orpheus@la.us.gov" reads: "Guns acceptable. Payment on delivery of order at usual drop" (Smith 219). Although the state of Louisiana no longer exists, and so has no functioning government, the entire region has become a military base, suggesting the military's involvement in arming the AB tribe (notably, the most violent tribe, as they are the tribe the most susceptible to Fever).

The construction of Orleans as a wasteland is just that: a construction. Smith's novel challenges Western society's understanding of wastelands, wherein lands that are supposedly devoid of human life are valued only to the extent that their resources can be exploited—a phenomenon described by Jesse Goldstein as *terra economica*, or “a landscape of wasted potential” (358).⁷³ Of course, this suggests a continuity between present and future governments and the original settler-colonial powers in North America, which treated the Indigenous inhabitants of the region as disposable in order to

⁷³ Goldstein describes how lands as various as “forest lands, waste lands, meadows, common fields, fens, etc.” were collapsed into the general category of wasteland because they were not enclosed or cultivated; he argues that this dialectic between economically productive land and wasteland is *terra economica*; similarly, Ferguson links the colonial designation of “Waste Land” to “its capacity for profit and taxation” (298). Both Goldstein and Ferguson trace how the discourse of wastelands/improvement originate with Locke, who used the term “wasteland” to denote any lands that were not privately owned and advocated for the privatization and agricultural cultivation of wastelands (Baka 980, Dillion 261). The narrative that wastelands are empty space that must be “improved” can be traced from Locke's ideas to various colonial projects. Lindsey Dillion traces how nineteenth century American settlers viewed Californian wetlands as wasteland in need of “improvement” through “relations of private property and agricultural or urban development” and how designating land as wasteland was “used to extend European rule in colonial spaces” (259). Similarly, Jane M. Ferguson traces how the legal category of wasteland was used in colonial Myanmar to “bring more of the country's natural resources and agricultural products into the fold of global capitalism” (296). David Briggs demonstrates how “colonial visions of ‘wasteland’” led to colonial environmental practices and “green colonialism” in Vietnam (1037), and Alexander Douglas Young argues that “the colonial land law doctrines of wastelands and improvement” were applied to Māori land in New Zealand to drain wetlands (249).

exploit the land's natural resources.⁷⁴ Furthermore, Smith's novel suggests that it is the land's very status as "waste" that allows its ecological flourishing.

In *Orleans*, the connection between the Delta's status as waste and its ecological revival is stated explicitly. Although in the Outer States the social conditions are better than those in Orleans, the impacts of climate change are felt through ecological and agricultural disruption; in Orleans, by contrast, due to the smaller population size and reduced human impact on the environment, the effects of climate change are less disruptive. As Daniel travels south, he wonders at the number of families "crammed in ancient cars, moving east, west, wherever they heard things were better...families huddled under blankets, waiting for help that was slow to come" (44). The answer, in part, is that honeybees are extinct in the Outer States, disrupting agriculture and causing food shortages. However, bees persist in Orleans, specifically in Mr. Go's apiary. Mr. Go lives in a bunker, a greenhouse full of "fruits, vegetables, trees and flowers" that works like Daniel's containment suit: the "flora...acts as a filter for the toxins in the water" (250). Mr. Go sees his greenhouse as an ark, and sees himself as holding "these plants,

⁷⁴ Anna Stanley outlines the historical and ongoing connections between settler colonialism and resource development, noting that "settler colonial formations inflect the contemporary dynamics of accumulation" (2431). She cites Coulthard, who describes settler colonialism as a "structure of domination" predicated on the ongoing dispossession of Indigenous people's lands and political authority (qtd. 2431); it is a "distinct mode of colonizing that takes primarily through the removal of land and disavowal of Indigeneity" (Stanley 24313). Settler colonial resource extraction was "deeply informed by white supremacist myths like terra nullius" and "land use and European liberal ideologies of property [that] motivated the 'resourcification' of Indigenous territories" (Preston 358). Jen Preston explores racial extractivism and settler colonialism in a Canadian context, noting how the Geological Survey of Canada played a "significant" role in "motivating the treaty-making process" once crude oil and bitumen were discovered in the prairies (357); the extraction of fossil fuels was closely linked with the signing of Treaty 8, as I outline in my chapters on *The Back of the Turtle* and *Watershed*.

these life forms, in trust for the Delta, for the world” (255). Mr. Go puts the collapse of America and the flourishing of Orleans into context, clarifying what Smith has heretofore alluded to regarding the ecological adaptation happening in Orleans: “Despite our failings, the Delta is the Promised Land. The land of milk and, quite literally, honey” (Smith 252). Go links this promise of a better future to Orleans’ status as wasteland: “by killing New Orleans, it seems we have saved it...Don’t believe for a minute that the rest of the United States has survived...We are no longer a nation...We are divided...and so your homeland dies, while ours flourishes, and yet we die, too, every day, for want of the things your world could provide” (Smith 253). While Mr. Go alludes to the environmental and racial injustice that shapes Orleans, he seems to believe that the separation from the Outer States is worth the ecological flourishing in Orleans. Sam Morris writes that Mr. Go sees Orleans as a utopia, albeit a “pre-human ecological utopia” (263), and himself as a Noah figure, although, unlike Noah, Go does not care about the survival of humans, only of the natural world (263).

While Mr. Go criticizes America’s division, and this critique does suggest that the only way forward is to look at environmentally just solutions and an equitable distribution of resources between Orleans and the Outer States, it is also possible to read him as a proponent of deep ecology, a radical form of environmentalism introduced by Arne Naess in 1995. Naess lays out eight principles of deep ecology; according to Greg Garrard, the two most important of these are:

1. The well-being and flourishing of human and non-human life on Earth have value in themselves...These values are independent of the usefulness of the nonhuman world for human purposes [and]
2. The flourishing of human life and

cultures is compatible with a substantially smaller human population. The flourishing of non-human life *requires* a smaller population. (Naess qtd. in Garrard 24)

Mr. Go can be read as a proponent of deep ecology given his deep care for and work to restore the natural world, alongside his indifference regarding the fate of human survival in Orleans (Morris 263). Mr. Go was once a scientist at the Institute of Post-Separation Studies, but, like the researchers who were more interested in sociological research than finding a cure for the Fever, Mr. Go also had ulterior motives for staying in the region. While Mr. Go works to counter the ecological damage in Orleans, he does little to counter the social damage resulting from the Fever and the Institute of Post-Separation Studies. As he explains to Daniel, “[w]hen I moved to Orleans before the Wall went up, I knew what the government had planned. I simply could not let them seal the Delta off without trying, *trying* to fix what went wrong” (253). By “what went wrong,” Mr. Go is referring to the Mississippi River-Gulf Outlet (MRGO) from which he takes his name.⁷⁵

Closed in 2009, MRGO was a sea-level canal that ran from “the heart of New Orleans down to the Gulf of Mexico” and was supposed to increase shipping by providing a shorter route to the Gulf of Mexico (Freudenburg et al. 505). Even prior to its construction, MRGO was met with opposition, due to the projected negative environmental impacts of its construction. As Freudenburg et al. outline, because the

⁷⁵ The Mississippi River-Gulf Outlet is a transportation canal whose construction was premised on predictions of increased prosperity; however, its construction ultimately destroyed the wetlands that had formerly protected New Orleans from Hurricanes, thereby increasing the damage from Hurricane Katrina (Freudenburg et al. 497). MRGO is “pronounced almost universally as ‘Mister Go’” but is also locally known as “hurricane highway” (Freudenburg et al. 505).

canal was “straight as a gun barrel” and had no “fresh-water flow to keep out saltwater” it would act as an inlet for saltwater in the region’s wetlands (507). This influx of saltwater resulted in the death of the salt-sensitive plants in the wetlands that “historically protected New Orleans from hurricanes” (Freudenburg et al. 508); over 8,000 acres of wetland were destroyed during the canal’s construction, and the canal “subsequently caused severe coastal erosion and salt-water intrusion” (Campanella qtd. in Hartnell 935). The disappearance of wetlands in cypress swamps had devastating consequences by the time Katrina hit. In the novel, Mr. Go moves to Orleans before the wall is erected and stays on illegally despite a warrant for his arrest (Smith 255) in the hope of rehabilitating the region’s wetland ecosystem, which was devastated by the canal and subsequent hurricanes. Because he uses his foreknowledge of the government’s plans in an attempt to remediate the region’s ecology, rather than help the region’s ailing population, Mr. Go is aligned with a deep ecological perspective: he is more interested in environmental than social recovery.

As Garrard notes, a “major, recurrent objection to deep ecology is that ecocentrism is misanthropic, and... certain advocates...have made inhuman and ill-informed statements about population issues” (25). Although Mr. Go can be read as misanthropic, the environmental improvements he has made are significant. Mr. Go elaborates: “This island, this greenhouse, is ... [a] fragile ecosystem, but one that works. And bears fruit ... It’s why I live here. But outside, in the city, the same process is happening. Orleans is healing itself” (Smith 265). This healing is visible throughout the novel. For instance, the shellfish in the Delta are thriving; years after the storms, they have cleaned up the river water, and now the oysters are the biggest they’ve been since

“white man first came to this country” (143). The shellfish are variously described as a “gift from God” and “Nature taking care of herself” (Smith 143). The oak trees in the Delta have also adapted. Daniel is mystified by their appearance; rather than the “gray-green spread of leaves and hair-like Spanish moss...the tops of these trees [are] reddish brown, bleeding into a dry, powdery orange shade” (Smith 244). Daniel concludes these changes in oak appearance must be due to the water, which is “briny, like seawater,” likely due to a breach in the levees (246). However, the trees persist, and Daniel concludes: “Yes, the Delta was dangerous, but it was still very much alive” (246). Orleans is not, as Daniel first assumed, a necropolis, but an environment where nature is beginning to heal and a tenuous society is attempting to govern itself; although Mr. Go’s ecocentrism may be misanthropic, the ecological recovery underway in *Orleans* suggests that the Outer States, and America more generally, may benefit from a more ecocentric orientation, which does not view humans as inherently superior to nature.

Although Orleans may slowly be healing itself, there is no doubt that its environment is both toxic and dangerous, due to debris that remains after the storms. However, like Mr. Go, who sees an opportunity for a more sustainable future in the midst of the ecological devastation, Smith also envisions a way forward that involves working with what remains in Orleans; characters participate in “dirty work” or “dirty ecology” out of necessity, but this “work” promotes cooperation and making do with what is available, rather than participating in consumer culture. In his book on environmental racism, Carl Zimring traces the history of what he calls “dirty work”: work that is “low status and high risk” (Perry qtd. in Zimring 112) but that was “vital to maintaining new standards of hygiene” that developed between the nineteenth and twentieth centuries

(Zimring 112). *Orleans* demonstrates how in a climate-changed world, all work, all survival, depends on dirty work, simultaneously challenging and reinforcing racial and class divisions between those who do this kind of work. “Dirty work” emerged, in part, due to new patterns of consumption at the turn of the century, which saw consumers shopping for new (and newly affordable) goods. However, as mass production made it easier for Americans to purchase more, “mass disposal” of these same items also increased; rather than repair old or broken items, Americans simply replaced them with new products (Zimring 114). In Zimring’s history of waste, immigrants and racialized Americans do the dirty work of junk peddling, benefitting from “mass consumerism and planned obsolescence” (126), a pattern that persists in Smith’s novel, as Orleans is cut off from the Outer States; with no new production or importation of goods, her characters must rely on what they can scavenge from their climate-changed landscape.

In *Orleans*, characters participate in “dirty ecology”; that is, they “mak[e] do with what they can salvage from other waste-making classes” (Yaeger 4). After the Delta is ravaged by climate change and Fever and abandoned by the government, characters must “make do” with what they can salvage from their own former lives or, if they are lucky, what they can trade for smuggled goods. The landscape of Orleans is dotted with incongruous objects, repurposed to help shore up the city from flood, or objects otherwise lost, wasted, and destroyed due to flooding. When the levee near the market failed, it was shored up by the residents. Now, “what once been a green hill now be a beach dune made of debris—everything from washing machines to refrigerators and old cars been hauled and dumped, trying to shore up the levee. But the land gave way when the river rose, and the junk be left behind” (Smith 13). These repurposed objects not only represent dirty

ecology, but also government failure and environmental racism, linking back to the historical precedents mentioned previously.

The changed landscape of Orleans presents new dangers and opportunities for its residents, as it hides valuable objects and resources in its swampy wreck. Characters scavenge former neighbourhoods for objects buried in devastated buildings, like those found in “Rooftops.” The former residential area is now a marsh. Houses sit under layers of silt and mud, “acting like a natural levee for us, but used to be somebody’s home” (Smith 225). Rooftops is a place for dirty ecology. Residents scavenge goods that “float up in... rainstorm[s]. Furniture, food, bones. You name it” (Smith 225). Participating in dirty ecology or dirty work is risky. The ground at Rooftops is unstable; only children can scavenge there without risking falling through the silt to the wreckage below. There are other opportunities for scavenging in the novel, but they, too, are dangerous. Plenty of canned goods remain in the warehouses now submerged in the Delta, only accessible to “the best divers” (Smith 63), yet diving in sunken stores poses a tremendous risk, due to the structural damage to buildings that “ain’t meant to be underwater” (Smith 63). By demonstrating how characters are forced to participate in dirty ecology or dirty work to survive, Smith’s novel condemns the Global North for viewing others as waste. By failing to provide adequate aid for the Delta, the US government forces Smith’s characters into a life of dirty work, courting injury and illness just to survive in the Delta.

3. Bad Blood and Bare Life

The abandonment of Orleans’ citizens and their resultant reliance on dirty work is a result of wild time. As Rogers writes, wild time “is the space where reason fails” and

has the potential to “plunge us into an ‘alien senseless wasteland’” (Ross Meyer qtd. in Rogers 181). The alien world depicted in *Orleans* depends on a state of exception premised on climate change, wherein the residents of the Delta are reduced to “bare life,” a term used by Giorgio Agamben to describe life in the state of exception. Agamben argues that states of exception produce “zones of indistinction” between juridical and political orders, connecting the state of exception to a “ban” (the “relation of exception is a relation of ban” [28]), wherein the excluded person is simultaneously excluded from and included within the law. When a subject exists in this “threshold of indistinction” (105), they are reduced to bare life, or *homo sacer*, so they can be “killed and yet not sacrificed” (10). To understand the status of the banned individual, Agamben turns to Germanic and Old English sources that define the bandit as a wolf-man, or werewolf (105). Caught between the status of human and animal, the bandit can be killed by anyone with impunity.

I argue that the residents of Orleans exist in the sovereign ban, and that this ban is a result of climate exceptionalism; the people of Orleans are banned from the Outer States, due to a state of exception arising in response to climate change and the Fever. As noted in the previous chapter, Rogers argues that “climate exceptionalism can potentially usher in...the setting aside of the rule of law and the erosion of human rights safeguards” (156), as seen in both *Orleans* and *The Water Knife*. As both Anthony Appiah and Linda

Bosniak have argued separately,⁷⁶ “human rights” are largely dependent on the state, and thus cease when the Delta is abandoned. The loss of human rights due to the state of exception in works of cli-fi set in the midst of wild time (as seen in this chapter and the previous), helps to distinguish works of cli-fi set before or after the chaos of the climate crisis. The importance of citizenship for conferring human rights is made clear in Agamben’s analysis of citizenship in Nazi Germany. Agamben notes that “one of the few rules to which the Nazis constantly adhered during the course of the ‘Final Solution’ was that Jews could be sent to the extermination camps only after they had been fully denationalized” (132). Likewise in *Orleans*, American citizenship is revoked when the United States Government withdraws governance from the Delta Region, making it permissible for Orleans residents to be experimented upon or exterminated.

In her history of race in America, Ariela J. Gross writes that there are “close ties between whiteness and citizenship” in America (7), which is significant in terms of how the Fever is used to revoke the citizenship of those Americans who are trapped in

⁷⁶ In “Citizenship Denationalized,” Bosniak responds to “efforts in political and social thought to locate citizenship beyond the nation state” (452). One argument in support of denationalization is the international human rights regime; however, Bosniak argues that this claim has “limited empirical application” (460), as in countries like the United States, rights granted to “aliens” are “not grounded in the international human rights regime...but in the national system itself” (460). Further, Bosniak argues that even in cases where rights are conferred by the international human rights regime, they are “made available to individuals only by way of their states” (468), an argument in line with that made by Anthony Appiah who argues human rights are “the results of agreements promulgated by states” and used “by officials to justify actions both within and across states” (259). Further, Appiah argues that the language of “human rights” is sometimes too broadly employed, as although “ample food, clothing, medical care and social services” are “terribly important” they are not “things that an impoverished state...can simply provide” (261). Appiah’s claim here suggests that human rights must be provided or enforced by someone, and that someone is usually the state: “in committing ourselves to human rights in international law, we are requiring states not just to respect them, but also to attempt to enforce respect for these rights” (262).

Orleans: these citizens are predominantly Black, as previously mentioned. The revocation of citizenship based on blood contaminated by the Fever is a result of wild time; in *Orleans* “the state of exception...ceases to be referred to as an external and provisional state of factual danger, and comes to be confused with the juridical rule itself” (Agamben 168). The novel demonstrates the catastrophic convergence between race, climate change, and disease that occurs during wild time, and shows how climate change can result in a state of exception, even when that state of exception is not rooted directly in climate change.

Like Rogers, who links the state of exception brought about by climate change to the rise of totalitarian regimes (156), Agamben, too, looks at the connection between the state of exception, bare life, and the rise of Nazism and fascism, arguing that these regimes can easily shift from biopolitics to thanatopolitics, an argument that I also make about the citizens of Orleans and the history of racism and medical experimentation in the United States. Per Agamben, “there is a line in every modern state marking the point at which the decision on life becomes a decision on death” (122); this is what is at stake in *Orleans* when the decision to banish the region from the United States signals their death, or their reduction to bare life. In no longer falling under the protection of the state, the residents of the region can be killed with impunity, even by the state itself, as seen by the government’s provision of weapons to the AB tribe.

Bare life is simultaneously excluded from and captured within the state of exception (Agamben 9). However, when the exception becomes the rule, the realms of bare life and politics, of exclusion and inclusion, become indistinguishable. In *Orleans*, this occurs as the state simultaneously attempts to govern bodies in the region (by not

treating the Fever, and by importing guns and fomenting war), and abandons the region to their own devices—when the US Government withdraws from the region, it leaves Tribes with the authority once held by the state, placing the freedom of decision making in the hands of the citizens. This results in further violence, given the commodification of Blood resulting from the fever. Due to the lack of governance in Orleans beyond adherence to Rules of Blood, residents of the region can be and are killed with impunity, by both other residents, and by the government of the Outer States.

The reduction of Orleans' residents to bare life reinforces the environmental injustice Smith depicts through the history of storms and destruction in the region; already vulnerable to and due to the effects of climate change, residents then can be killed with impunity due to the Rules of Blood. Through the Rules of Blood, Smith also introduces issues of racial injustice through the novel's allusions to ideas of racial purity and contamination through the Delta Fever. As outlined above, during Hurricane Katrina it was primarily Black residents who were unable to evacuate the city, due to structural poverty and the lack of public transportation during the storm. The novel suggests that in the aftermath of Katrina and the subsequent storms, the region's population remains predominantly Black; at one point Fen encounters a man sick with fever, whom she identifies as a smuggler because "[he] be white, whiter than you see in Orleans anymore" (Smith 77). We can assume that in the aftermath of the storms, those who were able to escape the region did so, being able to afford resettlement elsewhere, or being otherwise able to exercise social privilege, including white privilege. Thus, the people in Orleans who are reduced to bare life are racialized, emphasizing not only environmental racism, but also connecting to the history of racism in America, including medical

experimentation on racialized people.

In addition to exploring the connections between race and citizenship, and the possibility that citizenship can be revoked in the state of exception or wild time, *Orleans* also asks readers to consider their understanding of race itself. The novel relies on the biologically essentialist idea that race is “a fact of nature, a property of blood” (Gross 9), which is significant considering that Delta Fever contaminates the blood. Once reduced to bare life, the entire Delta region is easily cast-off by the United States due to the contagion carried in residents’ blood. The only way to control the spread of the Fever is to limit contact to people of the same blood type. Social organization in Orleans is based on “tribes,” groups of people of the same blood type, living together to slow the spread of the disease. The contamination of the blood, and the necessity of not mixing blood types, can be read as a metaphor for racial purity and white supremacy in America. As Zimring outlines, the invention of the concept of miscegenation in America “marked a new and highly significant turn in the...regulation of interracial marriage,” which determined that the progeny of “interracial unions” were “tainted” or “too impure to be white” (72, 73). This purity discourse is directly connected to blood by an 1869 ruling by the Georgia Supreme Court, which argued that miscegenation is not only unnatural, but produces offspring that are “inferior in physical development and strength to the full blood of either race” (qtd. in Zimring 72). In *Orleans*, it is essential that Fen get Baby Girl to the outer states; as a newborn, her blood is pure, but the more time she spends in Orleans, the greater the chance that her blood will become contaminated by the Fever. It is no coincidence that the Delta Fever, which has turned the Delta into a wasteland, is a blood disease, and also no coincidence that the majority of the Delta’s population is Black.

Not only do the frequent references to the blood suggest anxieties about miscegenation, but *Orleans* also makes direct reference to the Tuskegee syphilis study, a study run by the Tuskegee Institute and the U.S. Public Health Service from 1932 to 1972, which observed “‘untreated syphilis in the male Negro,’ while telling the men in the study that they were being ‘treated’ for their ‘bad blood’” (Reverby 22 “More than Fact”). When Daniel learns that the Institute of Post-Separation studies has not been researching a cure, but instead studying the effects of social division by tribe, he says: “It’s like Tuskegee all over again. They never wanted a cure” (Smith 207). There are many parallels between the Tuskegee Institute and the Institute for Post-Separation studies. Likewise, although syphilis is not a blood disease, there are certain parallels between the Fever and syphilis; in the tertiary stage of untreated syphilis, many organ systems can be affected, including the circulatory system, the brain, and the nervous system (CDC). Death can occur in this stage through damage to the internal organs (Syphilis- CDC Fact Sheet, n.p.). Similarly, the Fever kills by consuming red blood cells until the blood fails and the liver gives up (Smith 21). As the Fever progresses, “folks...be screaming nonsense and scrabbling with they hands, shoveling they mouths full of dirt” because, as Fen’s father explains, “they be looking for iron to replenish they blood” (Smith 22). Although syphilis is not a blood disease, doctors and public health officials told their “patients” that they were being treated for “bad blood”: Tom W. Shick explains this usage, noting that “bad blood” was “a rural folk expression that had no specific disease connotation” that was used by rural people do describe a range of common symptoms for a variety of ailments, and that this term was “readily adopted by PHS physicians as a euphemism for syphilis” (100-101). In *Orleans* the Fever is

described as contaminating the blood, or turning it bad; as Fen says, “it kill off all [the] good blood” (Smith 38), implying that the blood becomes bad as a result, and alluding, through this language, to the Tuskegee Study.

Beyond the connection to Tuskegee through “bad” or contaminated blood, the novel reflects the structure of government sponsored science that uses un-consenting people as research subjects. Susan Reverby describes the justified fear and larger cultural narratives that surround Tuskegee, noting that “the belief persists...that the PHS actually gave the men syphilis” which has become a “disaster myth” in African American communities (“More than Fact” 23). Although it is never suggested in the novel that the government created the Fever and spread it initially, this is not outside the realm of possibility, as Daniel is distinctly worried that the military will use his new virus to commit genocide in the name of profit (Smith 47).

Regardless of the Fever’s origin, or Daniel’s suspicion that the military will weaponize his cure, the real parallels here lie in the dehumanizing treatment of the research subjects. As Tolliver writes, “the allusion to the ‘bad blood’ in the Tuskegee Experiment reflects not only the diseased blood of the Orleans citizens but also the ambivalence of the researchers to the plight of the people being studied” (139). She argues that Smith depicts this ambivalence through “the use of grotesque realism” showing “the unsanctioned and unethical research historically enacted against Black bodies as well as the disparate treatment for marginalized populations who are in need of government assistance” (Tolliver 140). Fen makes this connection clear, telling Daniel: “Orleans just a lab to them. We ain’t people, we rats” (Smith 206). Rather than tell a realistic story about the Tuskegee Syphilis Study or Hurricane Katrina, Smith envisions a

dystopian future where catastrophic convergence between race, poverty, and vulnerability turn the citizens of the Delta not only into bare life, but into human guinea pigs.

At issue in both *Orleans* and the Tuskegee Syphilis Study is the role government plays in decisions regarding treatment and research and the connection to systemic racism. Reverby suggests that the reason Tuskegee has risen to such a mythic status in U.S. American public consciousness is due to the intersection of “the power to prolong life or cause early death” and the “American obsession with governmental control and racial politics” (*Examining Tuskegee* 2). These factors interact in relevant ways in Smith’s novel; fundamentally, by removing the Delta region from the United States, the government controls who lives and dies, and the Declaration of Separation prioritizes the lives of “the many” over the lives of those in the Delta. Furthermore, government control is extended through the Institute of Post-Separation Studies, which is set up to study post-racial politics in a society where skin colour is irrelevant; as Daniel puts it, the Institute is studying “a new racism” (Smith 207).

Daniel’s fears that the military may weaponize his “cure” may seem extreme; however, in addition to portraying distrust of government and the government’s mistreatment of certain citizens, *Orleans* demonstrates that government and military control already intersect, especially during states of exception. While the military was not involved in the Tuskegee Syphilis Study, in *Examining Tuskegee*, Reverby gives an historical account of how the Public Health Service (a partner with the Tuskegee Institute in the study) developed, noting that by the late nineteenth century the PHS had “expanded into a commissioned corps of medical officers” that was “built on a military model” (19). The mandate of the PHS is reflected in Smith’s novel; as in *Orleans*, where

military guards police the borders to protect the Outer States from contamination, “cleaning up” was a key mandate of the Public Health Service. The service was responsible for the provision of clean water and sanitation services; however, it was also responsible for “enforcing quarantines and stopping the spread of disease” which gave them “power to police borders” (Reverby 19), just as the military does in *Orleans*. It is clear from Daniel’s role in the novel as a military scientist that the connections between medicine, public health, and military control persist in the world of the novel. Reverby argues that the Public Health Service played a critical role in linking the “‘dangerous’ immigrant to biological stigmas” as well as categorizing diseased people as “other” (19). Understanding these connections between public health, racism, and experimentation on non-consenting humans is central to understanding Smith’s novel, as it is this very othering of the diseased people that concerns Daniel. By categorizing the residents of the Delta, infected with a Fever that the government has no intention of curing, as “other,” it is easier to not only “ban” them from the country using armed, military guards, but in so doing, consider the land as empty—providing the justification to take the resources and open up the Delta to trade, once its residents have finally been eliminated.

4. Genre Revisited: Hope and Environmental Justice

While many of the events in *Orleans* are rooted in historical inequities that are projected into a future shaped by environmental and medical racism, the novel is ultimately optimistic about the future, and pushes back against cli-fi narratives that see apocalypse as the end of the white world. Given its emphasis on the past, present, and future of Black people, *Orleans* is a work of Afrofuturism; Tolliver describes

Afrofuturism as “a cultural aesthetic” in which Black authors center Black characters in speculative narratives, reclaiming and recovering the past, and elevating “positive realities that exist in the present,” thereby creating “new possibilities for the future” (133). Smith’s novel acknowledges both historical and future apocalypse in the form of catastrophic storms and disease, suggesting that African American communities have already survived apocalypse in America. This vision is reinforced during the All Saint’s Day parade scene, which builds on Mardi Gras traditions to celebrate the persistence of life in Orleans despite the adversity the region has faced. All Saint’s Day is the one night when members from the different tribes come together, chanting: “*Nous sommes ici! Nous sommes ici! Encore! Encore! Nous restons ici!*” (Smith 171).⁷⁷ This annual parade, which comes at the end of Hurricane season, celebrates and affirms the persistence of the residents of Orleans.⁷⁸ It should also be noted that even as the novel depicts dystopian conditions, with the only character interested in creating peace in Orleans killed at the beginning of the novel, Lydia’s vision suggests that even in the face of violence and adversity, like the natural world that is beginning to revive itself, it is possible that society, too, may do the same, albeit based on a low-footprint, dirty ecology trade and barter economy.

Furthermore, the plot revolving around getting Baby Girl (later named Enola by

⁷⁷ “We are here! We are here! Still! Still! We stay here!” (my translation)

⁷⁸ Although Mardi Gras is celebrated in New Orleans on Shrove Tuesday (February 21), in *Orleans* the parade occurs on All Saints Day (November 1), at the end of hurricane season. Despite the changed date, the parade still involves “folks...[showing] up in they costumes, ready to ride” (Smith 170). Like Mardi Gras, costumes include “owl- and pheasant-feather headdresses, chains and bracelets made of shiny metal and glass...and necks with strand after strand of old Mari Gras beads” (Smith 170).

Fen) out of the Delta region emphasizes the importance of cooperation and collaboration across borders and racial divisions. Getting Enola to the Outer States requires cooperation with several parties, although Fen relies primarily on Daniel. Whereas in the previous chapter I argued that Bacigalupi's *The Water Knife* did not depict a functional "multiethnic coalition" or effective "cross-cultural communication" (to use Pérez Ramos's phrases), *Orleans* depicts both cross cultural communication and collaboration. First, and most obviously, there is cross-cultural collaboration between Fen and Daniel. Daniel's race is unknown, as he spends the entire novel wearing his encounter suit to protect himself from the Fever; however, coming from the Outer States, Daniel comes from a different culture. The differences between Orleans and the Outer States are made clear through conversations between Fen and Daniel, and range from simple differences like the availability of candy or hamburgers to larger issues like the existence of "schools and grocery stores and amusement parks" and "buildings without trees going through their roofs" (Smith 246). Even if Fen and Daniel are of the same race, they come from different cultures. Secondly, although they play a minor role in the novel, there is a large Asian population in Orleans, and without help from one of Fen's friends in this community, Daniel and Fen would likely not have survived their escape from the blood hunters.

Daniel's initial attitudes about the Delta are problematic; he not only views the region as dead, but he is also paternalistic in his belief that the best hope for the future lies with him, despite the great risk that this belief entails for the population of Orleans, as Daniel brings vials of a virus that could decimate the region over the wall. Ultimately, Daniel does offer citizens of Orleans hope, although it is not in hope of a cure for the

Fever. Fen and Daniel's collaboration is motivated by hope for the future, albeit different hopes. Daniel requires Fen in his quest to cure the Fever, and Fen requires Daniel to get Baby Girl out of Orleans. However, as Daniel spends more time with Fen, he realizes the danger that he has put residents of Orleans in by bringing his virus over the wall. Rather than abandoning the region after he loses the vial, Daniel is driven by his belief that a better future is possible. He returns to Rooftops where the vial was lost, and by chance ends up seeking refuge at the very church when Enola is about to be sacrificed by a bloodthirsty priest, helping Fen rescue the child and smuggle her out of the Delta. By listening to Fen's needs, Daniel begins the process of reintegrating residents of the Delta into the Outer States by smuggling Enola across the border.

Enola is the name Fen ultimately chooses for Baby Girl; before deciding that the best hope for the child lies on the other side of the wall, Fen names the infant for East New Orleans (NOLA is the abbreviation used to indicate New Orleans, Louisiana). The name not only roots the child to her history in Orleans, but also refers to the larger historical context of the region; recall that Orleans dropped the "new" after Hurricane Jesus. By adding the "e" for east, Fen not only adds regional specificity to the child's name, but, as Coleman notes, the prefix "e" has several meanings, the foremost of these being "out, away, without" (OED qtd. 27), indicating Fen's hope that Enola will have a better life "out" of or "away" from the Delta region, a hope that is realized at the end of the novel. Coleman connects Enola's escape to a larger hope for Orleans, arguing that because Enola "is free of Delta Fever, she is New Orleans 'without' disease; therefore, she is the promise of a new South" (27). While Coleman links the promise of the new South to a move towards ecofeminist ethics, my reading suggests that the hope for the

new South lies in two areas; firstly, the cross-cultural collaboration mentioned above, and secondly, in self-sacrifice for the future of both the environment and its inhabitants.

At the end of the novel, it seems that Fen, Daniel, and Enola will be captured by the soldiers guarding the wall. Fen's hope for Enola's future is so great that she ultimately sacrifices herself so that Daniel can get the child over the wall. Sam Morris considers the utopian impulse in *Orleans*, citing Ernst Bloch, who claims that hope is central to utopian aspirations, as "utopia is an impulse that exists in people rather than...a place" (Morris 265). In choosing to sacrifice herself, Fen's hope for the future outweighs her instincts for self-preservation. This moment is significant in terms of cli-fi oriented towards environmental justice for two reasons. Firstly, Fen makes a sacrifice, rooted in love, for a better future. This is not to suggest that we must sacrifice ourselves to combat climate change, although this might be in line with deep ecological thinking. Rather, it suggests that if we have hope for the future, we must make sacrifices now to secure that

future.⁷⁹ Secondly, through her sacrifice, Fen makes Daniel Enola's de facto guardian, as we never learn if the family that she contacted in the Outer States will adopt the child. Fen trusts Daniel to care for the child, and on his end, Daniel promises to protect her (Smith 323); this is the ultimate multi-ethnic coalition or collaboration. Daniel accepts the child that is not his, promising to care for her and bring her to a better life. There is no guarantee that Fen's sacrifice will be worthwhile; it is not clear at the end of the novel what will happen to Daniel and Enola. However, it does not matter that the novel is unresolved, as its utopian potential lies not only in its hope for a better future, but in its demonstration of the collaboration based on listening to another(ed) person's needs. While the ecological revival in Orleans does provide hope for our ability to live with

⁷⁹ While the novel does not touch explicitly on the sacrifices that readers might make to secure a future that is not dystopian, there are certain sacrifices that people in the Global North will have to make in order to lessen the impacts of climate change, largely related to lifestyle. For example, Rob Lawlor notes that through regulation and taxation, the consumption of certain goods may be prohibited, or certain good will become costlier: "for example, people will drive less, fly less, and eat less meat" (353) which would be sacrifices "in *some sense*" (353). Lawlor concludes that the "claim that we can reduce our emissions significantly without involving any sacrifice does not stand up to examination" (362). These sacrifices can be understood in terms of "degrowth," an "alternative sustainable social-economic model aiming for a downscaling of production and consumption" which scientists suggest "may be among the few realistic options to counter climate change" (Krcan and Basso 1). Christie Nicolson notes that degrowth is not intended as a universal approach for combatting climate change, but is geared towards "the high-consumption and highly idealized societies of the Global North" (1152). John Meyer links sacrifice and hope, as Smith does in *Orleans*, when Fen is willing to sacrifice herself for the hope that Enola will have a better life. Meyer finds that rather than convincing people to make personal sacrifices to combat climate change through apocalyptic rhetoric or scientific information, we would be better off "strengthening democratic impulses and institutions [which] requires hope" (12); Meyer believes that whether or not people are willing to make sacrifices like those identified by Lawlor depend on their "perceptions of justice and effectiveness" as "when those calling for change don't also appear to be participating, I'm more likely to view myself as a sacrificial victim, and I'm more likely to resist such a hypocritical call" (14).

climate change by suggesting that environmental re-adaptation after catastrophe and the end of industrial capitalism is possible, as Mr. Go notes, this future is not just. What makes the novel just is Daniel's desire to bridge the gap between the outer and inner states, slowly beginning to heal the divide, and his desire to protect the inhabitants of the Delta from genocide. Daniel's reorientation from a paternalistic desire to "save" Orleans from the Fever, to a position where he is willing to learn from Fen about what the people in Orleans truly need and work alongside her to prevent the people of Orleans from being sacrificed to facilitate the exploitation of their natural resources, suggests the necessity of working to close the gap between marginalized and non-marginalized people, so that no one is considered waste. In contrast to *The Water Knife* and similarly to *Watershed*, Orleans emphasizes working cooperatively with the people who are suffering from the consequences of climate change to enact climate justice, rather than leaving them to their own devices.

Chapter Six

Making Kin: Posthuman Possibilities and Queer Ecologies in *The Annual Migration Of Clouds* And *Blackfish City*

The first section of this project explored works set prior to the onset of wild time, and argued that the commodification of waste and water, as well as neoliberal policies that emphasize individual responsibility, hinder participatory democracy and climate justice. The next section built on those arguments, looking at works set in the midst of wild time. These chapters argued that climate change can lead to a state of exception, wherein vulnerable people are viewed as disposable; the negative consequences of climate exceptionalism, Bacigalupi and Smith suggest, can be overcome by cooperation and communication. The final two chapters of this project explore worlds that have emerged through wild time. Climate change is not “over,” but Premee Mohamed’s and Sam J. Miller’s characters (in this chapter) and Robinson’s and Johnson’s (in the next) have survived the breakdown of social systems and infrastructures, and continue to survive the ravages of climate change. Like the works explored in previous chapters, all four works in these final two chapters are concerned with questions of narrative: how climate change is narrated in literature and popular culture, and how this narrative is shaped by other cultural discourses. This chapter analyzes *Blackfish City*, by Miller, and *The Annual Migration of Clouds*, by Mohamed, to explore the potential of queer ecological posthuman cli-fi for climate justice. Despite their formal differences (*Blackfish City* has a complicated plot and eight protagonists who participate in and unravel a variety of conspiracies, whereas *The Annual Migration of Clouds* focuses on the protagonist, Reid’s, inner state, and has very little plot), both works depict societies that have been re-established in climate-changed worlds, although these societies differ greatly. *Blackfish*

City, on one hand, depicts the technologically advanced floating city of Qaanaaq; following sea level rise, the establishment of floating cities allows life to continue more or less as before, with similar technology, oil-drilling, and persistent class stratification. *The Annual Migration of Clouds*, on the other hand, envisions a radically altered world; everything must be locally made or grown, people can only live near running water, few technologies are available to ordinary citizens, and the wealthy live in private domes, isolated from the effects of climate change. Despite their differences, I include both works in this chapter as they depict queerly posthuman futures that show how climate change has the potential to undermine the human as autonomous subject, and de-link the future from the realm of heterosexual reproduction. In *Blackfish City*, Miller depicts a “nanobonded” community of humans technologically and emotionally linked with animals; human-animal pairs share subjectivity, and if they are separated, experience severe consequences and symptoms that mirror “the breaks,” a sexually transmitted illness that blurs the boundary between self and other, as sufferers gain access to the memories and emotions of their partners and their partners’ partners. In *The Annual Migration of Clouds*, Mohamed, like Miller, envisions a subjectivity-altering illness. Cad, or *Cadastrulamyces*, is a fungal symbiont passed from parent to child (Mohamed 3); however, whereas symbiont suggests symbiosis, or a mutually beneficial relationship, it is more typically viewed as a parasite. Cad is a “semi-sapient fungus” (Mohamed 3) that impacts the afflicted person’s neurological processes and possibly their brain-functioning.

Despite their posthuman narrators, as I will define below, and post-wild time conditions, these works demonstrate that even radical changes, such as changed human subjectivity and changes in environmental conditions, may not ultimately result in

dramatic social or systemic changes, and may, in fact, reinforce the notion of human dominance that has resulted in the Anthropocene. Both works depict a tension between the old world and its ways of doing things, and the new world ushered in by climate change, suggesting, contrary to Naomi Klein's famous dictum, that climate change may not, in fact, change everything.⁸⁰ They show that the consequences of the Anthropocene may not lead to post-anthropocentrism, and that popular posthumanism may not lead to critical posthumanism; that is, the blending of human and nonhuman may not lead to the decentering of the human that critical posthumanists call for.

In so doing, these works do not abandon hope of a post-anthropocentric world, but they do suggest that, on their own, posthumanism and post-anthropocentrism may not lead to more just futures, in terms of climate justice, environmental justice, or social justice more generally. It is the combination of posthumanism and queer ecology that ultimately leads to the possibility for justice in these works. I use posthuman and queer theory in conjunction in this chapter as they both challenge binaries and what is "natural"; posthumanism challenges the superiority of humans over a supposedly inert natural world, whereas queer ecological theory seeks to elucidate the connections between sexual politics and nature and demonstrates how both are discursively constructed. Both *The Annual Migration of Clouds* and *Blackfish City*, when read alongside posthuman and queer theory, point to ways of "staying with the trouble" (Haraway). This task of staying with the trouble involves making "kin in lines of inventive connection as a practice of learning to live and die well with each other" and

⁸⁰ This phrase comes from the title of Naomi Klein's *This Changes Everything: Capitalism vs. the Climate*, published in 2014.

“stirr[ing] up potent response to devastating events” as well as “settl[ing] troubled waters and rebuild[ing] quiet places” (Haraway, *Staying* 1). Challenging the binaries that make inventive kin-making practices difficult and engaging directly with the difficulties of the climate crisis can potentially lead to the rebuilding Haraway suggests in *Staying With the Trouble*. This is seen in Miller’s novel. Mohamed’s novel is less settled, and instead grapples, inconclusively, with how to live and die well with non-human others. Taken together, these theoretical lenses, and ultimately these novels, reinforce the importance of re-considering responsibility in the context of climate change, whether through demonstrating the connection between humans and nonhumans, or by challenging the primacy of the child in climate change rhetoric and reproductive futurism.

In *The Annual Migration of Clouds*, humanism arguably triumphs over posthumanism, as the protagonist struggles to reconcile the reality of her situation (climate change and Cad) with how she believes the world should be, and resents the fact that reproductive futurism led to her birth with a fatal illness in a devastated world. In *Blackfish City*, however, the humanist and anthropocentric prejudice that leads to systemic inequality and injustice, as well as discrimination, is overcome by an unlikely alliance of queer posthuman characters and a crime boss, who overthrow the dominant system, replacing it with something more equitable. I argue that the differences between these novels and their outcomes have two causes: their different approaches to queer theory and politics, which shapes how they conceive of futurity and relationality, and the social systems they depict. Less has been lost due to climate change in Miller’s novel. Although Qaanaaq’s social system is dystopian, society persists, and joy remains. I argue that the fact that this world has been able to adapt to climate change makes its characters

more amenable to abandoning humanism. In contrast, Mohamed's characters have lost all vestiges of life in the modern world due to climate change, and I argue that this makes them less likely to abandon the vestiges of power and privilege that humanism affords them. Although they approach these issues differently, taken together these works show how queer ecological posthumanism, especially in conjunction with post-anthropocentrism, can foster climate, social, and reproductive justice by either fostering solidarity, or by showing how focusing solely on "improving" the future can lead to failures of justice. These works demonstrate the importance of considering justice broadly in the context of climate change: *Blackfish City* points to how queer, posthuman politics can foster justice by foregrounding relationality (whether between humans, or between humans and animals), whereas *The Annual Migration of Clouds* shows that posthuman politics may fail when not accompanied by a consideration of intergenerational climate justice. In what follows, I show how the novels grapple with humanism and posthumanism in the context of climate change, and how the posthuman goal of challenging binaries and the supremacy of the human is reinforced and expanded by a queer ecological reading, which demonstrates the importance of relationships and collective action for climate justice.

1. Posthumanism

Broadly, that the novels engage with two forms of posthumanism in different ways. Critical posthumanism challenges humanism, in particular the dualisms that have been used to characterize who and what is considered "human," while popular posthumanism "reflects society's fears of biotechnological changes" (Tarr and White xi). Popular

posthumanism depicts a literal “after” the human, where the human as biologically defined is fundamentally altered or lost through biological or technological incursions and changes; critical posthumanism, conversely, recognizes and challenges the injustices of humanism, and can “help us re-think the basic unit of reference for the human in the bio-genetic age known as ‘Anthropocene’” (Braidotti 5). As N. Katherine Hayles writes, echoing definitions of critical posthumanism, “the posthuman does not really mean the end of humanity. It signals instead the end of a certain conception of the human, a conception that may have applied, at best, to that fraction of humanity who had the wealth, power, and leisure to conceptualize themselves as autonomous beings exercising their will through individual agency and choice” (286). Hayles’ elucidation of posthumanism, especially its emphasis on how this conception of the human has always been limited, is key for the ideas of justice explored in this chapter. Mohamed’s novel does not challenge this conception of the human, but rather emphasizes it by reinforcing the importance of autonomy and human agency, whereas in Miller’s novel, queer ecological posthumanism leads to the transformation of Qaanaaq’s society, combatting the view that people who are nanobonded or who suffer from the breaks are subhuman, thereby challenging the belief that only the wealthy and autonomous are truly human. These works point to how limited understandings of “the human” inevitably lead to several varieties of injustice, and to the benefits of breaking down the dualisms that are central to humanism. Haraway notes that dualisms play a key role in Western traditions and are “systemic to the logics and practices of domination” (*Manifestly* 59). These dualisms or oppositions include, but are not limited to, self/other, mind/body, culture/nature, male/female, whole/part, active/passive and maker/made (*Manifestly* 59).

All of these dualisms are challenged in the novels explored in this chapter.

Posthumanism shows how these dualisms have never been comprised of discrete categories or entities. Rather, there is a “vital interconnection” between humans and other species, or other others (Braidotti 7). Posthumanism privileges inter-relation and hybridization. The notion of human (inter)-relationality is also foregrounded by Stacy Alaimo’s concept of trans-corporeality, “in which the human is always intermeshed with the more-than-human world” and which emphasizes how “the human is ultimately inseparable from the environment” (2). Trans-corporeality is key to Alaimo’s conception of the posthuman, and emphasizes how the “understanding [of] the substance of one’s self as interconnected with the wider environment marks a profound shift in subjectivity” (20). The notion of trans-corporeality and a shift in subjectivity is relevant for understanding both *Blackfish City* and *The Annual Migration of Clouds*, as both works depict the interconnection of the body with its environment, in sometimes painful or challenging ways, and how this interconnection fundamentally alters ideas of the self and subjectivity.

Even as their societies are shaped by climate injustice and unequal distribution of and access to resources and housing, both *Blackfish City* and *The Annual Migration of Clouds* hint at possibilities for enacting climate justice in climate-changed worlds. In what follows, I explore how posthumanism has the potential to radically reorient human life and the ideologies that shape it to foster the recognition that humans are always already imbricated in the natural world, and as such, the violence of climate change impacts not only external environments and nonhuman life, but also humanity itself. While it is tempting to read these novels as challenging the human within the context of climate

change, or challenging it as a result of climate change, posthuman theory shows how the human has never been the “idealized ... human subject [that is] separate and liberated from nature and fully in command of self and non-human others” (Castree and Nash 501). By exploring changes to human subjectivity in a climatically altered world, these novels also show how humans have never been “liberated” from nature, as even in Miller’s technological future, and especially in Mohamed’s technology-less future, humans still rely on the natural world for survival. Furthermore, they show how, even excluding the posthuman changes to their subjectivity, the human subject has never been autonomous, but is, in fact, reliant upon a web of connections with other humans as well as the nonhuman others they rely upon for consumption or companionship.

These works, however, go beyond showing how the human has never been an autonomous subject, engaging with what Bignall and Braidotti call the posthuman turn, defined as “the convergence of posthumanism with post-anthropocentrism” (1). The rejection of anthropocentrism can be read in terms of Braidotti’s argument that “a new ecological posthumanism ... raises issues of power and entitlement in the age of globalization” and suggests that “the critical posthuman subject within an eco-philosophy of multiple belongings” is a “relational subject constituted in and by multiplicity, that is to say, a subject that works across differences and is also internally differentiated, but still grounded and accountable” (49).⁸¹ The notion that humans are constituted through

⁸¹ Braidotti uses “critical posthumanism” to differentiate between her view of posthumanism, which rests on a foundation of anti-humanism (38) from what she views as the two primary strains of posthumanism in contemporary thought. The first is shaped by moral philosophy and “develops a reactive form of the posthuman” and the second comes from science and technology studies and “enforces an analytic form of the posthuman” (38). Both of these forms of posthumanism contain residual humanist ideals, which Braidotti hopes to overcome with her critical posthumanism.

relationships and are “internally differentiated” is one I will come back to regularly through this chapter,⁸² as Miller and Mohamed both depict humans who are shaped by their relationships (with humans and non-humans alike), and are internally differentiated due to the posthuman changes depicted in each work.

Ecological posthumanism is particularly important for my reading of these two works, as both Miller and Mohamed challenge the clear-cut distinctions between human and non-human, inside and outside, and natural and unnatural. Chen, citing Taylor, explains that “ecological posthumanism invokes a remapping of nature that contests ‘the false integrity not only of the humanist self but also the idea of nature as essentially natural, other, elsewhere, or outside’” (183). Going beyond what ecological posthumanism is, to what it does, Matthew A. Taylor argues that posthuman ecology “would dissipate the borders between the self and world” to create “tense, uncertain imbrications rather than an easy, unified holism” (359). Both *Blackfish City* and *The Annual Migration of Clouds* appear, especially in the context of climate change, to dissipate these borders. In *Blackfish City*, the borders between self and world are not dissolved for all people; rather, through the breaks or the process of becoming nano-bonded, certain people experience shared subjectivity, either with other people or animals, respectively. *The Annual Migration of Clouds* is similar; only those infected with Cad experience the dissipation of borders between self and other, and the

⁸² Braidotti claims that the posthuman subject is internally differentiated, contrasting it with the unified humanist subject. The internally differentiated posthuman subject is not easily categorized, but rather belongs to multiple categories without contradiction. It is shaped by multiplicity and the ability to work across, rather than subsume difference (49). This subject cannot be reduced to a linear narrative (57), but is “joyfully discontinuous” and exists in a constant state of active reinvention (167).

imbrication of human and fungus is both tense and uncertain. Characters resent the illness, and uncertainty results as they struggle to differentiate their thoughts and desires from those of their fungal symbionts.

Both novels suggest, as does Taylor, that posthuman ecology will not result in holism, but painful or uncomfortable couplings which challenge the notion of the self, even as there is tremendous potential in this “dissipation” to enact both climate and social justice. Ecological posthumanism and post-anthropocentrism are central to my argument, as moving toward this ecological posthumanism holds potential for both ecological and environmental justice; that is, justice for the natural world and also for humans unequally impacted by environmental disaster can be enacted by challenging various divisions (including class divisions, human vs. animal divisions and nature vs. culture divisions). Challenging these divisions and foregrounding interactions makes clear how injustice (whether environmental or ecological) is never limited to one group or element, but instead always has wider ranging, sometimes invisible, consequences.

Regardless of its potential, the move toward an ecological posthumanism, as both Mohamed’s and Miller’s novels show, is not without challenges. The difficulty of accepting posthumanism is supported through Phoebe Chen’s analysis of young adult, posthuman cli-fi, where she finds that “the protagonist’s transition into posthumanism amidst environmental crisis [can be] a challenging if not futile process” (180). Despite the proliferation of posthuman theory, humanism persists, in both reality and in fiction, and its influences, its dichotomies, and its unwillingness to let go of the centrality of the human persist, to varying degrees, in both novels, resulting in some difficulty in accepting posthuman subjectivity.

Anita Tarr and Donna White summarize the liberal humanist definition of “the human” as a “rational, independent, autonomous, unified, [and] universal” subject who reigns “supreme over nature and all other species” (ix). Several of these characteristics persist in both novels, even after the collapse of society due to widespread climate disaster. In *Blackfish City*, with the exception of the nanobonded community, which views animals as on equal ontological footing as humans, anthropocentrism persists: endangered animals are kept in “polyglass cages” as “unlucky” pets by Qaanaaq’s elite (Miller 4) and many of Qaanaaq’s residents work on “Russian petroleum rigs in the far Arctic” (Miller 5). Little has been done to mitigate climate change, and beyond the domestic or nanobonded animals, this urban environment seems to pay the natural world no regard, suggesting the persistence in the belief of human supremacy. In *The Annual Migration of Clouds*, characters are more in tune with the natural world, as they live and work closely with the land. Nevertheless, the belief in the “rational, independent, autonomous” human subject persists, as demonstrated by the rejection of Cad on these terms. Reid would rather die than live never knowing if her thoughts are her own or her Cad’s (Mohamed 126), suggesting the importance of independent and autonomous rational thought within the novel.

The difficulties of abandoning humanism seem to relate to the social and environmental conditions in each novel. In both, posthumanism is framed as unnatural or pathological, yet the responses to posthuman subjectivity differ greatly between the novels. In Miller’s novel, nanobonded human-animal pairs are seen as abominations as they reject “the dominion God gave us over the animals” (Miller 57), and in Mohamed’s, people are so desperate to rid themselves of Cad that the attempted cures are more

dangerous than the disease itself, including everything from chemotherapy to “predatory fungi” to “blood substitutes” and when those fail, people attempt to “burn it out, cut it out, stave it out” which ultimately leads to the death of the host, but not the symbiont (Mohamed 68). It is possible, as I will explore through *The Annual Migration of Clouds*, that climatic and environmental change and crisis may, in fact, reinforce humanism, as it is a comforting ideology in an uncertain world. The different levels of acceptance of posthumanism can arguably be traced to the novels’ different social structures and material realities. Writing about *Blackfish City*’s queer characters, Christy Tidwell argues that the novel does not propose that only queer people could change the world, but that that “the openness that makes room for them spills over into an openness to alternative ways of being and thinking in other areas as well” (13); one such area is the acceptance of posthumanism. Mohamed’s characters, in contrast, cling to humanist structures that make embracing posthumanism more of a challenge. Reid’s community lives in an abandoned university, and her plan to leave her community to chart her own course through this uncertain world involves attending Howse University, which is so private and privileged that no one can confirm its existence. Humanism ultimately triumphs in Mohamed’s novel through the emphasis on the university despite the incursion of posthumanism through Cad, whereas in Miller’s novel queer posthuman futures suggest more equitable ways forward.

2. Posthuman Disease and the Dissolution of Self

Perhaps an additional challenge to the acceptance of posthumanism in *Blackfish City* and *The Annual Migration of Clouds* is the fact that both works disrupt the human

through illnesses that lead to shared subjectivity and a collapse of boundaries between humans and non-humans; trans-corporeality, interconnection, and posthuman subjectivity are undermined to some degree by the fact that subjectivity is altered through illness. Because illness is understood to be negative, this framing suggests something pathological about posthumanism or expanded subjectivity, which creates potential limitations for how this change is viewed. Mohamed's subjectivity altering illness is *Cadastrulamyces*, a fungal "heritable symbiont" that is transmitted genetically (Mohamed 3), and referred to simply as Cad, for short. In *The Annual Migration of Clouds*, Cad is directly related to ideas of popular posthumanism, which "reflects society's fears of biotechnological changes" (Tarr and White xi), as the illness is seen as a threat to the human. The novel thus reflects fears of the human biological changes that may follow from the climate crisis. Cad leaves visible traces on the body, as it "scribble[s] across [Reid's] skin and the skin of [her] ancestors in crayon colors" (3), and while largely benign, Cad threatens the human in some cases it "goes off" (Mohamed 14), a euphemism for anything ranging from vertigo, narcolepsy, dementia, to a fungal explosion out of "limbs and backs and faces ... teeth or eyes," or the overloading of "every nerve in the body" resulting in "pain so nightmarishly terrible that the victims swiftly lose their voice from screaming" (Mohamed 14). Thus, Cad could also be understood according to Christy Tidwell's description of ecohorror, a genre defined in terms of "revenge of nature" (538). In these terms, Cad is framed as an invader; the body is a site invaded by "nature that is exterior to humanity" (539). This framing, which sets up a rigid binary between human and nature, is clearly present within the novel, and Reid even wonders if Cad is punishment for climate change and colonialism (Mohamed 91).

Regardless of these popular posthuman elements, my analysis focuses on critical posthumanism. Miller's illness is "the breaks," a sexually transmitted illness that primarily, although not exclusively, impacts men who have sex with men. Unlike Cad, the breaks is more in line with critical posthumanism, as it is boundary blurring, and along with nanobonding, it emphasizes the interconnections between humans and between humans and the nonhuman world, and the important role that relationships (with both humans and animals) play in terms of both personal and societal health.

Neither the breaks nor Cad can be treated or cured, and both open up the sick person's subjectivity, although Cad is an agent in its own right, whereas the breaks is not. Cad impacts the host's neurotransmitters, and Reid wonders whether it also impacts the brain. The implications are that it does, so that Reid struggles to differentiate between her own desires and those of the fungus. Cad should be understood as an actant, Bruno Latour's term for anything (human or nonhuman) which "*does something*" (Bennett 355), or, read in terms of Bennett's thing-power materialism, which "offers a contestable but...auspicious account of how it is that things have the power to move humans...who—in accounts that emphasize Augustinian free will or Kantian autonomy or Hegelian self-consciousness—are figured as *self-movers*" (Bennett 359). Cad's agency is demonstrated during a hunting trip, when Reid's Cad paralyzes her, putting her friend Henryk's life in danger. Afterwards, Reid reflects: "there are things the disease does not want you to do, and no you will not be able to do them" (77). Cad not only impacts human agency, but challenges the very notion that humans have historically *not* been acted upon by the natural world.

Despite the rather posthuman acknowledgement that she has never been in full

control of herself due to her body's "secret internal movements with their own agendas" such as "cramps, hunger pangs, the clutch and release of monthly blood," Cad's intervention is utterly alien and unwelcome, and despite its imperative to "stay safe...no matter what" (77), Reid resists and resents Cad's interference in her brain and body. By the end of the novel, Reid concludes that Cad likely impacts the brain itself, as she can no longer recognize her mother, who also suffers from Cad: "I fear darkly that you want me to stay and it wants me to stay and I can't tell the difference between (neurotransmitters. It doesn't) (don't) (it just means nerve it doesn't mean brain it doesn't mean) (stop it) (mind, it doesn't mean you, what you are, where you live)" (86). The style here reflects the interrupted and disjointed subjectivity that emerges as Reid grapples with herself and her symbiont; although these are all possibly her thoughts, interrupted by her own conflicting commentary, the use of parentheses also suggests different voices or thoughts occurring simultaneously, leading to the possibility that some of these interjections, for example "don't" and "stop it" belong to the fungus, trying to protect itself from her scrutiny.

Similar to the multivocality of Reid's thoughts in *The Annual Migration of Clouds*, in *Blackfish City* the breaks is characterized by a multiplicity of voices and memories. Those who contract the illness gain sudden access to the memories of not only their sexual partner who transmitted the disease, but a chain of their lover's lovers, so that their thoughts are flooded by memories not their own; as Fill tells Barron: "I think I'm remembering things that happened to other people" (Miller 52). Although the breaks has not been granted a more formal, "more scientific," sounding name, Ankit speculates that an appropriate medical name might be "identity dissolution syndrome (IDS) or

multiplicative affiliation disorder (MAD)” (Miller 192). These speculative names suggest that the illness, like Cad, specifically impacts the subjectivity, to the point where the sick person’s identity is subsumed by the disease. The informal name, “the breaks” implies a brokenness; rather than seeing the disease as additive, as the afflicted gain multiple perspectives, it is seen as a dissolution of the self, which is viewed as a loss. The culmination of the breaks is “bodybreaking.” Bodybreaking is “the moment when [the] mind’s hold on the here and now finally rupture[s] forever and [the] mind [breaks] free from [the] body” (67); bodybreaking is fatal. The breaks’ culmination in the rupture between mind and body points to an additional critique of Enlightenment humanism: the division between mind and body put forth by Descartes. The fact that this division is the fatal culmination of the breaks points to the falsity of this division, and suggests that the mind-body duality is itself a lethal ideology. Despite the negative connotations of the name, those afflicted do not tend to view themselves as “broken.” Rather, each time Barron experiences an interruption to his subjectivity, “he smile[s], as if no one vision was more welcome than the next” (67). Based on this reading, rather than suggesting a brokenness, as it does to the wider public, the breaks may signify a division between one stage and the next, suggested by the phrase “them’s the breaks,” an outdated phrase used by an older character to describe the illness (Miller 51).

Although the causes of both illnesses are unknown, there is the suggestion that they (and the posthuman subjectivity that they foster) are a direct result of the climate crisis. Cad is believed to have emerged in Europe, and after briefly disappearing, it cropped up again “everywhere” as the permafrost melted in earnest; Reid’s friend Henryk recalls how “everyone said it was being released from the melted permafrost” (Mohamed 67) or

how “another theory [stated] that it was because the oceans were getting so hot, and some deep-sea fish with [the fungal symbiont] came up to where they weren’t supposed to and spread it into fish that people were eating” (Mohamed 68). However, Reid and Henryk also recall the rumour that it was from “bioweapons” “[o]r a lab accident. Or a government experiment...people thought it was definitely bioengineered, and it was the Russians” (Mohamed 67). The etiology of the breaks is just as contested and shaped by conspiracy theories. Upset by the lack of political response to the breaks, Ankit begins researching the issue, finding just as much confusion about the breaks as there is about Cad. It seems that “no two sources...were discussing the same disease” (Miller 64), and its supposed causes range from “God’s wrath, raining down upon the nations whose hyperactive economies fucked up the planet” to “God’s wrath, inflicted upon immoral sinful subpopulations” to “big Pharma, accidentally unleashing a monster” when “covert drug testing schemes...overlapped” to “a lie, a myth to keep people distrustful and angry and fearful of each other” to “a lie, a myth to distract from something far worse on the horizon” (Miller 65).

Two threads emerge from the conspiracies surrounding the proliferation of the illness in each novel: climate change and political and social division.⁸³ In terms of climate

⁸³ In both works, the sketchy history and conspiracies surrounding the illnesses allude to the pre-diegetic conditions of wild time. Like in many works explored in this project, *Blackfish City* and *The Annual Migration of Clouds* suggest that climate change and conflict are closely linked, as countries seek to protect their resources, or exploit those of others. Both novels imply increased nationalism, or outright conflict, in some of the theories of the origins of their illnesses, which suggest that the diseases were engineered as bioweapons. In Mohamed’s novel, one possible origin of Cad is that it was bioengineered and released by the Russians (67), whereas one suggested cause of the breaks in Miller’s novel is that it was “spawned” in the military labs of “foreign governments” (65). The breaks also leads to internal division within Qaanaaq, as politicians use it to distract from dystopian social conditions.

justice, some of these discourses surrounding the illnesses are problematic in that they can be read as “solutions” to or “punishment” for climate change, linking to the ecofascist myth that “environmental and social collapse are desirable” because, “if people have to die” there will be “less strain on resources and the environment” (Anson et al. 19). The idea that these illnesses present a solution to the “population problem”⁸⁴ is reinforced by the fact that, in both novels, the people suffering from the illnesses are marginalized: in *Blackfish City* the characters who have the breaks are queer or racialized, whereas in *The Annual Migration of Clouds* they are not wealthy enough to live inside the protected domes. The fact that these illnesses primarily impact marginalized peoples suggests that these groups are seen as disposable, since in *Blackfish City* there is little effort to search for a cure, and in *The Annual Migration of Clouds*, Reid questions whether a cure for Cad has been discovered at Howse University, and not made publicly available (Mohamed 23). Furthermore, the response (or lack thereof) to each illness fosters social divisiveness and pathologization, leading to further marginalization,

⁸⁴ I am using this term as shorthand, with a full recognition that fears of overpopulation have been rooted in imperialism since Malthus’ theory of overpopulation. Today, Anson et al., note that fears of overpopulation are critical to “ecofascist ideology” (14), which overlooks the real issue: the inequitable distribution of resources such as food (Holt-Giménez et al.). Furthermore, as these works show, the people who are viewed as “disposable” or as causing over-population are located in the Global South, where population continues to grow (Anson et al. 14). However, these people are responsible for the fewest emissions, again pointing to the fact that the issue is not population, but consumption of resources. Overpopulation discourse is problematic as it has historically led to unjust population control measures (including measures such as China’s one-child policy, or the imposed use of long acting reversible contraceptives which have been used “transnationally in population control programs since the 1950s” (Clarke 23)), rooted in racism, classism, and sexism. Haraway argues that while making kin, rather than population is necessary to counteract the effects of 8 billion people on the planet, this approach cannot be employed indiscriminately, as “persons belonging to groups subjected to genocide” must be allowed to replace and nurture their “missing generations” (“Making Kin” 75).

and creating a distraction from ongoing issues of climate justice.

Mohamed pushes back against the suggestion that humanity deserves to suffer from these illnesses because of climate change, challenging the “revenge of nature” narrative. Reid initially questions whether Cad is a punishment, but quickly realizes how this “punishment,” would be inherently unjust, as the fungus has no way of discerning who deserves punishment (Mohamed 91). This points to the problems with the ecofascist myths identified by Anson et al., which are used to justify the inherently unjust treatment of poor and racialized people. The illnesses are not shown to impact wealthy people, so seeing them as punishment for the climate crisis is inherently problematic, as those who are least responsible for climate change are the most severely impacted by Cad and the breaks, while in Mohamed and Miller’s novels the wealthy live insular lives in protected domes or in the Upper Arms, respectively. The pathologization of posthumanism, then, suggests why it might be resisted in the context of climate change; posthuman subjects may reject their transformation, as in Mohamed’s novel, because they are unwilling to undergo further marginalization by abandoning the privileged status of “the human” in an era when so much is already lost, and the wealthy and insular can overlook this transformation, as it occurs in people they may already view as less than human.

Both Cad and the breaks have positive potential if humanism is willingly abandoned and the changes fostered by Cad and the breaks are accepted, regardless of their negative framing. Cad not only potentially impacts the thoughts of those impacted; its sentience also impacts their bodies in ways that shape their behaviours. When Reid angrily describes Cad as a “parasite,” rather than a “symbiont,” she is wracked with a pain that is “impossible to describe,” so that she “never [says] it again” (Mohamed 3). Regardless of

the fungus's violent response, its role is supposedly benevolent; Cad infection is correlated with "*fewer* occurrences of risk-taking behaviour," according to Dr. Chan (Mohamed 149), and when hantavirus breaks out in Reid's community, no one with Cad catches it. It is widely accepted that Cad aims to keep its host safe. Although it relies on the living host for its life and propagation, Reid speculates about the fungus's aims, attributing to it greater agency and desires beyond simply reproducing: "Imagine that, one day: generation after generation of Cad infected people having kids, living safely...till down the line everyone had it and we would finally be docile and wise as the fungus wished us to be" (Mohamed 82). This docility may simply be a fungal survival strategy, although it can also be read as an appropriate response to living in the climate-changed world, and this is how I read Cad in terms of a critical posthumanist project.

In its insistence on safety, Cad points to shared vulnerability. Both humans and the fungus are vulnerable to the changing climate and other nonhumans who have evolved in response to it, and in attempting to protect itself and its host, Cad essentially forces humans to live more safely in the face of common threats. This also has the potential to benefit other species, as seen in the two scenes involving large animals in the novel. Cad forces its hosts to freeze in the face of danger, and so when Reid goes on two hunting excursions, Cad renders the hunters less effective, if not useless, allowing their prey to escape; thus, in an oblique manner, Cad allows other species to thrive as well. Might living according to *Cadastrulamyces*' desires result in more ecologically minded humans, less likely to repeat the damages of the Anthropocene? Braidotti suggests that climate change and "contemporary bio-genetic capitalism generates a global form of reactive mutual dependence of all living organisms, including non-humans" which is a "shared

form of vulnerability,” a “global sense of interconnection between the human and the non-human environment in the face of common threats” (50). This positive reading of the symbiotic and shared vulnerability should be qualified by the differential impacts of the fungus and who is most vulnerable. As outlined above, those wealthy enough to afford life in a dome are protected from the impacts of climate change and Cad, which they justify as necessary to “make sure they could help with recovery after everything” (Mohamed 17), and where they “walled off” the “have nots” so they could “ride out the great disasters with their own kind” (Mohamed 22). This differential vulnerability raises the question of if these changes brought about by the fungus created a more ecological society, it would have much of an impact, as Cad seems to primarily impact those who already have a minimal ecological footprint.

Cad’s posthuman potential and the possibility that it could result in living in greater ecological balance and safety are ultimately rejected, although the novel is ambiguous as to whether this rejection is only Reid’s or also Mohamed’s; Reid is unwilling to abandon humanism and the novel’s ending depicts the triumph of humanism over posthuman potential. People see only the negative side of Cad, and view the illness as an invasion or punishment, rather than an agent worth cooperating with. This view is reflected by the parallels Reid draws between Cad and the history of colonization in Canada (although the nation seems to have dissolved, the novel is set in what was formerly Calgary):

for Europeans it was not enough that we barged in to infect, to occupy, but that we invaded with violence, the intent to *possess* the ‘new’ continent in a way that the people already living there did not. Destroy steal, poison, rename, kill, barricade, and deny. In every way like Cad, the colonizer that should not have

lived in us...but came anyways to possess, not to cohabit. Well then, maybe this is our punishment for that. But how does a fungus know who to punish?

(Mohamed 91)

Through the use of first-person plural pronouns, Reid aligns herself with the European colonists who dispossessed the Indigenous peoples of North America, despite the fact that her generation knows nothing of “back then,” and despite the complication of this parallel by her recognition of the injustice of colonization through her experience with Cad. This position also aligns her with the problematic views of “the human” perpetuated by and used to justify colonialism, even though she simultaneously views her own body as colonized by Cad. Reid views the colonization of her own body as unjust, while also acknowledging that it may be a just punishment; ultimately and perhaps ironically, Reid’s resentment of her body’s colonization leads to her allegiance with humanism.

Humanism triumphs over posthumanism at the end of Mohamed’s novel, as Reid ultimately chooses to go to the mysterious university to which she’s been accepted, rather than staying with her mother and community. Jeffrey Kripal traces the connections between humanism and the university, noting that “humanism constitutes a set of deeply linked philosophical commitments to (1) the authority of reason... (2) science as our most reliable way of knowing the physical world, (3) democratic forms of government, and (4) social justice” (465). Kripal concludes that “not accidentally, these related values are shared by many, if not most institutions of higher learning” (465). An emphasis on rationality and free thought have historically characterized universities, and Reid’s drive to better herself through education reinforces the model of humanist education wherein students “can proceed to the perfection of their individual talents and become the kind of

persons they are predestined to be, i.e. the kind of political and economic elite the nation is aiming for” (Serrano-Velarde 7). Reid’s desire to align herself with the political and economic elite, who live in the domes, never mind the fact that the nation along with its political and economic structures has collapsed, suggests issues of climate justice. While we are accustomed to thinking about the inequitable distribution of wealth and power, as well as environmental harms, within or between countries, Mohamed’s novel points to the importance of considering these issues for future generations, who may also desire the same kinds of lives that were available to previous generations.

While I ultimately contend that humanism triumphs over Cad’s posthuman potential, Mohamed does explore the possibility of accepting shared subjectivity with Cad, albeit less fully than Miller does in *Blackfish City*. Although Reid resists and resents her Cad, calling it a “parasite,” rather than a “symbiont,” and believing that her Cad is “of [her],” yet “does not belong to [her]” as it is “its own thing” (Mohamed 3), by the end of the novel she has begun to recognize the potential of Cad, and forms what seems to be a tentative alliance with her symbiont, while the doctors in her community (who do not have Cad, and thus cannot speak to the experience of the disease), refuse to change their views. This shift is catalyzed by Reid’s mother and/or her mother’s Cad, who resists Reid’s imminent departure to university. Reid’s mother launches herself down their building’s staircase, in a way that suggests that “nothing will be taken from her” or that nothing will be taken from the disease, leading Reid to speculate that “they are working as one,” where “they” refers to the fungus and her mother (Mohamed 147). Reid’s suspicion is confirmed when, in that moment, her own semi-sapient fungal symbiont cooperates with her, responding to her plea: “Help me! I can’t do this alone!” (Mohamed

147), allowing her to catch her mother mid-air.

Although Dr. Chan believes that Reid's account "sounds like a lot of agency for a fungal infection" (Mohamed 149), Reid comes to accept and acknowledge that agency, thinking to her fungus: "we are not a team now, but we are not enemies fighting a war either. I think perhaps there has been a truce" (Mohamed 150). Despite this move toward accepting material agency or posthumanism by the end of the novel, Reid's acceptance also reinforces the kind of dualisms that critical posthumanism seeks to overcome, especially those between self/other, mind/body, and whole/part (Haraway, *Manifestly* 59). After acknowledging the truce, Reid still does not acknowledge a *shared* subjectivity which is an element of Braidotti's "internally differentiated subject" (49). Reid's acknowledgement that they are "two, and not one" (Mohamed 150) is in line with posthumanism's rejection of the unified human subject, but the discrete separation between Reid and Cad challenges this move toward posthumanism, as per Braidotti the posthuman subject defies easy categorization, blurring boundaries and belonging to multiple categories without contradiction (49). Thus, despite the potential acceptance of Cad and its agency, and the new perspective that Reid gains through her symbiont, she refuses to acknowledge how they are entwined; it remains a separate entity, a second, alien and unintegrated entity within her body. Although this moment demonstrates what Andrew Rose calls "distributed agency," Reid refuses to accept that her actions are shaped by "more than just multiple *actants*...operating discretely upon each other, [but] more precisely that agency is a mixture from the start" (Rose 85). Rather than accept this "mixture" Reid clings to her own agency, seeing it as something that can be willfully supplemented by Cad on occasion, but only when specifically invited.

Whereas the posthumanism subjectivity fostered through Cad in *The Annual Migration of Clouds* is reactionary and reinforces human/nature and self/other divisions that critical posthumanism seeks to overcome, the breaks and nanobonding in *Blackfish City* offer a more revolutionary potential for shared subjectivity. As outlined above, the breaks impacts the subjectivity and memory of those it inflicts, and in many ways is similar to the experience of people nanobonded with animals. Both people with the breaks and those who are nanobonded are pathologized or persecuted, albeit in different ways, suggesting a similar reactionary response to that in Mohamed's novel. However, in Miller's novel, this pathologization is external, and is not shared by those whose subjectivities are impacted; unlike Reid, characters in Miller's novel do not (overtly, at least) resent how their sense of self is undermined.

Furthermore, likely due to the fact that *Blackfish City* is set in a city where certain governing and social structures persist, the epidemic is not seen as inherently natural, but as a failure of social systems; as Ankit puts it, "epidemics do not have medical causes; they have social ones" (Miller 192). Ultimately, the cause of the breaks is unknown, yet its persistence and devastating impact can be traced to social causes and the benefit of Qaanaq's elite. The epidemic offers a distraction from more fundamental problems in Qaanaq, such as "the supremacy of property" and the "fact that landlords ran everything" (Miller 151). Furthermore, like the AIDS epidemic on which Miller bases the breaks (Simon n.p.), the fact that it is painted only as sexually transmitted disease, particularly among men who have sex with men, obscures its connections to broader social or environmental problems: in the novel, these include climate change, climate

migration, and overcrowded, unhygienic refugee encampments and lack of housing.⁸⁵

It is widely believed that “the breaks [is] God’s wrath, inflicted upon immoral subpopulations” (Miller 65); however, as Ankit discovers early in the novel, the disease can also be transmitted through the exchange of other bodily fluids. Meeting with a family in her role working for Arm Manager Fyodorovna to address a complaint regarding their housing, Ankit meets a six-year-old girl named Taksa, who has the breaks. Her father explains that she contracted the illness in a resettlement camp, where conditions were unimaginable, and in the close quarters a woman vomited on Taksa, transmitting the breaks. Although Ankit tries to harness the image of the child to inspire political action to address the breaks, her attempt is futile, as “the breaks is toxic” and “politicians won’t go near it [because] [p]eople think it’s just criminals and perverts” and “whether or not that’s true is irrelevant” (Miller 28).⁸⁶ It is not only politicians who will not touch the breaks, but everyone, including drug manufacturers. During her

⁸⁵ Although symptomatically different from the breaks as well as occurring during a period with different social and environmental conditions, early information that AIDS was a “gay disease” (Treichler 43) limited the response to it, slowing funding and research, as due to the lack of understanding of homosexuality in the scientific and medical worlds, “many eminent scientists during this period rejected the possibility that AIDS was an infectious disease because they had no idea how a man could transmit an infectious agent to another man” (Curran cited in Treichler 51). Further, the separation and othering of “those at risk” from the “general population” had public health consequences, creating a false sense of security for women and heterosexual men, and also delaying funding because its chief victims were gay or otherwise socially undesirable (Treichler 43, 50).

⁸⁶ Miller has stated that the breaks is based on AIDS, and this lack of political action and discrimination against people with the breaks mirrors the response to AIDS. Nicole Seymour quotes Beth Berila, who outlines how the “U.S. AIDS activists group ACT UP ‘battle[d] mainstream public perception that people living with AIDS are somehow toxic to public health, at both the individual and national levels’” (qtd. in Seymour 94). The belief, then, in the toxicity of people with the breaks is based on this historical precedent.

investigation, Ankit discovers that people suffering from early cases of the breaks were “successfully sedated indefinitely” using “something called Quet-38-36.0—a tranquilizer, derived from an atypical antipsychotic” (Miller 81), a promising treatment, as sedatives typically do not work to treat the breaks. While one can critique a treatment that relies on indefinite sedation, the fact that this treatment is seen as promising by Barron, a man who has the breaks, suggests that it is better than no treatment. That the drug is derived from an atypical antipsychotic (the class of drug used to treat psychiatric conditions such as schizophrenia, bipolar disorder, and agitation associated with dementia) suggests that it does not render patients unconscious, but works to make the symptoms of the breaks more manageable. Quet-38.36.0, however, does not exist anywhere in Qaanaaq (Miller 107), and cannot be printed using Qaanaaq’s molecular assembly machines (Miller 149). Thus, Qaanaaq elites not only deliberately limit the understanding of the breaks and who the disease impacts, but also refuse to treat it, despite the existence of a drug that may do so. As a result, the disease is pathologized in such a way that it becomes a distraction for other systemic problems, and simultaneously leads to ignorance of its posthuman potential.

Like people who have the breaks, the nanobonded community is characterized as “unnatural” in ways that lead to violence, persecution, and genocide. Across society, there is widespread resistance to the idea of shared subjectivity, regardless of whether it arises due to the breaks or nanobonding. Like those who believe that people suffering from the breaks are unnatural or immoral, people also believe that those who are nanobonded are “abomination[s]” and “wedded...to Satan” (57). Like the breaks, the ability to nanobond is mysterious; it is unknown whether the community was exposed

deliberately or accidentally to the “wireless nanomachines” that were originally used to “establish one-to-one networks between individuals” (Miller 73). However, after exposure, the ability to bond with animals is cultivated through “years of training and imprinting” which allows people to network with animals, “forming primal emotional connections so strong that they could control their animals through thought alone” (Miller 73). While this passage mentions “control” of bonded animals, control is not an accurate characterization. According to Ankit’s mother, Masaaraq’s, description of her bond with her orca, Atkonartok, the relationship is more complicated than one of control: “I am what she is, she is what I am. I am an animal. We are an animal” (Miller 227). Ankit experiences this bond herself near the end of the novel, after learning that her mothers and brother are nanobonded. She bonds with a Kaapori capuchin, a monkey who has broken out of captivity in Qaanaaq to thrive as a feral, and describes the feeling of shared subjectivity and experience: regardless of whether Ankit is standing still indoors, if the monkey climbs, it feels as though she is “swinging through space. Like gravity just comes and goes” (Miller 262). Bonded animals are not treated as machines to control, but as family members to be cared for, respected, and protected, and the control goes both ways: the animal and the human share emotions, viewpoints, and physical sensations, making “control” a reductive explanation, clearly put forth by someone with little experience of the connection that arises through shared subjectivity.

Like those with the breaks, people nanobonded to animals share subjectivity, and like the breaks, nanobonding can also result in negative health consequences. However, unlike the breaks, the negative consequences do not occur through the connection or relationship, but *once the relationship is broken*. This is apparent through Kaev, whose

symptoms mirror the breaks for much of the novel. Like Taksa, the child with the breaks, Kaev, too, loses control of his speech, “gibber[ing]” and “bark[ing]” in a “loud panicky succession of syllables he [cannot] control” (Miller 59). These sounds reflect the state of his mind, which is “full of screaming; the roaring of savage beasts; the orgasmic cry of the crowd when the fight was at its peak,” full of a “tentacled mass of thoughts and whispers and memories and contradictory beliefs that screamed and gibbered” (Miller 113). Unbeknownst to all but his mother, Masaaraq, Kaev is nanobonded with the polar bear she brings with her on her orca. Without realizing the reason, he finds relief from the “pressure” and the “screaming and singing” and “fog” when he is near the bear (Miller 113). Masaaraq later explains the phenomenon, telling Ankit that she would never have let the child and bear be separated had she known the attack that massacred their village was coming, as she “shivered...to think of [his] life without the bear he’d been bonded to” (Miller 142). Ora, Kaev and Ankit’s other mother, whose bonded animal dies, describes the feeling as having her “brains scrambled back to the mental capacity of a child” (Miller 297). What this suggests is that shared subjectivity is beneficial and important, rather than something to be pathologized, and the true issue lies in *disconnection* from other people and the nonhuman world.

The breaks and nanobonding are posthuman in how they trouble the boundaries between self and other and human and animal. Whereas in Thomas King’s *The Back of the Turtle*, the human animal division was challenged through cross-species community and care, in these works set in the future, this boundary is challenged further, by the incursion of the non-human into human physiology. Rosi Braidotti defines the “critical posthuman subject” as “a relational subject constituted in and by multiplicity, that is to

say a subject that works across differences and is also internally differentiated, but still grounded and accountable” (49). Relationality is central to the breaks and nanobonding; the breaks is transmitted through sexual or close personal contact, reinforcing how humans are already relational creatures who depend on close contact for many reasons, and leads to a multiplicity of experience and memories, opening up the individual subject and allowing them to understand their lovers in deeper and more intimate ways.

Nanobonding is also relational: it is a deliberate choice to bond with an animal, initiated through ceremony, and the bonded subject works “across difference” and becomes “internally differentiated” in a way that gives them a deeper and broader perspective than they would have as a traditional humanist subject. Braidotti argues that posthumanism is a “transformative or symbiotic relation that hybridizes and alters the ‘nature’ of each one and foregrounds the middle grounds of their interaction” (79); this is very similar to Masaaraq’s description of her bond with Atkonartok. Whereas in *The Annual Migration of Clouds* the transformation through Cad appears to be unidirectional, with the fungus working only to transform the human, the transformations in *Blackfish City* appear to be multidirectional and hybridizing, moving away from the privileging of the humanist subject, and creating a middle ground where human and animal meet.

Similarly, however, to Cad, nanobonding is also related to a shared vulnerability due to climate change. It is not a coincidence that against the backdrop of climate change, the two primary animal characters in the novel are a polar bear and an orca, species which

are both at risk due to climate change.⁸⁷ The humans bonded to these animals feel their visceral pain as the climate changes, resulting in the animals becoming “scraggly and thin and hungry, their friends gone, their hunger and their loneliness echoing heavy inside [their human’s] heads” (Miller 139). In my analysis of *The Annual Migration of Clouds*, I cited Braidotti’s posthumanism shaped by climate change and characterized by shared vulnerability; Braidotti sees this vulnerability as leading to “an affirmative bond that locates the subject in the flow of relations with multiple others” (50). Elaborating on this relationship, Braidotti also uses the term “posthuman ethics” to describe the acknowledgment that “ties bind us to ... multiple ‘others’ in a vital web of complex interrelations,” which “breaks up the fantasy of unity, totality, and one-ness” (100). Whereas Reid only unwillingly acknowledges that she is “two,” and does not fully accept the fungus, *Blackfish City* more fully challenges the idea of a unified human identity through its recognition and privileging of relationships, whether with humans or nonhumans, making the novel more amenable to being understood as reflecting Braidotti’s posthuman ethics. These ethics are further reinforced by the fact that through

⁸⁷ Characteristic megafauna such as the polar bear and orca are frequently used as symbols of animal endangerment in climate change discourse. Both the World Wildlife Fund (WWF) and Greenpeace have used the orca and the polar bear as icons of what will be lost if anthropogenic climate change is not slowed, as it will result in the loss of their arctic and subarctic habitats. The WWF’s Maddi Higgins notes that orcas are threatened on multiple fronts, including by whaling, “dangerous levels of toxic contaminants,” oil spills, loss of ocean biodiversity, and climate change. Greenpeace has also used the orca to mobilize against the TransMountain Pipeline expansion, which has the potential to harm orcas through increased marine traffic, oil spills and other toxic chemicals. Polar bears are also popular symbols of climate change. Cameron Whitley and Linda Kalof examine how animals are depicted photographically in narratives of environmental degradation, finding that “representation of animals in the visualization of climate change [is] rare,” but that when used, the “victims” depicted tend to be polar bears (14). According to Molly Segal, the polar bear has become the “accidental icon” of climate change, as the bears are used metonymically to represent the arctic.

nanobonding, humans experience the pain of their animal companions that results from climate change, increasing empathy and emphasizing how the nonhuman world will be impacted.

As outlined above, both novels tie posthuman subjectivity to a shared vulnerability linked to climate change. This vulnerability leads to the blurring of boundaries between human and non-human. As Chen argues, destabilizing the “ontological boundary between human and nonhuman” can lead to “science fiction’s posthumanist potential to redefine the human condition according to the changing dynamic of human nature relationships” (192). However, as I have shown, there is no guarantee that this transformation will be embraced or seen in a positive light. Taylor argues that while posthuman theorists such as Haraway promise “*pleasure* in the confusion of boundaries,” the expectation that “we [will] benefit from the collapse of ontological boundaries that separate ‘us’ from ‘the world’ betrays an incredible degree of optimism, even anthropocentrism” (Taylor 360), as such a posthuman blurring of boundaries can lead to a “fearful decomposing of normative conceptions of discrete humanity and bounded individual identity” (Taylor 369). Similarly, Castree and Nash suggest that posthumanism may either be celebrated *or* met with humanist concern (501). The works explored in this chapter represent both ends of the spectrum, with this fear, or humanist concern, being amplified in *The Annual Migration of Clouds*, whereas *Blackfish City* presents the changes as less severe or threatening. In a world where so much has already been altered or lost due to climate change, and where Reid’s generation is already asked to take more things for granted “than anyone who’s ever lived before,” (Mohamed 46) anthropocentrism and humanism may offer a degree of privilege, control, and stability in a radically destabilized world;

such stability and certainty may be less necessary in the context of Miller's novel, where less has been lost as a result of the climate crisis.

Relatedly, posthumanism, according to Braidotti, is linked to post-anthropocentrism, and I argue both are key to the potential for ecological and environmental justice in these novels. This is another reason that Miller more successfully embraces posthuman politics. Miller represents and embraces post-anthropocentric subjects and subjectivity, even as, perhaps counter intuitively, his novel is set in an urban environment, seemingly disconnected from the natural world. Mohamed's novel, in contrast, depicts a rural, self-sufficient community governed by the rhythms and cycles of the natural world, which remains grounded in anthropocentrism. Post-anthropocentrism is "marked by the emergence of 'the politics of life itself'" (Rose qtd. in Braidotti 60), where life can no longer only be attributed to humans, but is an interactive and open-ended process (60). This emphasis on life, that is on *zoe*, rather than *bios*, leads to *zoe*-centered egalitarianism, which sees all forms of life as being on the same ontological footing.⁸⁸ Despite its focalization through humans and its relative inattention to the natural world, *Blackfish City* does not privilege human life over nonhumans (especially animals). Nanobonded animals are referred to as family, and in the final chapters when both Liam (Kaev's bonded polar bear) and Go (Kaev's lover) are killed, Liam's death is considered the more significant of the two.

This is not the case in *The Annual Migration of Clouds*, as indicated by the frequent references to Cad as a parasite. Unlike the term "symbiont," "parasite" has negative

⁸⁸ Braidotti distinguishes between *zoe* and *bios*, where *zoe* is the "non-human, vital force of life" (60), and *bios* refers to "the portion of life—both organic and discursive—that has traditionally been reserved for *anthropos*" (61).

connotations, as it refers to an organism that “obtain[s] food, shelter, or some other benefit” at the “expense of the host organism, which it may directly or indirectly harm” (*OED*, 2a). This view is anthropocentric, as it sees Cad only in terms of the (negatively perceived) consequences it has on humans and fails to consider Cad as a species in its own right, or how humans and Cad could live peaceably together, in a safe, docile, and environmentally friendly community.⁸⁹ Furthermore, despite, or perhaps because of, their reliance on the natural world for survival, Reid’s community views the natural world in predominantly utilitarian terms, and is willing to use whatever advantages are available to them. This is seen during the pig hunt, which takes place in the spring. Even though there would be “better eats in the fall,” the hunt must take place in the spring when the pigs have been “hungry all winter, and might finally be getting weak ... slow and languid from the long starving” (Mohamed 89). The hunters acknowledge that people in the past limited hunting to the fall, “because they wanted to play fair,” but this is not a luxury the community has. For the most part, they view the natural world in either adversarial or neutral terms; however, there are rare moments of recognition of its inherent worth. For example, Reid has never seen new paper, as trees are now considered “too young and too few, and therefore too precious, to kill for something” so “frivolous” (Mohamed 5). This is a rare acknowledgement that the natural world may be valuable in its own right. Although this anthropocentric mindset must change now, in the face of the imminent

⁸⁹ The anthropocentric rejection of Cad also hinders ecological justice. As Low and Gleeson note, all natural entities are “entitled to enjoy the fullness” of their forms of life (qtd. in Schlosberg 136). Although from an Anthropocentric perspective this right is rarely extended to bacteria, viruses, and microbes, *The Annual Migration of Clouds* raises the question of whether it should be.

climate crisis, what Mohamed's novel suggests is that, in the midst of a crisis, or in its immediate aftermath, humans may not have the capacity to prioritize anything beyond their own survival.

3. Queer Ecology and Reproductive Futurism

So far in this chapter I have outlined the similarities and differences in how Mohamed and Miller envision posthuman futures in climate-changed worlds, and have argued that whereas characters in Miller's novel embrace the political potential of posthumanism, in Mohamed's novel Reid ultimately aligns herself with humanism. Queer ecology is another framework for understanding the differences between the novels. Both works' challenges to humanism and anthropocentrism, and their suggestion that the climate crisis requires moving away from these ideologies, is tied Lee Edelman's rejection of "reproduction futurism," or the insistence that the status quo (including humanism and anthropocentrism) be maintained through reproduction. Like posthumanism, the rejection of reproductive futurism suggests the importance of "making kin not kind," to borrow Haraway's phrase, as the climate crisis re-shapes ideas of to whom and how we are responsible. The idea of the Child, or of heteronormative reproductive futurity, which sees the Child as a symbol of a normative future, is central to Edelman's *No Future*. The Child is also frequently drawn upon in climate change rhetoric, as an impetus to change behaviour and confront the climate crisis in order to protect "the future." In this section, I analyze queer futurity and ecology, as well as the role that children play in both novels, looking at how the young people depicted view their situations, how the figure of the Child is viewed in larger society in each novel, and how heterosexual reproduction, or

reproductive futurism, reinforces, rather than challenges the status quo, even as it is purportedly used to create more environmentally friendly futures. *Blackfish City* and *The Annual Migration of Clouds* can be read as posthuman queer ecological literature in how they blur the boundaries between human and nonhuman others in productive or painful ways, and in how they challenge reproductive futurity by emphasizing the present, as in Miller's novel, or by pushing back against the image of the Child that is central to much climate change rhetoric, as in Mohamed's. Ultimately, both works suggest that the reproductive temporality that shapes the future in terms of "birth, marriage, reproduction, death" (Shackleton 361) may no longer make sense within the context of climate change. If reproduction should not be the mark of futurity in climate-changed worlds, how can we imagine world-making in ways that are more just? *Blackfish City* suggests that posthuman and non-reproductive family ties are just as valuable as heteronormative reproductive futurity in a world shaped by climate change. Unlike *The Annual Migration of Clouds*' more pessimistic selfishness that sees the breakdown of familial and community ties, *Blackfish City* explores the revolutionary potential of queer, posthuman kin-making.

Only *Blackfish City* deals with explicitly queer characters or relationships, yet both works echo queer ecological theory. Although not strictly parallel, posthumanism and queer ecology have similar goals: challenging binaries and normative ideologies. Broadly, Alex Lothian explains that "queer theory deconstructs binary logics of identity and imagines how the world might be changed by their subversion or destruction" (16). More specifically, Nicole Seymour defines "queer environmentalism" as "environmentalism that is rooted in a concept of futurity that is established outside the

value set of normative, reproductive, heterosexuality” (qtd. in Shackleton 358). Similarly, Catriona Sandilands uses the term “queer ecology” to denote “practices that aim...to disrupt prevailing and heterosexist discursive and institutional articulations of sexuality and nature” and that rethink “environmental politics in light of queer theory” (n.p.). In their introduction to the first book-length treatment of queer ecology, Mortimer-Sandilands and Bruce Erickson point to how queer and ecological politics are connected as they both “reveal the powerful ways in which understandings of nature inform discourses of sexuality, and also the ways in which understandings of sex inform discussions of nature” and argue that these issues are linked “through a strongly evolutionary narrative that pits the perverse, the polluted, and the degenerate against the fit, the healthy, the natural” (14). Thus, the novels’ queer ecology or environmentalism builds on their posthumanism, as nature, culture, and gender rely on various binaries that are undermined through a queer ecological posthumanism.

These divisions are also challenged through *Blackfish City* and *The Annual Migration of Cloud’s* posthumanism, explored above, which challenge the distinction between the perverse and/or polluted and the healthy and natural. I include *The Annual Migration of Clouds* in this chapter, alongside the more explicitly queer *Blackfish City*, because while it does not depict queer relationships, it explores connections between sex and the natural world by showing that climate change and Cad challenge heterosexist norms such as the primacy of the Child. While studies of posthumanism largely focus on the human/nonhuman and nature/culture divides, queer ecology not only challenges these binaries, but also seeks to open environmental understanding “to explicitly non-heterosexual forms of relationship, experience, and imagination as a way of transforming

entrenched and natural practices toward simultaneously queer and environmental ends” (Mortimer-Sandilands and Erikson 43). My reading of these novels in queer ecological, as well as posthuman terms, shows how “challenging heterosexist norms” is required to “recognize the ways in which families built on Global North consumerism may need to change their understanding of their relationship with the natural world, and thus their practices” (Sturgeon 127). I contend that in doing so, these novels prioritize climate and reproductive justice by exploring how an emphasis on the (heterosexual) future can lead to women’s oppression, as well as unjust and unsafe living conditions for future children and for the natural world, and how queering relationships and the future has a potential to create a world with more equitable treatment of humans (including those who are ill) and the non-human world.

Sex and reproduction are key issues in both novels; although Cad is not strictly a sexually transmitted illness in the way the breaks is, it *is* passed on genetically: it is a “heritable symbiont,” and therefore relies on sexual reproduction for transmission across generations. Given the sexual transmission of both diseases, interrogating the relationships between sex, reproduction, and family in the context of climate-changed futures is important to understand how the figure of the Child and its connection to the future is naturalized, and how this naturalization has implications for reproductive and climate justice. In her analysis of *Memoirs of a Polar Bear*, Daisy Reid attends to queer desire and interspecies encounters, arguing that the novel “consistently throws into question the default nature of the heteronormative family unit and its attendant fixation upon the figure of the biological child as the epitome of the ethical good,” drawing on Edelman’s formulation of reproductive futurism to support her claims (118). I argue that

Blackfish City and *The Annual Migration of Clouds* raise similar questions in their depiction of queer or alternative family structures and the place of the Child, even as, and perhaps because, the future is thrown into radical uncertainty.

Edelman's *No Future* outlines the idea of reproductive futurism, a "temporality oriented toward the figure of the Child" (Weist 400) and challenges "the Child as the emblem of futurity's unquestioned value"; he proposes instead a project of "queer oppositionality that would oppose itself to the structural determinants of politics as such" (Edelman 4). Pushing against "politics as such" and the idea of the inherent value of the future, Edelman argues that even radical politics are inherently conservative, insofar as "it works to *affirm* a structure, to *authenticate* a social order, which it then intends to transmit to the future in the form of its inner Child" (3). This transmission, rather than transformation, suggests that the future for actual children will look much the same as the present.

This is true, too, of climate change rhetoric which uses the image of the Child to "reflect a notion of a family-timed future" (Kverndokk 145), where the child is a stand in of a future in need of saving. Inevitably, the future that must be saved for the child relies on the preservation of today's status quo, rather than a transformation that would ensure its sustainability. Arguably, this emphasis on the child and future in need of saving links back to my primary critique of climate fiction in terms of climate justice: which children are saved? Whose futures? And is the future in need of saving simply a preservation of the status quo?

The Annual Migration of Clouds offers a direct challenge to reproductive futurism through its focalization through a child/young adult. As Kverndokk notes, the Child is a

well-established trope in climate change discourse, which reflects “a notion of family-timed future” and “authorizes ‘the parent’ as a position of enunciation in climate change discourse” (145). The problem with this position of the Child as a mere representation of “a future to be saved” (Kverndokk 145), Mohamed’s novel suggests, is that seeing the Child as a stand-in for the future refuses to see the actual, real futures of children in worlds dramatically altered by climate change, and challenges the very notion that this future is one worth saving, an idea Reid struggles with, leading to conflict with her mother. If, as Edelman argues, reproductive futurism “generates a generational succession, temporality and narrative sequence” that does not enable change, but rather perpetuates sameness, and “assure[s] repetition” (60), or as Kverndokk suggests, reproductive futurism “reproduces social norms by projecting them onto the future” (147), Reid explicitly points to the problems with this mentality, especially as climate change necessitates a radical break from the status quo, rather than its repetition. Mohamed’s novel envisions the world that will result from the continuation of the status quo, suggesting it is not one that future children will desire. The world Reid inherits is one of struggle and suffering, with limited possibilities, and she laments this: “you feel it sometimes, rage filling you like an updraft from a fire ... rage that we missed it, missed it all, and rage at those who got to have it in the specific way that took it from us ... What has been broken has been broken in a way that can no longer be fixed” (Mohamed 62). As Rebekah Sheldon argues in *The Child to Come: Life After the Human Catastrophe*, the child is “freighted with expectations and anxieties about the future,” while “she is tethered to a future that can no longer be taken for granted” (2-3). Thus, the child, especially when used in climate change rhetoric or in apocalyptic novels, and Reid in

particular, is caught in a double bind. In Mohamed's novel, forced breeding programs are used to produce children, as they are in many post-apocalyptic or dystopian novels (or as Sheldon calls them, "sterility apocalypses" (151)), to shore up the future,⁹⁰ even as climate change challenges the very future and life conditions reproduction seeks to perpetuate.

Reid has limited knowledge of the past, referring to it as "*back then*" or "Back Then, capitalized, like Anno Domino" (Mohamed 61), and is not even certain when "Back Then" begins or ends. Despite her general uncertainty about the past, Reid has been accepted to Howse University based on an essay she wrote about "reproductive rights," or, rather, "not reproductive rights exactly...but the erosion of rights then that led to the now, clearly and neatly, like foot-prints in mud" (Mohamed 35). This connection between the "then" and the "now," points to the orderly, logical movement from past to present to future, and a (misplaced) belief in reproductive futurism's ability to carry (pun intended) the present into the future. This belief that the Child "joins the security of generational succession and proper development to the promise of human futurity" (Sheldon 20) leads to the implementation of "draconian abortion bans," when, due to "wonky sperm and ... dodgy eggs and ... pollution and ... malnutrition" fertility and birth rates rapidly declined (Mohamed 36, 37). The need to regulate and force reproduction in this manner suggests that "the child's assurance of human vitality slides metonymically into an assurance of life itself" (Sheldon 20), an assurance that is clung to in the pre-diegetic world of Mohamed's novel, as the possibility of future life is called

⁹⁰ See, for example, Margaret Atwood's *The Handmaid's Tale*, P. D. James' *Children of Men*, or Louise Erdrich's *Future Home of the Living God*.

into question through environmental and reproductive crises.

Furthermore, in addition to abortion bans, upwards of two hundred countries enact pro-natal policies which endorse heterosexual couplings, eliminate sex-ed from schools, ban contraception, and offer tax breaks for people who have children. Despite these policies and incentives, babies do not follow; instead, there are only “angry graphs and tables showing the projections, potential babies, quantum babies swirling like cherubs on a painted ceiling and nothing below it” (Mohamed 36). Regardless of their intention to repopulate the Earth, Reid connects these policies not to the maintenance of humankind, or the shoring up of the future, but rather to “the depopulation of Earth,” as so many of these children inherit Cad and a world devastated by climate change (Mohamed 36). In effect, the efforts to ensure to continuation of the present into the future suggest the very challenges that the present presents for the future, as pollution and malnutrition, both of which can be linked to the climate crisis, challenge not only the conditions necessary for human life, but also humans’ ability to reproduce, and thus the maintenance of the species itself.

The tension in the novel emerges from these contradictions. It is caused, in part, by the very problem with the Child as the privileged stand-in for the future alluded to above: the future that is deemed worth protecting is a privileged one, where the child will be protected from the ravages of the climate crisis. Although Reid acknowledges this and resents that “Back Then” people did not prevent the repetition of the status quo, she still seeks to emulate the past by leaving home and attending university, rather than breaking with this historical “life schedule” (Lothian 7) and staying home to support her community with the planting and harvest. Perhaps unsurprisingly, then, reproduction and

the university are brought together in Mohamed's novel. When Reid prepares to tell her mother of her acceptance, her mother interjects: "Oh my *God*, you're not going to tell me you're pregnant!" (15). When Reid insists that that is not the case, and comes up against her mother's resistance to her attending, it is clear that her mother would prefer if Reid *were* pregnant, as she repeatedly insists that Reid is driven by her love for and desire to impress Henryk, rather than her own desire to attend university. This connection between the university and reproduction suggests that both are involved in the repetition of a past that is no longer sustainable, and thus should perhaps no longer be desirable; nevertheless, Mohamed's novel grapples with the challenges of abandoning the things that have shaped one's expectations for life, especially, although not only, in the Global North.

The university not only represents the privileging of humanism over posthumanism, as explored previously, but also literally represents privilege itself. Rather than privileging the future through reproduction, then, Reid privileges her present self in her ultimate decision to abandon her community for the university. Thus, she can be read in Edelman's antirelational and antireproductive terms despite the fact that this decision, like reproductive futurism, also seeks to reproduce a conservative way of life. Howse is located in a dome, where the rich fled as climate change intensified, and Reid sees her opportunity to attend as almost akin to magic, especially given the secrecy surrounding the school. She notes that it is not a secret like her and Henryk's secret strawberry patch, but rather like "the hidden schools of wizardry in old books" with their "mystery, power, esoteric knowledge, and all the riches that must attend those things" (Mohamed 7). This shows that despite the new world order shaped by deprivation and lack, Reid shares the

desires and values of past children, as this reference to children's literature implies.

This contrast between Reid's desires for power and riches, shaped by children's literature, a genre that has "often been understood as a cultural force that props up the dominant institutions of society" (Hintz 78-9) and is meant to simultaneously "initiate novice readers into the 'ways of the world'" and "preserve childhood innocence" (Hintz 152), and her social reality, where dominant institutions have all but collapsed and childhood innocence is a thing of the past, is evident. Perry Nodelman argues that "children's literature is frequently about coming to terms with a world one does not understand" (qtd. in Grenby 165), but this outdated literature is not an effective guide for Reid's generation. By contrasting Reid's belief in her future, which has been shaped by her access to the children's novels of the diegetic past, Mohamed suggests that the emphasis on the Child as the figure of the future does not benefit them, as the world they inherit is not a continuation of the status quo. The lives of these children are not merely symbols of future hope, but are shaped by the inevitable consequences of climate change. The children's literature of the past can no longer help Reid's generation make sense of the world, as the world it was written in and for no longer exists.

Ignoring Cad for a moment, it is important to note that even as climate-change rhetoric harnesses the image of the Child, children will face more severe consequences of climate change than their parents. As Singh, Xue, and Poukhovski-Sheremetyev note, "climate change disproportionately, and unjustly, affects the world's young" (1), and the climate crisis already disproportionately effects youth mental health, with the most comprehensive study of climate anxiety to date finding that a "majority" of young people "feel betrayed and abandoned by governments, which are perceived as failing to respond

to the climate crisis” (2). This sense of betrayal is evident in Reid, who not only resents the failure to prevent climate change, but also the inequities and increased class stratification that followed. The past seems nearly as unimaginable as the children’s literature mentioned above. As she says of her generation: “we are asked to take many, many things for granted. More than anyone who’s ever lived before us” (Mohamed 46), including Paris, movies, technology, space travel, and the existence of anything beyond their small community, including the university itself. As the distinction between the past and fiction is blurred, Mohamed highlights the fiction of the Child as future.

The reproduction of the status quo and heteronormativity thereby fail in *The Annual Migration of Clouds* and are further challenged or complicated in the novel as reproductive futurism not only leads to the production of the future, but also the reproduction of Cad. Reid not only inherits a climate-changed world, but also a life-altering, fatal illness, and thus insists upon and resents the tangible material consequences of sexual reproduction. Despite the concomitance of Cad and reproduction, reproductive futurism remains privileged in Reid’s world, even as it leads to the infection of subsequent generations with Cad. This heterosexual reproduction is figured, by Reid, as rape-like, as she thinks at her mother: “Do you understand that *I did not consent to this*: to having Cad, to being born with it ... *you forced that upon me* ... My anger is the same as yours should have been” (Mohamed 86, emphasis added). Reid looks down on and pushes back against the heteronormativity and pro-natalism that led to her Cad. Arguing with her mother, Reid asserts: “just because you lost your mind with a man doesn’t mean it happens to everybody!” (Mohamed 85). Although she does not state it explicitly, Reid suggests that the path to marriage and children is one that she will not take, a view that is

likely shaped by her experience living with Cad and climate change.

Reid refuses to give into attempts to “bind...back” “apprehension of nonhuman agency” through the child, to “[reconsolidate] liveliness within the charmed circle of human futurity via sexual reproduction” (Sheldon 177). Despite her resentment and fear of her Cad, Reid refuses to exert control over non-human agency and materiality by dominating it with attempts to increase the presence and power of human life. When, at the end of the novel, she thinks that her relationship with Henryk may become romantic, she cannot help but think to herself, “can you imagine. The embarrassment of it all,” where the “embarrassment” seems to refer to the imagined future where they “make love, [and don’t] worry about protection so that [she] can carry his baby to university” (Mohamed 142). The moment Reid imagines a future defined in reproductive futurist terms, this very future is shut down. Reid’s rejection of reproduction and her frequent comments on the many injustices shaping her life point to the necessity of understanding the future and justice differently. Mohamed’s novel suggests that climate change rhetoric’s emphasis on the future (through the Child), may not be to children’s benefit, as the future is too late to implement the necessary changes. In her rejection of reproductive futurity, Reid suggests that it is imperative to consider the implications of bringing children into climate-changed worlds which they did not shape, and which they did not consent to being born into.

Blackfish City also addresses questions of justice and the future by showing how not all children or people matter equally to the dominant classes of society and by depicting a queer-led revolution that fosters justice for marginalized people in the present, not only the future. The inequality of existing populations—and their children—is evidenced by

Ankit's attempt to use Taksa's case of the breaks to garner public sympathy and attention, as explored in the previous section. Taksa's family speaks Tamil at home, indicating that they have migrated from South Asia, which was impacted by the Water Wars; thus, the disregard for this child with a life-threatening illness, and others like her, suggests a disregard for poor, racialized children. Taksa is the only child in the novel, and her family the only conventional, heteronormative family depicted in any detail. In its refusal to protect the future of the child by refusing to protect the child herself, and by only briefly depicting a single child, *Blackfish City* disconnects the future from the domain of the Child, suggesting instead that the immigrants, survivors, and residents of Qaanaaq are the future, while also depicting what can simultaneously be understood as Edelman's queer oppositionality toward normative politics.

In its belief that immigrants and survivors of the climate crisis are the future of Qaanaaq, *Blackfish City* moves away from the antirelationality or strategic pessimism employed by some queer theorists,⁹¹ toward the queer optimism or utopianism advocated for by José Esteban Muñoz and Michael Snediker. The novel sets up a neat division between the new society of Qaanaaq, where immigrants have found “freedom” and “joy,” and tourists from “the Sunken World,” who see only what has been lost. In contrast to the negativity of the tourists, Ankit's emphasis on the joy experienced by people in Qaanaaq can be read in terms of Snediker's queer optimism, which is “immanently, rather than

⁹¹ Antirelational or antisocial queer theory and politics, described by Snediker as queer pessimism, is often understood by critics as beginning with the publication of Leo Bersani's “Is the Rectum a Grave?” (Haslam 263). However, Judith Halberstam argues that the tension between a negative and a positive queer politics dates to the early twentieth century in Europe, which saw the emergence of an “anti-communitarian homophilia” (143).

futurally oriented” (3) or Muñoz’s emphasis on the “sense of astonishment found in quotidian things,” which he praises in Warhol and O’Hara’s works. Muñoz’s “mode of queer critique depends on critical practices that stave off ... failures of imagination” (18). While the failures of imagination referred to here are antirelationality and antiutopianism, this can also apply to the tourists who see the poverty of Qaanaaq’s climate refugees as purely dystopian. The freedom and joy depicted in Qaanaaq, despite its dystopian elements, is what allows for the possibility of Muñoz’s queer utopia, or Snediker’s queer optimism; Qaanaaq’s queerness allows Miller’s characters to “see and feel beyond the quagmire of the present” (and the present is, indeed, a quagmire), to a “then and there” shaped by “other ways of being in the world” (Muñoz 1), and ultimately, the suggestion of a new world premised on a just distribution of resources.

Although Miller’s novel could be read along the lines of Edelman’s more pessimistic queer theory, as it rejects reproductive futurity and the importance of the child, I argue that this rejection of the child is not a rejection of the future, as it is in Edelman’s terms; rather, the future hinges on a queer collective, who seek not only to improve the future, but also the here and now. As Haslam outlines, Muñoz suggests that Edelman’s rejection of reproductive futurism not only rejects the figure of the Child, but also “denies an intersectional political resistance that connects queer people, people of color, the working classes, and other marginalized groups through complex political formations designed to change the ‘here and now’ into a more utopian future for all” (250). This denial does not take place in *Blackfish City*; indeed, political resistance is grounded in intersectional politics connecting queer, poor, displaced, criminalized, and otherwise marginalized characters. Haslam elaborates that “the antirelationsist insistence on a radical alterity

founded in a queer rejection of the future is read as a refusal to participate in wider, and more difficult, political acts of transformation. Against this, Muñoz argues that there can be a form of utopian futurity founded on an interrelational queerness” (250). In Miller’s novel, the future is not the territory of the child, but is shaped by the various and variously intersectional residents of Qaanaaq who transform the city through “interrelational queerness.”

Watching the tourists from the Sunken World, Ankit reflects: “[w]e are the future ... and you are the past” (10). This future, the novel suggests, is posthuman and queer, given the focalizing characters and their entangled and queer family structures. Masaaraq, the orcamancer, and Ora, her partner who is imprisoned in the cabinet (a multi-purpose mental institution, prison, and protective custody for the wealthy), are queer partners who are both nanobonded. Kaev and Ankit are their children, although the entire family is estranged, and only recognize one another as family midway through the novel. Relatedly, Soq, a queer, non-binary youth who seems to be an independent character for the majority of the novel, is revealed to be the child of Kaev and the crime boss, Go, although their family is also estranged, and only Go is aware of their familial relationship. This heterosexual pairing is given no space, however, as Soq and Go have oppositional views and desires, and as Masaaraq kills Go at the end of the novel. Soq, the character with the most revolutionary potential, gains their power to subvert Qaanaaq’s political structure and re-distribute wealth and property through a queer sexual encounter with Fill, one of the city’s shareholder’s, Martin Podlove’s, grandsons. Soq contracts the breaks from Fill, and gains access to his memories and knowledge of his grandfather’s records, explicitly tying queerness to Qaanaaq’s future. Queer sex transmits the data that

will allow for the total reorganization of Qaanaaq society.

Despite the joy and happiness experienced by Qaanaaq's residents, the city is dystopian in many ways. Qaanaaq's eight arms are organized according to class and privilege. While arms one through three are private and impressive, arms four through eight are characterized by "tight floating tenements," "boxes heaped on boxes," "illicit steel stilts holding up overcrowded crates" and "human desperation" that seems to "warp the very laws of physics" (Miller 7). The city is run by shareholders and landlords, and there are no limits to what they can and cannot do (Miller 12). To inflate demand for (and thus the price of) housing, Qaanaaq's shareholders keep empty apartments off the market, and use their positions of power to imprison anyone seen as a threat to political stability in the Cabinet (Miller 313). In Miller's novel, queer relationships ultimately undermine the control of the shareholders. Soq obtains the list of vacant apartments through sex with Fill, and uses this information, in partnership with Masaaraq's desire to be reunited with Ora, to find housing for everyone who has been unjustly imprisoned in the Cabinet.

Whereas in *The Annual Migration of Clouds*, Reid embraces humanism rather than posthumanism, in *Blackfish City* a queer posthumanism is embraced and is harnessed to create a more just society. The importance of a shared subjectivity that decenters the human and acknowledges a posthuman and relational mesh is seen in the connection discovered between the breaks and nanobonding at the end of the novel. Ankit, her mother Masaaraq, her brother Kaev, and Kaev's child, Soq, work together to break Ankit and Kaev's other mother, Ora, out of the Cabinet. Ora, who was nanobonded to a black-chested buzzard eagle and who has the breaks, explains: "the breaks isn't a disease. It's just incomplete. Once the missing piece is in place, it's a gift. An incredible ability"

(Miller 283). In order to survive her twenty years in the cabinet, Ora has broken with longstanding nanobonding rules, which state that outsiders cannot be bonded (Miller 140, 233). Bonding to people was the only thing that kept Ora sane, and when she did, she found that when she bonded with people with the breaks, they stopped suffering from it (Miller 297). This reinforces my point made in the previous section: nanobonding reveals the necessity of connection.

The queer posthumanism of Miller's novel ultimately points to how "the recognition of shared ties of vulnerability can generate new forms of posthuman community and compassion" (Pick qtd. in Braidotti 69) and how the "vitality" of the posthuman bond "is based on sharing this planet," resulting in a "in a vital interconnection that posits a qualitative shift...away from species-ism and towards an ethical appreciation of what bodies (human, animals, others) can do (Braidotti 71-2). Furthermore, it points to the alienation of modern life and suggests that the only way to enact the radical changes needed in the face of climate change is to decenter not only the human, but also the self, to empathetically understand others' experiences, and fight against systemic oppression. This shift toward empathy and away from the human self leads to the change that occurs at the end of the novel, when the inmates are freed from the cabinet, and the vacant apartments hoarded by Qaanaaq's elites are redistributed to address the housing crisis and systemic inequality.

This change comes about when Soq chooses not to form an alliance with Go, which was their initial plan, as it would elevate their status, as Go's role as Qaanaaq's primary crime boss would be cemented by keeping the knowledge of Podlove's empty apartments to herself. Soq chooses a more revolutionary path, and aligns themselves with their

grandmother, Ora, rather than their mother. While both Podlove and Go are fighting for control of the city, Soq thinks: “*For once, the status quo is fragile. Things could change*” (Miller 311), and Soq enacts this change by making the list of vacant apartments public. There is hope that Qaanaaq’s future will be more equitable under Soq’s guidance, as they “radiate” not only power, but also “something more—the strength to do the right thing, the hard thing, and the wisdom to know what that was” (Miller 323). Soq’s ability to do the “right thing” is influenced by Ora, who also has revolutionary plans for Qaanaaq, based on her experience bonding with people in the Cabinet. Whereas traditional rules dictate that only family members can be bonded, reinforcing the primacy of the family, Ora seeks to move beyond the family structure, whether heterosexual or queer, to nanobond anyone suffering from the breaks, which will make the illness manageable by “*reestablish[ing] the missing link between the individual and the collective*” (Thomas 56, emphasis added). The emphasis on relationality in Miller’s novel is linked to its queerness; as he explains in an interview with Scott Simon, Miller was inspired by how HIV/AIDS catalyzed communities coming together and fighting back, which “forced political changes, forced a sort of sea change in how we think about things” (n.p.). In *Blackfish City*, I argue the sea change catalyzed is linked to “transversality” or relationality, which enacts ethical relationships premised on interconnection and interdependence between humans and the natural world (Braidotti 95). Where Braidotti’s posthuman ethics asks us to acknowledge our entanglement with multiple others, transversality foregrounds not only this entanglement, which can be passive, but also brings beings into more active relating and specifically “values non-human or a-personal life” (95). This concept is similar to Karen Barad’s “ethics of mattering” which is “about

responsibility and accountability for the lively relationalities of becoming of which we are a part” (393). Regardless of the terminology used to describe these queer, posthuman ethics, it is clear that, for Miller, relationships should play a central role in fostering justice.

The importance of relationships and interconnection is reinforced by Ora’s plan to treat the breaks. The breaks’ symptoms emerge from the fact that the illness “encodes massive amounts of data” from the chain of people who transmit it, and “a normal human mind has no idea how to process this kind of information,” causing it to slowly break down (Miller 297). The nanites carried by nanobonded people, however, allow them to process the emotions of the animals to whom they are bonded, and when someone with the breaks becomes bonded to a nanobonded person, “the nanites help them survive” by allowing them to handle and control the influx of memories (Miller 297). Ora plans to bond with as many people suffering from the breaks as possible, reinforcing the importance of relationships. Ora not only goes beyond the structure of the family, but shows the value of interconnectedness, both with the natural world, and with people deemed “untouchable” because of the breaks.

Thanks to Ora and Soq’s actions, the novel concludes with a large, entangled mesh of subjectivities and relationships that can be read in line with Muñoz’s assertion that queerness must be understood “as collectivity” and as being about “futurity and hope” (11). By foregrounding relationality rather than the antirelationality proposed by Edelman, the novel also can be read in Haraway’s terms, showcasing the power of making kin, not kind, and highlighting that this kinship is increasingly important in the context of climate change. Relationships are central to the just transformation depicted,

and, as Christy Tidwell suggests, the fact that these relationships are queer, and that Miller's world is open to them, is what spills over "into an openness to alternative ways of being and thinking in other areas as well—including challenges to capitalism and colonialism" (13). Importantly for my project, this transformation, facilitated by and due to queer ecological posthumanism, is a transformation toward a more just society, where access to housing is not dictated by class. Although the novel ends before readers learn if the stigma surrounding the breaks and nanobonding is overcome, Miller suggests that by providing housing for Qaanaaq's masses, this queer, ill collective can begin to challenge the political rhetoric about the breaks used to distract from other social problems.

The posthumanism of both *Blackfish City* and *The Annual Migration of Clouds* is strengthened by their queerness and rejection of the heterosexual, reproductive family unit as the only kind of social and familial arrangement that makes sense in a post-wild time, climate-changed world. Whereas Mohamed's novel suggests that bringing children into a world ravaged by climate change and illness is inherently unjust, and likens it to sexual assault, Miller suggests that alternative family structures that extend beyond humanity to include non-human members may offer a more just alternative. These works explore intimacy, even when intimacy with the nonhuman world is unwanted, to show the inherent connection not only between families, but between all humans and the non-human world, showing how, as Timothy Morton puts it, "life-forms constitute a *mesh*, a non-totalizable, open-ended concatenation of interrelations that blur and confound boundaries at practically any level" (275). By emphasizing relationships beyond the family to show how these relationships always already influence even the insular family structure, these works break with "family time" through estrangement or discord in the

families depicted, and challenge how that family time “makes the future seemingly tellable and imaginable” (Kverndokk 155). Instead, they suggest that family time and reproductive futurism hinder the ability to imagine the alternative, radically different futures that will be needed to confront the climate crisis.

Instead of family time, queer time structures these works. Queer time emerges in both novels through the disruptions to the status quo that follow climate change and wild time. As Lothian outlines, “queer temporal theory ... insist[s] on a nonlinear approach to the production and reproduction of futures” asking instead “what worlds are made and what pleasures found when time is not a relentless onslaught of future generations angled toward progress, degeneration, or some combination of the two” (3). Similarly, Rogers describes wild time as a temporal structure that “will no longer assume the form with which we are familiar” (9), and as a period which “embrace[s] the inviolate and the utterly desecrated, freedom and destruction, rule-breaking and the already broken” and which “is unfamiliar and unsettling and utterly necessary” (11). Wild time’s disruptions to linearity and its embrace of rule-breaking and the broken parallel queer time, which, as Lothian describes it, and which I argue is clear in both works, “signifies breaking with straight and narrow paths toward the future laid out for the reproductive family, the law-abiding citizen” instead lingering in the present or refusing the future, creating moments of “ephemeral utopia” (3). The collapse of the “logic, institutions, and modes of interacting” due to wild time (Rogers 4) ultimately allows for the challenge to heteronormative family forms and straight time that is important in both these works of climate fiction; as Sturgeon argues, “heteronormative family forms are bound up in environmentally dangerous social and economic practices” (Sturgeon 126). Imagining

queerly posthuman futures, both Mohamed and Miller depict alternatives that break down binaries and the privileging of humankind, suggesting that the future cannot simply reproduce the beliefs of the past, and prioritize transforming the immediate present, rather than a distant future.

Posthumanism and post-anthropocentrism have potential for ecological and environmental justice in that they can foster trans-species solidarity, as well as solidarity across gender, race, and class lines. For Braidotti, this means that “both kinship and ethical accountability need to be redefined” to consider not only human relationships, but also responsibility to one another and the nonhuman world (103), as Miller hints at through the end of his novel. Alaimo makes a similar claim, drawing on Barad’s assertion that “ethics is about accountability for our part of the tangled webs we weave” (qtd. in Alaimo 157). While neither novel may succeed at envisioning redefined ethical accountability (*Blackfish City* gestures toward it, while *The Annual Migration of Clouds* shies away from it), this gesturing is beneficial of its own accord because “fictional narratives provide a window” into distributed environmental politics as “we patiently and urgently acclimate ourselves to [the] fragmentary uneven, [and] shifting foundations of posthuman and distributed subjectivities” (Rose 206). Thus, even when they may fall short, in gesturing at them and attempting to represent posthuman ethics, works of cli-fi may reorient readers to more distributed futures that move away from anthropocentrism and toward the recognition that we have always been posthuman.

Chapter Seven

Climate Utopianism: Just Transformations in *Corvus* And *New York 2140*

Building on the previous chapter on Sam J. Miller's *Blackfish City* and Preme Mohamed's *The Annual Migration of Clouds*, this chapter takes up Kim Stanley Robinson's *New York 2140* and Harold Johnson's *Corvus*, to argue that, beyond wild time, the climate crisis holds transformative potential. In the previous chapter, I explored this transformation in terms of posthumanism and queer ecology, arguing that an ethos of boundary blurring and movement away from the human and heterosexual reproduction facilitate climate justice in a climate-changed world. Despite the positive elements of *Blackfish City* and *The Annual Migration of Clouds*, both works are, like all of the works analyzed thus far, climate dystopias. Here, I argue that Robinson and Johnson envision utopia through climate change.

To explore what I am calling climate utopianism, I read *New York 2140* in conjunction with *Corvus*. Both Robinson and Johnson imagine futures shaped by climate change; like *Blackfish City* and *The Annual Migration of Clouds*, *New York 2140* and *Corvus* are set beyond wild time—the worst of the climate crisis has passed and a relatively stable society has been re-established. Both novels envision the persistence of some elements of twenty-first-century North American life, including the stock exchange and the court system, as well as entrenched class division; however, both also envision similar changes, such as the turn to collectives as a way of surviving climate change.

Corvus and *New York 2140* emphasize the ongoing need for justice in climate-changed futures, albeit on different scales. Likely due at least in part to the positionality of the authors (Harold Johnson is a Cree author living in what is now known as Canada, and Kim Stanley Robinson is a white settler living in what is now known as the United

States), these works depict different visions of climate utopianism. Both present the need for a paradigm shift, although the agency and ability of the characters to enact such a shift is limited by their power and position within society. However, the works approach this paradigm shift differently. *Corvus* is a work of Indigenous Futurism⁹² in which agency and action are constrained to local and personal realms. There are two transformative possibilities in *Corvus* for those seeking to escape the dominant paradigm: they can drop out altogether (by joining a smaller, alternative community, such as the Ashram or Indigenous community depicted in the novel⁹³); or they can focus on personal transformation, improving their relationship to their communities, the natural world, and

⁹² Indigenous Futurisms often use science fiction tropes to “engage colonial power in the spirit of a struggle for survival” (Taiiaki Alfred qtd. in Dillion 3). However, as Lynette James argues, Indigenous Futurism is more than a generic category; it is “an orientation” that should be meaningful not only to Indigenous peoples but “to anyone hopeful or terrified about the future” (174).

⁹³ Johnson does not specify the Nation of the Indigenous peoples in *Corvus*. However, Johnson is Cree, and Trevor J. Phillips notes that “Cree cosmological relationships with the land” and the “Cree Raven story” play a role in the narrative. Although La Ronge is home to the Lac La Ronge Indian band, which is Cree, Johnson notes that not all Indigenous people in the region are Cree, and points to hostilities between Cree and Dene people in the region and the differences in culture and language (*Peace* 93). Thus, we cannot make assumptions about the nation of the Indigenous characters George encounters in the novel.

Similarly, the backgrounds of those who established and live on the Ashram are not addressed. Ashrams originate in India, as part of the Hindu philosophy; the Sanskrit word *āśrama* means “‘hermitage,’ a place of retirement for spiritual practice (Heehs 66), or can also refer to the Hindu philosophy “that organizes life as a series of four stages or *ashrams*—the student...householder...renouncer...and hermit (Skaria 954). “Ashram” also, more broadly, denotes a form of intentional community; Gandhi established several communities he called “ashrams” in South Africa and India, intentional communities that promoted “alternative politics that [sought] to constitute the nation through a politics of nonviolent neighbourliness” McLain 465). Gandhi’s ashrams were governed by eleven principles, many of which are also visible in the Ashram in *Corvus*. These are truth, nonviolence, celibacy, control of the palate, non-stealing, non-possession, physical labour, economic independence, fearlessness, removal of untouchability, and tolerance (McLain 473). In *Corvus*, the Ashram is founded by a pacifist as a place where “people would live together...share and take care of each other and be self-sufficient” (198).

to the universe as a whole. In *New York 2140*, by contrast, some of the characters are able to intervene in the dominant paradigm more directly due to their privileged position within it (due to their political influence or knowledge of the financial system, for example). This allows Robinson's characters to enact a paradigm shift that is only hinted at in *Corvus*. These novels emphasize similar issues and point to the roles that power and privilege play in shaping a just climate future. Taken together, they show the need for both personal and structural change to create more equitable futures in the face of climate change.

While neither work explored in this chapter presents unbridled utopian optimism, and, in fact, both could be read as dystopian due the climate crisis, in their attempts to imagine changes to social systems and new ways of relating to each other and the environment, both Robinson's *New York 2140* and Johnson's *Corvus* are shaped by a utopian impulse,⁹⁴ which I argue makes them works of climate utopianism. Both novels emphasize the necessity of transformation (social, economic, and personal) for

⁹⁴ In *The Concept of Utopia*, Ruth Levitas traces the history of utopia and utopian scholarship, and pushes back on the idea of a utopian impulse as understood by Bloch, Geoghegan and Marcuse as fundamentally part of human nature, as being "grounded in the human capacity for, and need, for fantasy" (Geoghegan qtd in Levitas 209). Levitas argues that the idea of "an innate impulse to utopianising is intimately bound up with essentialist definitions of human needs and human nature" (210), and suggests instead that utopia is a social construct that emerges not out of an innate impulse, but "a socially constructed response to an *equally* constructed gap between the needs and wants generated by a particular society and the satisfactions available to and distributed by it" (210). Tom Moylan likewise argues for the social origin of utopia, but does not abandon the utopian impulse, arguing that it "continually bases its drive in the personal experience of unfulfilled human need" and suggests that "if those whose lives are oppressed and unfree are able to dream beyond the present, then the utopian impulse as non-exclusive activity no longer limited to imposed models will play an increasingly significant role in the oppositional project" (212). In this chapter, I use the term utopian impulse along the terms outlined by Levitas and Moylan, outlining the impulse as a response to a desire for improved personal and social conditions.

weathering the climate crisis, and suggest that the most important changes are those that create a more just society. Although the novels depict different elements of the necessary transformations, reading them together shows that, by turning toward community and eschewing the isolation and alienation produced by modern capitalist social structures, the climate crisis may not be prevented, but social crises need not result, too.

The utopian impulse of these works thus challenges claims that cli-fi reinforces power structures and overlooks climate justice by conflating the end of the world and the end of a privileged way of life. In this chapter, I argue that climate change may (and perhaps should) precipitate the end of the privileged Western way of life, but that this does not constitute the end of the world; as Claire Colebrook puts it, we might rather see “‘the end of the world’ as the end of ‘a’ world, *and* to think that a certain worldlessness is not the end of the world” (108).⁹⁵ The end of stark material and power differentials, and the climate injustice perpetuated by them, has the potential to usher in a climate utopia shaped by climate justice. Both *Corvus* and *New York 2140* are works of climate utopianism that show that climate change does not guarantee the “end of the world” and point to the need for justice in climate-changed futures. In their climate utopianism, which emerges out of the dystopian social and environmental conditions of the climate crisis and wild time, these works depict communities driven by the utopian impulse to

⁹⁵ Claire Colebrook extends this argument and explores this tension in “Anti-Catastrophic Time,” noting that “what is experienced as a dystopian and imagined future—where resources are controlled by those with capital power, where humans are abandoned to mere survival, where life is on the threshold of annihilation but where corporations are robust—is how many already experience...life on this planet” and that “more importantly, the very condition for the “world” that is depicted as being at an end (the world of liberal freedom, reflection, consumption, rights and critical distance) requires and has always required another world that appears as “the end of the world” (103).

create a better and more just society. That is, they show that climate change may lead to the end of the world as we know it, but it does not lead to the end of the world, pointing to the utopian potential of the worlds that emerge from the crisis.

1. Climate Fiction and Dystopia: Why We Need Climate Utopia

Lawrence Buell has famously argued that “apocalypse is the single most powerful master metaphor that the contemporary environmental movement has at its disposal” (285); thus, it is perhaps unsurprising that Axel Goodbody and Adeline Johns-Putra identify apocalypse as a “particularly influential mode of writing” within cli-fi (12). In addition to drawing on apocalyptic tropes, many works of cli-fi build on the tradition of dystopian literature as an educational genre, noted by scholars such as Patrick Murphy and Keith Booker.⁹⁶ Although some scholars believe that dystopian cli-fi has the potential to educate and create a sense of urgency in readers, as outlined in Chapter Two, the efficacy of dystopian scenarios at motivating behavioural change has been challenged by critics who find that such scenarios are either consumed as entertainment or create a sense of powerlessness and despair that is inimical to action. Kim Stanley Robinson has commented on the inefficacy of dystopian cli-fi to motivate change in an interview with

⁹⁶ Patrick Murphy claims that the purpose of dystopian literature is forewarning (26). Forewarning is crucial in regards to climate change; dystopian novels warn readers about the threats to our world and lifestyles if immediate action is not taken. Murphy writes, “[m]any dystopian writers would be entirely dissatisfied if their novels led people only to understanding and not to any type of social action” (Murphy 26). Keith Booker writes that “dystopian fictions provide fresh perspectives on problematic social and political practice that may otherwise be taken for granted or considered natural and inevitable” (3-4). For Booker, dystopian literature educates through defamiliarization. Taking Murphy and Booker together, defamiliarization leads to understanding, which can in turn precipitate action, although whether it *does*, in fact, precipitate action is difficult to assess.

Brooke Gladstone, saying: dystopias “are too easy, and they end up being a kind of pornography of despair” which results in reader “complacency” (qtd. in Wright 114). Similarly, Maria Ojala finds that pessimism about climate change leads to a “hopelessness that tends to shift agency” (Jordan, Bernier, Zuiker 311). Lucy Burnett notes that narratives that seek to motivate readers through fear are “among the least effective persuasive devices” (Moser and Dilling, Witmarsh, O’Neil and Irene qtd. in Burnett 165) when it comes to climate change, and more worryingly, Bennett, et al., find that dystopian extrapolations “run the risk of becoming self-fulfilling” as people tend to “base their actions on what they believe about society and their future” (411). Thus, despite the purported educational potential of dystopian climate fiction, climate communication scholars, or reader response theorists, find that fear is not, ultimately, a strong motivating factor.

Further, this project is motivated by critiques of cli-fi from proponents of environmental and racial justice; Noël Sturgeon argues that “first world concerns over the fate of the world” in apocalyptic climate films are largely only triggered “after it has consumed everything,” where “it” is the so-called first world (qtd. in Joo 75). Similarly, April Anson finds that “fictional appeals to the apocalypse...are wedded to the exceptionalism of the white settler state,” as the state of emergency can be used to justify the unequal distribution of both resources and state and military violence (62), as seen in *Watershed*, *The Water Knife*, and *Orleans*.⁹⁷ Audra Mitchell and Aadita Chaudhury are

⁹⁷ Anson elaborates, noting that the state of emergency, which “defines” the logic of apocalypse, “works to secure the innocence of its white settler subjects, even as they reject state power” (63) and thus the state of emergency can be read as an “attempt to deflect a settler identity, while continuing to enjoy settler privilege on stolen land” (Tuck and Yang qtd. 64).

critical of how such end-of-world climate change discourses imagine “subjects in whom whiteness is elided with resilience and survival” and thus “normalize and obscure the modes of violence and oppression through which perceived ‘resilience’... is achieved” as well as how they “displace the threat of total destruction ‘onto others who are seen as lacking the resourcefulness of the survivor’” (Gergan, Smith and Vasevudan qtd. 313).⁹⁸ Thus, rather than confronting the power dynamics and inequities that have contributed to the climate crisis in ways that are necessary to deal with climate change and live in a more equitable and environmentally sustainable way, works of dystopian or apocalyptic cli-fi may reinforce the status quo. Ultimately, recent critiques of the genre contend that by positing climate change as the end of the world for hegemonic Western society, cli-fi effaces how Western civilization has already been responsible for the ending of worlds.

Although much cli-fi and cli-fi scholarship emphasizes dystopian or (post)apocalyptic futures, such futures are linked to the social, political and power systems that shape North American society and its response to climate change, and thus cli-fi. Until this point, this project has focused on dystopian cli-fi and climate justice, through its emphasis on a lack of climate justice through extrapolation of present and historical injustices into the future, as in *Watershed*, *The Water Knife*, and *Orleans*, or through analysis of cli-fi that engages with climate justice by pointing to how lack of climate justice can exacerbate already dystopian conditions, as seen in *The Back of the Turtle* and *The Annual Migration of Clouds*. In its embrace of posthumanism and queer ecology, Miller’s *Blackfish City* envisions a more positive future, but the overarching social conditions preclude its

⁹⁸ Similarly, April Anson cites Eddie Yuen, who argues that apocalyptic rhetoric relies on fear, which is a “very effective platform from which to launch a campaign of populist xenophobia or authoritarian technocracy under the sign of scarcity” (qtd. 67).

categorization as utopian. Despite the preponderance of dystopian cli-fi, cli-fi is not inherently dystopian. Antonia Mehnert's *Climate Change Fictions* points to the value of the "cultural realm" for "rethinking and reimagining" climate change and responses to it (2), and emphasizes the moral dimension of texts dealing with the climate crisis. She argues that such works "engage in a poetics of responsibility" to discuss the "responsibility humankind has toward its own actions" (3). This is the role I suggest for climate utopianism; by engaging with the dystopian pasts, presents, and futures that have led to and could result from climate change, while refusing to capitulate to dystopian pessimism, such works emphasize the responsibility of humans to and for their own actions, and suggest the ability to overcome the momentum of petrocultures and apocalyptic climate rhetoric to eke out utopian possibilities, even in climate-changed worlds.

Whiteley, Chiang, and Einsiedel examine cli-fi through "the sociology of expectations literature," contending "that imaginings ... are both generative and performative" (30). They note that in addition to being generative, expectations (even in the form of literature) can be deterministic, meaning that "in holding up a preferred future, they at the same time, dismiss other alternative visions" (31). In the context of climate change, alternative visions are especially pressing; as Greg Garrard argues, "only if we imagine that the planet *has* a future are we likely to take responsibility for it" (116). While utopianism has not been totally ignored in cli-fi criticism, most scholarship focuses on the utopianism of specific works, namely those of Kim Stanley Robinson.⁹⁹ Other

⁹⁹ See, for example: Spencer Adams, Lisa Garforth, Raphael Kabo, Derrick King, Michael Kłata, Andrew Milner and David Sergeant.

work looks at specific possibilities for improved or utopian futures (namely solarpunk¹⁰⁰ or solarly¹⁰¹). However, I argue that to foster a prolonged discussion about the utopian potential of cli-fi, and to combat some of the challenges of dystopian cli-fi outlined above, a focus on climate utopianism is necessary. In this chapter, I use *Corvus* and *New York 2140* as case studies of climate utopianism, to flesh out the genre and show how each work participates in it in a different way and to argue for the value of utopian climate futures.

Before moving to analysis, a brief, preliminary discussion of climate utopianism is in order. In short, I argue that works of climate utopianism combat the pessimism of

¹⁰⁰ While solarpunk is not explicitly utopian, and can in fact, be post-apocalyptic, it is “broadly characterized by imagining sustainable futures after energy transition” (Williams 6). As the website solarpunks.net describes it, solarpunk is a movement in speculative fiction, art, fashion and activism that seeks to answer and embody the question “what does a sustainable civilization look like, and how can we get there? It can be “utopian, just optimistic, or concerned with the struggles en route to a better world — but never dystopian” (solarpunks.net). Williams finds that “alongside a profusion of solar technology, smaller-scale communities or egalitarian eco-city-states are a more common focus than nations” and that “community, care, and humility” are emphasized in the genre (6). Solarpunk is more than a literary genre, however; its concept and aesthetic emerged in online spaces such as blogs, tumblr, and discussion forums, before they were taken up in works of fiction (Williams 7). Adam Flynn’s “Solarpunk: Notes toward a Manifesto” states that “solarpunk is about finding ways to make life more wonderful for us right now” as well as for the generations that follow, and that “there’s an oppositional quality to solarpunk, but it’s an opposition that begins with *infrastructure as a form of resistance*.” Juan David Reina-Roso describes solarpunk as an area of counter-cultural hope to enables us to overcome socio-ecological injustices and increasing epistemic and ontological violence (47).

¹⁰¹ Solarly is a “neologism: *solar* with *solidarity* to assert that all energy projects, green or not, need to be organized with social justice commitments at the forefront” (Wilson 147). Dominic Boyer elaborates, explaining solarly as “less a precise political program than as the process of negotiating across large and small scales the reproductive apparatus of fossil-fueled modernity” (27). Jordan B. Kinder writes that “when informed by energy justice, solarly is a form of solidarity among the human and non-human world; it describes a relation towards the sun that reorients our collective energy imaginaries from one of scarcity to one of abundance” (64).

dystopian cli-fi, while also relying in some way on climate catastrophe as the catalyst for utopian transformation. This argument relies on disaster scholars including Charles Fritz, Lee Clarke and Rebecca Solnit who have pointed to the transformative potential of historical disasters. Fritz and Solnit point to the similarities in responses to catastrophe, even when conditions vary: people tend to come together, collaborating to survive catastrophe, and sometimes harness this energy to create a more desirable future.

The utopian imagination can play a key role in envisioning and implementing the transformations necessary given the climate crisis. Both Ruth Levitas and Kim Stanley Robinson argue for the necessity of utopia today. As Levitas states:

the economic and ecological crises mean that change is both essential and inevitable.

It is the nature of that change that is in question. We need to think about what kind of social and economic system can deliver secure and sustainable livelihoods and ways of life for all. For those who still think that utopia is about the impossible, what really is impossible is to carry on as we are, with social and economic systems that enrich a few but destroy the environment and impoverish most of the world's population. Our very survival depends on finding another way of living. (*Utopia as Method* xii)

Similarly, Robinson believes that in the face of climate change, “[i]t has become a case of utopia or catastrophe, and utopia has gone from being a somewhat minor literary problem to a necessary survival strategy” (“Remarks” 9). For these authors, utopia is a desire for a better future, or “a shared social vision” (“Remarks” 9). In this chapter, I argue that works of climate utopianism can help to shape this social vision.

In describing the works in this chapter as climate utopias, I argue that representing climate-changed futures not only as catastrophic, but also as sites of continuing advocacy

for change, even when the situation seems dire, is important for cli-fi. Just as the educational potential of dystopian cli-fi has been propounded, much utopian scholarship also speaks to the educational power of utopian futures; as Levitas notes, “Marxist tradition has defined utopia in terms of function” and one of the functions of utopia is the “education of desire” (*Concept 6*). The education of desire through climate utopias offers a counterbalance to the pessimism of much cli-fi, or climate change discourse more broadly; climate utopianism can provide readers with the hope or belief that their actions are significant, by depicting the impacts of actions within the fictional realm.

My thinking on climate utopian literature is shaped by Levitas’ *Utopia as Method*, wherein she argues that “[o]nly a form of utopian thought and of reading utopia that engages with the actual institutional structure of the present and the potential institutional structure of the future can help us ... and this demands an understanding of utopia as method rather than as a goal” (Levitas 126). Climate utopias are concerned with the transformation from climate catastrophe to a more just society that privileges environmental and ecological justice; they engage with the institutional structures of the present by pointing to their failures to address the climate crisis or climate justice, or by showing how these structures are transformed in the futures they imagine. In addition to depicting structural or systemic change, climate utopianism may also be more personal, depicting characters who break with dominant ideologies as they come to a new understanding of their place within the world (both environmental and social). This emphasis on transformation is why both works considered here have dystopian elements; climate utopia is concerned with getting from here to there. As José Esteban Muñoz argues, “it is productive to think about utopia as flux, a temporal disorganization, as a

moment when the here and the now is transcended by a *then* and a *there* that could be and indeed should be” (97). Climate utopias emerge from and through the here and now of the climate crisis. Although they may not transcend it, they reach beyond crisis, suggesting the emergence of something else. As Madeline Ashby writes about solarpunk, “with more optimistic stories...you can imagine a future that you actually want” (qtd. in Louiselle 144). Such imagination and agency are crucial, given the climate crisis, and I argue that climate utopianism can help to foster them.

New York 2140 depicts a more just future on a large scale; Robinson imagines a world where affordable housing is widely available, banks are nationalized, and a variety of new laws are written to limit the growth of capital and to protect people and the environment. *Corvus*, in contrast, focuses on personal transformations that are driven by the desire for justice. Both novels engage with climate justice by pointing to the unequal distribution of the effects and consequences of climate change. As Dipesh Chakrabarty writes, climate change will “accentuate the inequities of the global capitalist order as the impact of climate change...falls more heavily on poorer nations and on the poor of the rich nations” (29); both novels centre North America, looking specifically at the effects of climate instability and change on the poor in Canadian and U.S. American contexts. They depict personal or systemic change to not only protect those most vulnerable to climate change, but also ecological justice. Robinson furthers climate justice by pointing to the need for a more equitable distribution of resources to help the poor weather the effects of climate change, predominantly through the issue of housing, and Johnson points to how climate policies can reinforce inequality and suggests that Indigenous epistemologies may offer more just solutions for both people and the natural world.

In contrast to cli-fi that envisions climate change as an apocalypse, the works in this chapter push back against the notion that climate change is the end of the world, and they suggest in different ways that the end of the world has simultaneously already happened, and is continuously ongoing. In *Corvus*, Johnson draws on a history of colonialism, war, and Indigenous survivance to make this point, and in *New York 2140* Robinson refers to the 2008 financial crisis as well as future, imagined, disasters to show that such crises are never one offs—the financial system collapses in the novel, and Hurricane Fyodor is described as on par with a Third Pulse. Yet even as these novels show that the end of the world is not a singular event, they argue that we cannot abandon hope that things will improve.

2. Climate Justice and Personal Transformation in *Corvus*

Johnson's *Corvus* is set in drought-stricken La Ronge, Saskatchewan, eighty years after a series of natural disasters and two decade-long wars have ravaged North America. *Corvus* is set in a world shaped by climate change, but beyond immediate climatic disaster. Whereas during wild time the logic and structures of civilization are “undone as a consequence of climatic ... disruptions” (Rogers 4), climate chaos is predominantly part of *Corvus*'s history, and the structures and institutions of society have been re-established. The novel is focalized through three veterans of the Second Intra-American War, Richard, George, and Lenore. The narrative focuses on Richard and George's personal struggles to find freedom in a world shaped by climate change and repressive government. Richard lives on an Ashram that is viewed as utopian by many characters due to its self-sufficiency, tight-knit community, and connection with the natural world,

and George is a criminal prosecutor whose life is changed through an encounter with an Indigenous community that opens his eyes to different ways of relating to people and the natural world.

In addition to the human protagonists, *Corvus* also includes chapters from Raven's perspective. Raven is an extradiegetic narrator, providing a literal bird's-eye view of climate change and human life in La Ronge, and bringing in an element of the natural world as a narrator that has resonance as a Cree cosmological or spiritual figure. Trevor J. Phillips writes, "the Cree Raven story [acts] as a narrative frame" in the novel, making *Corvus* "more of a moral tale, in the model of Cree legend than contemporary speculative fiction" (n.p.). I argue that the chapters from Raven's perspective do more than act as a narrative frame; they offer a meta-commentary on human life in the Anthropocene. Although Raven's chapters comment predominantly on La Ronge during the time of the novel, these extradiegetic chapters address the readers' present and history, bringing the reader into the narrative, and suggesting that now, rather than the future, is the time to implement the changes that the novel points to.

Although climate change has largely stabilized in *Corvus*, its effects remain visible through the geography, social structures, and trauma that govern characters' lives; this emphasis on the structural, individual, and even affective impacts of climate change is a defining feature of cli-fi, according to Goodbody and Johns-Putra, who write that cli-fi explores climate change "not just in terms of setting, but also with regard to psychological and social issues" (11). Geographically, climate change has re-shaped the region. La Ronge is a town in northern Saskatchewan that "encompasses the Lac La Ronge Indian Band, the town of La Ronge, the village of Air Ronge and the Northern

Municipal Administration” (*Peace* 43). It is located on “the southern edge of the Precambrian Shield, on the shore of Lac La Ronge to Mistahi-Sâkahikanihk (Big Lake)” (Johnson, *Peace* 43). In 2021 La Ronge had a population of 2,521 people (Statistics Canada) while in Johnson’s novel it has expanded into a major city, a growth driven by climate change, as its subarctic climate makes it a desirable location for climate migrants from the south. As Raven narrates in the opening pages, humans were driven north “seeking the shade and the cool,” looking for “water, the lakes and rivers and places to bathe and splash and laugh and forget the drought and sand and dust of further south” (Johnson, *Corvus* 7). Although cities further south persist, their inhabitants must stay indoors for much of the year. Cities such as Phoenix and Houston, however, are “completely empty” as “nothing lives without water and...the reservoirs dried and the aquifers drained” (Johnson, *Corvus* 16). Like *Watershed* and *The Water Knife*, *Corvus* envisions widespread drought. As temperatures rise, the glaciers in the Rocky Mountains disappear, along with the “ice fields to feed the Saskatchewan River or the Athabasca or the Columbia” and as a result “there are years when the Saskatchewan didn’t flow” (Johnson, *Corvus* 148). As in the drought-shaped futures imagined by Vanderstooop and Bacigalupi, lack of water leads to conflict in *Corvus*: climate change leads to two Intra-American Wars, referred to as the First and Second Intras in the novel.

George, Richard, and Lenore are veterans of the Second Intra-American War, and its impacts on them are palpable. The Second Intra is the second of two wars fought over water in the Americas after climate change leads to drought. The First Intra was about climate migration. Because of Texas’s violent response to climate migrants from Mexico and Central America, Austin petitions for secession from the state, not wanting to be

associated with such xenophobic policies. However, in response to “the Austin Petition and especially support for it from outside, from the North” the rest of Texas demands succession from the union, along with Nevada, Alabama, Tennessee, and the secessionist movement “caught fire” based on the “difference between dry and wet states” (Johnson, *Corvus* 190), similar to the divisions fomenting in *Watershed*. Although extra-diegetic, the First Intra points specifically to issues of climate justice that are foregrounded in the novel, as the “wet” states participate in the politics of the armed lifeboat, closing their borders to more desperate refugees from the Global South. Johnson’s novel thus points to the unequal impacts and responses to climate change, wherein those who are most responsible (especially those states and provinces with oil-based economies) deal with relatively mild consequences, while barring those least responsible and who suffer more severe consequences of climate change.

The Second Intra is more explicitly “about water, or lack of water” due to a decade of extreme drought (Johnson, *Corvus* 104), although it, too, points to issues of climate justice. The causes of the second war are less clearly described, but its impacts are undeniable on George, Richard, and Lenore. Lenore is traumatized by her time in the military, and questions the value of her service, thinking: “they had gone to war to fight for peace...perpetual war for perpetual peace, until it couldn’t be stomached anymore” (Johnson, *Corvus* 51). Lenore wonders whether, even though “the mass killing had subsided and the biggest machines of war were silent for now,” they are really at peace (Johnson, *Corvus* 51); given the persistence of climate injustices and ongoing threat of conflict, Lenore wonders if the current state of existence can really be called peaceful.

Both Lenore and Richard recognize how the war promoted an artificial division

between “us” and “them,” and Johnson uses this recognition to advocate for climate justice; as Lenore understands it, the people she was fighting were not terrorists or enemies, but were simply hungry, as “the climate had changed and the crops had failed” and “cows had died from thirst and from the heat” (Johnson, *Corvus* 95). Johnson thus condemns the politics of the armed lifeboat and points the necessity of a collectivist utopia in the face of the climate crisis. Frederick Jameson also condemns these politics, writing that “rich societies like the U.S. will need to convert to another kind of ethic if the world is not to end up, as it currently seems destined to do, in the spectacle of a First-World gated community surrounded by a world of starving enemies” (“Politics” 49-50). The world imagined by Johnson is a world that resembles Parenti’s armed lifeboat, or Jameson’s gated community; *Corvus* depicts a Canada that has fought in climate wars against so-called “enemies,” while within the system individuals push for a revised ethic that foregrounds environmental and social justice.

Despite the obvious need for systemic change, depicted through the injustices of the First and Second Intras, Johnson comments on the challenges of imagining a better society through Lenore, who is haunted by her experience in the Second Intra. Lenore feels trapped by the repetition of a traumatic memory that revealed the climate injustices of her world, and the racialized violence that accompanies climate change through armed lifeboat politics. During a weapons search of a “cinderblock house” that belonged to “skinny dirty people with brown faces” (Johnson, *Corvus* 94), Lenore was curious about a pot simmering on the stove. When she uncovered the pot, she discovered a dead infant, simmering. This discovery prompts the realization that the people she was supposed to be

fighting against were not enemies, but just hungry people and “things done in hunger needed to be forgiven” (95).

Through this extradiegetic incident, Johnson comments explicitly on climate injustice, bringing racialized violence into climate change. As Caren Irr outlines in her survey of climate fiction, cannibalism is an “oddly persistent figure” of the genre, signifying the “outer limit of the endurable” in a way that “perpetuates the anxieties evident in narratives of European contact with the indigenous peoples of the New World” (6). In *Corvus*, the war is between North and South America, and the so-called enemies are the “skinny dirty people with brown faces” whom Lenore encounters. Johnson points directly to the fact that people in the Global South will face earlier and more severe impacts of climate change, and extends his critique of armed lifeboat politics, exaggerating the result of such politics in a Swiftian vein. In “A Modest Proposal,” Jonathan Swift makes a similar critique, pointing to inequities in Ireland in the 1720s, wherein landlords and English colonizers profited from the subjugation of Irish tenants. However, whereas Swift proposes that infants “be offered in sale to the persons of quality and fortune,” Johnson depicts a different scenario, wherein the poor of the Global South are in such dire circumstances due to the climate crisis that they are forced to eat, rather than sell, infants. Although depicting different scenarios, the use of cannibalism in both texts points to similar issues, including not only the inequitable distribution of wealth and resources, but also the exploitation of the poor to benefit the rich. Swift writes that stewed infants will be “very proper for landlords, who, as they have already devoured most of the parents, seem to have best title to the children” (n.p.) whereas Johnson

alludes to, but does not explicitly outline, how the Global North has exploited labour, natural resources, and lax environmental regulations in the Global South.

Because of her experience in the Second Intra, Lenore is caught in a trap that is a common critique of utopia; she cannot imagine how utopian views would translate to the real world, or how utopian transformations could be implemented. In *The Concept of Utopia*, Levitas writes, “the very term utopia suggests to most people that this dream of the good life is an impossible dream” (1), a viewpoint akin to Lenore’s, who despite a brief visit to the Ashram where Richard lives, feels that the utopian ideals lived-out on the Ashram do not apply in the real world, because “it was different there,” where “a person could imagine freedom and independence, taste the food that came from the ground, be with like-minded people” (Johnson, *Corvus* 115). Fighting in the Intra and witnessing climate injustice first-hand makes Lenore cynical, as she feels powerless to act against systemic forces. This failure of imagination and depression in the face of climate change and systemic injustice are reinforced by Lenore’s ultimate suicide.

Although Lenore’s inability to imagine a utopian future may be shaped, in part, by her experience in the Second Intra, it also points to a larger issue of privilege that recent critiques of climate fiction have brought to light. Colebrook argues that dystopian climate fiction “suggest[s] a paucity and timidity of the imagination, as if the destruction of how we live now could yield nothing but horror” (104). Related to this failure of the imagination, Colebrook asks: “What sort of person finds it easier to imagine the end of the world than the end of capitalism?” (107)¹⁰². She answers that such a person is likely

¹⁰² Colebrook asks this question in response to the dictum frequently attributed to Frederic Jameson and Slavoj Žižek that it is easier to imagine the end of the world than to imagine the end of capitalism (Fisher 8).

from the “first world,” and is a person for whom “the end of the world” signals the end of “the opportunity for hyper-consumption” (107). Lenore can thus be read as a representation of this kind of first-world consumer. As a criminal prosecutor, Lenore is in a position of relative privilege and her inability to imagine a better future, or any future at all, may also be due to her fear of losing her privilege. As she sees it, there are only two choices: “career and a steady pay cheque, or independence and [the Ashram’s] utopia” (Johnson, *Corvus* 116). Lenore is ultimately unwilling to give up the career and stability that her pay cheque afford her; although she has seen another way of living, she is unwilling to give up certain elements of her life, despite her unhappiness, such as her connection to the Net,¹⁰³ without which she feels “lost” as though “a huge part of her was missing” (Johnson, *Corvus* 93), and the status and prestige which come with being a prosecutor. In an essay about the need for utopia, Kim Stanley Robinson suggests that a factor that might hinder other ways of being is the fact that “those of us in the developed world, the privileged world, tend very naturally to ask: Even if we do survive ... will it be bad for us? Will we be unhappy? Will we lose our privileges?” (“Remarks” 11). Lenore seems unwilling to risk losing any privileges by George’s attempt to make the world better, and she chooses instead to take her own life rather than risk social and economic

¹⁰³ In the novel, the internet, or the Net, is required to participate in society. It is used to control all household appliances, entry to all secured buildings, monitor biometrics and health, provide access to bank accounts, and for communication. (92). Citizens access the Net through circuitry tattooed into their skin, which connects to their platforms (electronic devices), and can be used to control all of the functions listed above (Johnson, *Corvus* 62). Platforms are required to live in the city; however, to register a platform, citizens must be registered, which in turn requires “an address...bank account...credit rating...citizenship” (Johnson, *Corvus* 214).

“failure.” As a representation of the kind of privileged, first-world consumer identified by Colebrook and Robinson, Lenore suggests that failures of the utopian imagination may have less to do with the impossibility of utopia, but the necessary social transformation that true utopia will engender and a fear of this transformation.

To help overcome the challenges of imagining a utopian future, *Corvus*, like many works of climate-fiction, makes explicit mention of readers’ presents or pasts to establish continuity between contemporary actions and future climate conditions, and to not only emphasize the necessity of radical change, but to suggest that the present, rather than the future, is the time when such radical change should be implemented. Many works of cli-fi, including *Corvus*, are future histories: they are concerned with making the present “meaningful in terms of its possible outcome[s]” (Green 15). However, unlike many works of dystopian cli-fi, Johnson’s novel goes beyond suggesting that a dystopian future will result if change does not happen, but suggests that the present, and even the past of contemporary readers is *already* dystopian. Thus, per Murphy’s delineation, *Corvus* is a work of “cognition,”¹⁰⁴: a work that ““helps us to know ourselves and our existential situation”” (Scholes qtd. in Murphy 26). *Corvus* points to repressive elements in Canadian history, suggesting that Canadians may already live in a dystopian society, thereby emphasizing the need for change. The novel makes explicit reference to Prime

¹⁰⁴ Murphy argues that there are two kinds of dystopian literature: works of sublimation and works of cognition. Works of sublimation are passive forms of entertainment, that may relieve anxiety or “[make] life bearable” (Scholes qtd. in Murphy 26), but result in at best escapism, and at worse reinforce the status quo. Cognitive works, on the other hand, encourage “discomfiting reading” and social action (26).

Minister Stephen Harper's attack on science in 2012, for example.¹⁰⁵ A 2013 report from Canada's Information Commissioner found that the Harper government muzzled scientists, especially those researching climate change (CBC), which is reflected in the novel when Lenore says, "If Prime Minister Harper hadn't fired the scientists in 2012, we might have seen it coming" (Johnson, *Corvus* 138). Of course, this is reductive: climate change was on people's radar well before 2012, although by muzzling scientists Harper did, perhaps, make the public less aware of this information.¹⁰⁶ George has a longer view; he believes that by 2012, it was already too late and no one "could have stopped what was coming" (Johnson, *Corvus* 139). By employing the mode of future history here, Johnson "comment[s] upon the past and present by projecting the implications of the past and present forward in time" (Green qtd. in Barris 131), a strategy employed in much cli-fi, but subverted in Johnson's novel as the future is not inevitably dystopian. Although George believes that no one could have prevented what was coming, it is clear that Johnson, in writing a work of climate fiction, hopes to encourage readers to at least try. He balances dystopian admonitions of people contemporary to readers with the ongoing transformation and utopian potential of his climate-changed future. Trexler writes that "nearly all Anthropocene fiction addresses the historical tension between the existence of

¹⁰⁵ Prime Minister Stephen Harper was elected in 2006. Raili Lakanen finds that his election ushered in a new period in Canadian environmental governance, where Harper's government was "determined to control a new kind of environmental narrative" by "suppressing government science, the strategic and selective use of evidence to back up particular ideological positions, and a 'criminalizing' of dissent" (555).

¹⁰⁶ Lakanen finds that through measures such as a media protocol issued in 2007 that limited what Environment Canada scientist could say to the press and prevented them from "sharing their work at conferences, giving interviews to journalists, and even talking about research that had already been published" (556), the Harper government "sought to control the type and quality of evidence that could be used to inform decisions, by limiting both the collection and dissemination of data" (558).

catastrophic global warming and the failed obligation to act” (9), a tension that Johnson deploys by condemning the lack of climate action in the novel’s past and the readers’ present.

In addition to relying on elements of Canadian history and climate policy, Johnson also includes a future history that looks back on how people behaved in La Ronge before it was too late. As one character reflects, people “watched [a] glacier shrink for generations, measured how quickly it receded, pointed to where it used to extend to and said, ‘that is because of climate change,’” yet would drive to see the disappearing glacier, leave their vehicles running in the parking lot for their air conditioning, stand “pumping gas into their vehicles as the carbon pumped form the exhaust pipes, stood and looked at the mountains...at the last snow on the peaks” and say to themselves “I hope this doesn’t come to pass. Somebody has to do something” (Johnson, *Corvus* 178). While *Corvus* emphasizes personal transformation in the future through its characters, the inclusion of such future histories points to the necessity of the utopian impulse, the desire that drives a better future, to take root *now*, not only at some future date. *Corvus* can thus be read as a work of climate utopianism in its recollection of a dystopian past which has shaped the material conditions of the novel’s present; its utopianism is not unrealistic, but necessary. Works of climate utopia do not gloss over the dystopian conditions that are likely to accompany the climate crisis, but instead can, as *Corvus* shows, include these elements as pre-conditions for the utopian transformations they depict. If, as Levitas suggests, utopia is a method, *Corvus* provides inspiration for readers through its examples of personal transformation.

In other words, although *Corvus* points to dystopian elements persisting from the past

into the present, such as dystopian environmental conditions and a repressive government, it is shaped by a utopian impulse that drives desire for other, better, ways of living. *Corvus* represents climate utopianism on personal and local scales that is shaped by Indigenous epistemologies, in particular in its emphasis on the personal and local, which Michi Saagiig Nishnaabeg scholar Leanne Betasamosake Simpson emphasizes as “the alternative to extractivism”: “it’s respect, it’s relationship, it’s responsibility, and it’s local” (75). *Corvus* thus demonstrates how even within the dominant paradigm, there is space for change, and as a result, enclaves of better ways of living. This transformation, undergone by the novel’s protagonists, and George in particular, is directly linked to climate change, as it is linked to all of their experiences fighting in the Second Intra-American War, and the alienation resulting from the need to participate constantly in an exploitative capitalist system in the quest for “freedom” from the dingy, climate-changed city of La Ronge.

Corvus explores the interplay between intentional communities (seen as utopian in the novel) and personal beliefs, emphasizing the power of a single person changing their worldview. Its utopian transformation occurs on a much smaller scale than that depicted in Robinson’s *New York 2140*, as it depicts multiple, localized, bottom-up transformations. Levitas suggests that utopian scholars such as Roberto Unger argue that “changing the world requires a changed subjectivity” (*Utopia* 139). In contrast to Jameson, whose writing on utopia suggests the impossibility of such a changed subjectivity, Levitas’ turn to Unger suggests that such changes can and should happen “slowly and with ... consent” (*Utopia* 139). While the transformational agency of the characters in Johnson’s novel is limited in a way that Robinson’s is not, as Johnson’s

protagonists are people without access to the halls of power, the novel nevertheless depicts the transformational energy and changed subjectivity that Levitas urges. Johnson suggests that local, or even personal transformations are utopian, if they center justice for marginalized people and the natural world.

Corvus depicts characters and small communities going against the dominant paradigm, living sustainably with other people and the natural world. These ideas also emerge in Johnson's non-fiction works, *Peace and Good Order* and *Two Families*, where he explores the Canadian legal system and treaty relationships. These are key issues in *Corvus*, as well. Indigenous beliefs catalyze the primary personal transformation in the novel, reinforcing Lynette James' claim that Indigenous Futurism is more than a generic category, but "an orientation" that should be meaningful not only to Indigenous peoples but "to anyone hopeful or terrified about the future" (174).

In the novel, George embodies a personal transformation toward such hope. George is a criminal prosecutor who dreams of freedom and success, feeling trapped by his life in La Ronge. At the beginning of the novel, the only path to freedom that George can imagine is personal wealth. From the first paragraph of *Corvus*, Johnson emphasizes the need for climate justice and a more equitable distribution of resources. In addition to the international wars fought over natural resources in the novel, locally the impacts of climate change are also unequally distributed. As the impacts of climate change became more severe, "those who could afford it took to the sky" as at forty thousand feet, there are no storms. George dreams of being able to afford a life in Bel Arial, the sky city above La Ronge, as a marker of freedom and because it would be an escape from mass exodus to and crowding of the north, as more and more climate refugees arrive from the

south (11). For George, life in the sky represents the “last chance for freedom” as well as prestige—the “symbolism of living above everyone else” (Johnson, *Corvus* 11). He is initially optimistic that within three years he will be able to afford a home in Bel Aerial, but when he does not receive the promotion he had been anticipating, George becomes frustrated by the deferment of his dream of freedom.

George quickly finds a new, more immediate way to experience freedom, which affords him a new perspective on La Ronge and what freedom entails. He purchases an “ORV raven,” an Organic Recreational Vehicle that allows him to fly. ORV technology evolved from robotics, but uses organic, rather than electronic or hydraulic systems, and ORVs have the same genetic properties of the bird they are modeled from (Johnson, *Corvus* 23). George’s mindset begins to shift with the new perspective that the ORV raven affords him. Flying above La Ronge, he realizes that “he didn’t know [the city] ... at all” (Johnson, *Corvus* 29). However, George is initially unwilling to contemplate some elements of La Ronge which he can see clearly from the Raven’s perspective. Flying over the improvised and impoverished community of Regis, George turns around, preferring not to see the shacks made of “plastic and scraps of lumber” and the “yellow sand... that soaked up the piss and shit and puke and blood” (Johnson, *Corvus* 30). George believes that having bought the ORV to experience the “better things in life” (Johnson, *Corvus* 30), he should not have to confront the darker side of his society shaped by poverty and injustice.

Despite his initial reluctance to contemplate Regis, George’s mindset ultimately shifts through his encounter with another community he encounters in his ORV. Caught in a storm while flying, George loses control of the raven and crashes the bird at Long Lake

Pass, where he is found by two Indigenous men and brought down the mountain to Two Bears Camp. Because the storm disrupts the net, which the ORV relies on, George cannot leave Two Bears Camp for four days, until the connection is restored and he can reboot his raven. George's time at Two Bears Camp is transformative in two ways. Firstly, he experiences a sense of community and connection that were lacking in his life. George is taken in by Isadore and Memegwans, and he finds that he trusts Isadore after they spend a day paddling a canoe and walking together. This trust is reinforced through shared meals and physical touch. When Isadore "put[s] his arms around [George's] shoulders" and gives him a "little hug" and a pat on the back, George finds that he cannot remember the last time that a man had hugged him (Johnson, *Corvus* 103). These moments reinforce the fact of George's isolation in his daily life and suggest that rather than becoming increasingly isolated by eventually living in Bel Aerial, the solution to his isolation can be found by caring for others, just as he has been cared for.

In addition to the trust and community he finds in Isadore's kindness, George is transformed by a conversation that he has with Two Bears,¹⁰⁷ the medicine man at the camp, a conversation that also points to the issue of appropriation of Indigenous knowledge. George believes that he sees a Thunder Bird when he is caught in the storm. Unable to think of another explanation for the large, all-black bird, George wants to learn more about Thunder Birds. Two Bears, however, refuses to tell George the story of the Thunder Bird, due to a history of exploitation and cultural appropriation:

We used to tell you people our stories and you ran off and put them in books and

¹⁰⁷ Two Bears Camp is the name of the Indigenous community where George crashes his ORV, and Two Bears is also the name of the community's medicine man.

made yourselves famous. Then our people had to pay to read the story. That's also why we quit telling you about medicine. You took our medicine and sold it to the big companies and when Indians got sick we had to pay for something that was ours in the first place... There's a whole lot of stuff I can't tell you. I won't tell you.

(Johnson, *Corvus* 100)

Two Bears' refusal here can be read as what Betasamosake Simpson calls "generative refusal" which is a refusal to subject oneself to further violence and can entail a liberation "into a physical reality that [is] entirely consistent" with the one Indigenous people deserve and want, and relates to Indigenous Futurisms in *Corvus* as it is "consistent with the idea that focused rebuilding using Indigenous processes enacts an Indigenous presence that has the ability to give life to an Indigenous future" (254). This refusal is important in terms of climate justice and climate utopia, as it addresses a tension between the recognition that Indigenous peoples have much to offer in the way of Traditional Ecological Knowledge which could be applied to help address the climate crisis, and the need to avoid cultural appropriation and to recognize Indigenous sovereignty.

Despite James' assertion that Indigenous Futurism should be meaningful to all people concerned about the future, Two Bears' refusal points to a potential problem with this assertion. Indigenous beliefs are transformational for George, even as his encounter with the community at Two Bears Camp warns about appropriation. Within the context of sustainability and climate justice, Kyle Whyte (Potawatomi), Chris Caldwell (Menominee), and Marie Schaefer (Odawa) look at Menominee sustainability practices, and the Menominee Sustainability Development Institute (SDI), arguing that institutes like the SDI, and Traditional Ecological Knowledge more broadly, are, as the title of their

paper points to, “not just for ‘all humanity.’” Rather, Indigenous sustainability is “different from how non-Indigenous communities seek to understand [Indigenous] lessons of sustainability for the purpose of saving themselves or humankind” (174), as it focuses on not only environmental sustainability, but the continuance or survivance of Indigenous peoples in ways that combat settler colonialism, rather than working to preserve the settler-colonial state (174).

Thus, while Indigenous epistemologies are central to the utopian transformation in the novel, as a settler scholar I am not suggesting appropriation of Indigenous epistemologies to overcome the climate crisis, given the historical and ongoing of appropriation of Indigenous knowledges for settler benefit. Rather, as Two Bears points to, certain knowledge may be shared for the benefit of all, but only on the terms of those who hold such knowledge. Writing about co-resistance with Black communities or revolutionary movements in the Global South, Betasamosake Simpson writes that ethical engagement with the “theories and practices of co-resistors” requires engagement not only with their theories, but also with “the people and peoples that embody and enact these theories” in ways that “develop relationships of reciprocity and co-resistance” to embody an ethics of solidarity (66). Two Bears’ refusal to share the story of the Thunder Bird with George points to this ethic of solidarity in *Corvus* and suggests to readers that engaging with Indigenous knowledge and epistemologies is not enough and is appropriative if not accompanied by solidarity.

So, Two Bears does not share with George the story of the Thunder Bird; however, he does share a story that fundamentally alters how George relates to the world, and in particular, the people that he prosecutes. Two Bears tells George:

You were a spirit travelling across the universe, just a little bit of blue light, then you met the Creator and the Creator was both spirit and physical at the same time and you said, I want to be like that. So you came to this world so that you could experience the physical. While you're here, you should keep the Creator in your mind all the time. Never let anyone come between you and him, and never come between someone else and the creator. (106-7)

George comes to see working as a prosecutor as interfering with someone else's relationship with the creator, getting between their experience of the physical and the spiritual. As a crown prosecutor, George is employed by the settler-colonial state, and in his role, he perpetuates some of the problems with the system that are critiqued in the novel. Firstly, working as a prosecutor is inherently conservative, privileging the continuance of the state and its status quo by upholding the importance of the law. The problems with the legal system in the novel are also pointed to by Richard's narrative, when he is charged with "unlawful participation in a gathering" due to joining a protest while having a recent criminal charge, which should prohibit such participation (Johnson, *Corvus* 42). The protest Richard attends against the development of another Representative Area Network—networks of "small areas that were never supposed to be developed" (Johnson, *Corvus* 43). Set up a century prior, these networks were intended to be "nature for the sake of nature" (Johnson, *Corvus* 43). Rather than preventing or prosecuting the developers for the damage such development will do to nature and to the citizens who use the areas, the system prosecutes individuals protecting the natural world, suggesting the legality of the destruction linked to the climate crisis.

Honni van Rijswijk argues that "in modernity, law's assertion or jurisdiction over

harms has been central to the constitution of its authority, and yet, through these adjudications, law's own violence is heightened" (239). The previous example points to the legal violence of environmental destruction, which inevitably will also lead to human harms. Furthermore, law's jurisdiction over violence is reinforced through the examples of the First and Second Intras, during which state sanctioned violence is perpetrated, and the narrative about the war and climate change are controlled by the government to justify violence against climate migrants. Thus, being aware of law's harms, George comes to understand his role as a prosecutor as unethical, which leads to new empathy for the people he prosecutes, and his ultimate abandonment of his prosecutorial career.

Furthermore, in working as a prosecutor George perpetuates a system that does not value the relationality that is central to the novel. van Rijswijk elaborates that "law is aggressive in its assertion of an exclusive jurisdiction over violence, making an implied claim that it *alone* can access the truth, punish offenders and repair harms" (239; emphasis added). This colonial mentality regarding isolated adjudication of truth by law is challenged by George's encounter with Two Bears, which suggests a deeper, more personal truth, that cannot be adjudicated by the legal system. Johnson explores these ideas further *Peace and Good Order*, wherein he argues that redemption is critical for well-being and re-integration into the community, and that this process is curtailed by the legal system (130). Johnson suggests that the settler legal system perpetuates harm by its reliance on incarceration to both deter and punish crime, which prevents perpetrators from making amends and being reintegrated into the wider community. According to Johnson, the legal system eliminates agency of perpetrators and victims alike, by placing it in the hands of lawyers like George.

The changes in George's outlook that begin at Two Bears Camp are cemented in an interaction with a woman from Regis. Despite George's early aversion to Regis, by the end of the novel he deliberately visits to "see it for [him]self" (Johnson, *Corvus* 212). George wants to come to a better understanding of the people he prosecutes (the majority of George's prosecutions are people from Regis). Although George discovered a different kind of life at Two Bears Camp, he does not give much thought to the paradigm he exists within or how it might be shifted. Jasonia opens his eyes to the difference between his life and hers, noting how those living in Regis have "fall[en] out of the paradigm" (214); in order to have the both the literal and metaphorical platform that is needed to function in society,¹⁰⁸ people must be registered, which requires an address, bank account, and proof of citizenship, and while this makes sense within the dominant paradigm, Jasonia tells George that "most of the paradigm is just shit we made up" (Johnson, *Corvus* 216). She challenges George's belief in the necessity of law and the legal system, noting how, in Regis, people live outside the law and "figure out how to live together" (Johnson, *Corvus* 216). Between this conversation and the story Two Bears tells him, George decides to leave his job and opens Bendig Taylor Law Office, where he no longer practices criminal law, although the novel is silent on the kind of law he practises instead.

In addition to representing climate and environmental justice, *Corvus* depicts ecological justice, that is, justice for nature itself. David Schlosberg counters the belief that nonhuman nature is "beyond the bounds of relationships that can be based on justice"

¹⁰⁸ Living in La Ronge requires a platform, an integrated electronic device used for everything from communication to banking to controlling the systems in apartments; platforms are tattooed into people's skin to "enable the circuitry that connected to [the] platform" (Johnson 62)

(104). I have previously discussed the importance of relationality in improving justice between humans, and, like King in *The Back of the Turtle* and Miller in *Blackfish City*, Johnson extends the idea and importance of relationality to humans and the natural world, as well. Non-human nature enters *Corvus* in two ways, which are related to the fact that *Corvus* is a work of Indigenous Futurism. Firstly, the frame of the Raven story integrates a non-human perspective into the narrative structure, which helps to counter the anthropocentrism that governs much climate change discourse and fiction. Secondly, Johnson's novel deals with soil health, and emphasizes the interconnectedness of this cycle through Indigenous teachings.

Corvus's use of the Cree Raven story as a narrative frame, as Phillips argues, explicitly explores animal agency, and emphasizes the cyclical and ongoing nature of various ends of worlds (n.p.). The narrative is interrupted by Raven at several interludes; Raven offers a commentary on human disregard for the natural world. The novel begins from Raven's perspective, framing climate change and humans: "this forest was once forever upon the earth, but time and warming pushed surviving humans, the world's greatest invasive species, into it" (Johnson, *Corvus* 7). In their overview of Raven narratives from the Pacific Northwest and East Asian cultures, Thomas F. Thornton and Patricia M. Thornton find that a "key theme of Raven myths is to teach humans, who are often woefully ignorant, about the web of relationships that constitutes and maintains life on earth" (75); this is certainly the case in *Corvus*. Raven has a long memory that contrasts with the short lifespans of the human characters, who cannot remember a world before climate change. Raven recalls all of human history, missing the old days, "when men sought to learn his language, to speak, to converse, to learn" (Johnson, *Corvus* 133).

In the present, by contrast, humans ignore Raven, who “tried to tell them” to change their ways, but humans “just wouldn’t listen,” wouldn’t “see what they’re doing” (Johnson, *Corvus* 275). Raven’s perspective gives voice to the natural world, which is one element of ecological justice, according to Scholsberg (187). By including this perspective, Johnson’s novel points to the need for justice for the natural world, as well as for humans, and how the two are united within Indigenous worldviews. The novel ends with Raven’s perspective, reinforcing to the notion of cyclicity that is first introduced to the novel through the process of soil restoration, which I analyze below.

Cyclicity is also connected to the idea that there is not a single and definite end of the world for humans, and reflects what Kyle P. Whyte calls “spiraling time”— a common element of Indigenous SF. Spiraling time is rooted in an “Anishnaabe perspective on intergenerational time” (Whyte 228), and refers to “the varied experiences of time that [Indigenous people] have as participants within living narratives involving [their] ancestors and descendants” (Whyte 229). Spiraling narratives unfold through the interaction with, response to, and reflection on “the actual or potential actions and viewpoints” of both descendants and ancestors (Whyte 229). Although Johnson is Cree and Whyte is Anishnaabe, non-linear temporality is a recognized feature of Indigenous Futurisms. In the epigraph to *Walking the Clouds: An Anthology of Indigenous Science Fiction* Grace Dillion writes: “incorporating time travel, alternate realities, parallel universes and multiverses, and alternative histories is a hallmark of Native storytelling tradition, while viewing time as pasts, presents, and futures that flow together like currents in a navigable stream is central to Native epistemologies” (qtd. in Whyte 229). Similarly, Lou Cornum describes the work of Indigenous Futurisms as the “profound

deconstruction of how we imagine time, progress, and who is worthy of the future” (qtd. in De Vos 4). More specific to Cree culture, Cree elder John Cuthand tells the story of the round dance to emphasize continuity between decedents and ancestors (qtd. in De Vos 1); De Vos elaborates that the “power in the round dance ceremony ... is informed by a worldview organized according to an experience of time [that can be described] as spiralic: cyclical, but transforming ... rather than merely repeating” (2). Through Raven’s perspective, Johnson creates a sense of cyclicity that brings in past and future generations of humans. Raven reflects on how it has made art out of the bones of various now-extinct animals, cleaning up the earth, and returning the minerals from the bones to the soil. Although Raven is cynical about its ability to clean up after humans, and about human willingness to embrace animal wisdom and art, it concludes with the lines: “Oh, I forgot to tell you. I’ve made art out of human bones too. And I’m pretty sure I’ll do it again, and again, and again” (Johnson, *Corvus* 277). While Johnson’s novel is not dismissive of climate change, Raven’s perspective at the end of the novel diminishes the idea that climate change necessitates the end of the world by simultaneously suggesting that human history has been full of death and destruction, and that humans will survive climate change long enough for Raven to scatter human bones “again and again.” This perspective is important for climate utopianism as the cyclicity of human death and life suggests hope that we might survive and learn from the climate crisis, emerging into a more sustainable future.

In addition to bringing in Raven’s perspective, *Corvus* also emphasizes environmental justice through environmental restoration and the importance of Indigenous knowledge. Like *The Back of the Turtle*, *Corvus* looks beyond climate change

to address broader environmental issues. Climate change is more of a historical influence than a pressing concern in the novel; the primary environmental concern is soil exhaustion due to the spraying of glyphosate. Glyphosate is a “herbicide that kill[s] everything, that clog[s] the life paths of every plant” (Johnson, *Corvus* 37), and by the time the novel is set, soil micro-organisms have gone extinct. The prairies are a “grey desert” as far as the eye can see, a network of “dead zones” where nothing grows, where “there [is] nothing but dust that wouldn’t hold a seed, and when it rain[s], nothing but mud” (Johnson, *Corvus* 147).

Ecological justice is depicted in Johnson’s novel through soil restoration, which is seen as important in its own right, beyond its instrumental value to humans. Katherine lives on the Ashram with Richard, and is involved in soil restoration, with the farmer Peter Tarasoff. Katherine laments the death of the soil due to glyphosate, deploring that although there were once “Six times ten to the thirtieth power” bacterial cells existing within the soil, “more than half of the world’s species” were wiped out by a single compound (Johnson, *Corvus* 37). Like the environmental devastation in *The Back of the Turtle*, the destruction of the soil is a result of capitalism; as Richard puts it: “farmers weren’t trying to raise food for people, they were trying to make a profit... chemical companies promised huge profits and the farmers got greedy” (Johnson, *Corvus* 70). Like King, Johnson criticizes anthropocentric, profit driven worldviews that see the environment only as a resource to be exploited.

In an effort to revive the soil and break from this worldview, Katherine and Richard visit Peter Tarasoff at his organic farm, where he teaches them that soil is a living organism. Tarasoff is critical of the worldview that allowed farmers to kill the soil in the

first place; as he puts it, “the earth to them was simply a platform that they put seed into and sprayed fertilizer over” (Johnson, *Corvus* 147). He contends that “they farmed the chemicals, not the soil” (Johnson, *Corvus* 147). In contrast, he draws on Indigenous teachings that recognize that the soil is a living entity— “a cycle, a life ... a complexity of relationships” (Johnson, *Corvus* 148)— and that humans belong to the soil, not vice versa. Tarasoff’s worldview is shaped by Indigenous epistemologies, as he learned about the soil from Alec Whiteplume, an Indigenous man who told him “that he belonged to the land because his ancestors were part of the soil” (Johnson, *Corvus* 155); when Whiteplume’s ancestors were buried they fed the soil and the plants that grew “had his ancestor’s atoms in them” and when “he ate those plants, and ... the animals that ate those plants...he was part of the cycle” (Johnson, *Corvus* 155). Tarasoff draws from this teaching, blending it with his “Doukhobor background [to] get a Christianized slant on things” (Johnson, *Corvus* 154) and finds a way to restore the soil. He believes that “God wants a blood offering” (Johnson, *Corvus* 155), and so spreads blood from his farm’s abattoir over the soil, finding that “if you put blood on the soil, it comes back to life” (155). Thus, through Tarasoff Johnson emphasizes the importance of reciprocal relationships with the land, as well as the idea of cyclicity, as humans become soil, which feeds humans, in turn.

In contrast to the large-scale corporate farming that was driven by profit, Tarasoff disseminates his teachings for free, for the good of the land, in recognition that humans, too are in a complex relationship with the earth. As he tells Richard and Katherine: “all of this is us giving back something to the earth, because the Earth has provided for us all of our lives” (147). This emphasis on reciprocity, reinforced by Katherine’s decision at the

end of the novel to have a provision added to her will that her body be “cut up and spread around on the ground to decompose” (Johnson, *Corvus* 266), and the belief that humans are not at the top of a pyramid but part of an interconnected system, provides a suggestion of a reorientation that might allow for environmental restoration. These reciprocal relationships enact ecological justice, as humans work to counter the environmental harms of climate change and pollution, seeing the natural world as worth care and justice in its own right. Thus, Johnson’s climate utopia is not only utopian for humans, but also treats the natural world with respect and justice.

Corvus is a work of Indigenous Futurism that I argue is also a work of climate utopianism. In highlighting the injustices to those in the Global South and to the natural world that result from climate change, Johnson demonstrates the importance of climate justice in the response to the climate crisis. Although Johnson’s novel does not depict a wide-scale systemic transformation, it is utopian in its emphasis on personal, local transformations, as seen through George’s willingness to engage with Indigenous epistemologies and marginalized people living in Regis, and to alter his behaviour based on those teachings, and through Richard’s commitment to protecting the natural world through protest and soil restoration. Betasamosake Simpson argues that “*how* we live, *how* we organize, *how* we engage in the world—the process—not only frames the outcome” but is the transformation, as “[*h*]ow molds and then gives birth to the present” and “changes us” (19). Although speaking specifically to an Indigenous audience, here, about engaging in “deep and reciprocal Indigeneity” (19) her thoughts echo Johnson’s ideas about transformation, as outlined in *Corvus*. By emphasizing how we live in the world, and relate not only to other people, but to the natural world as well, we shape the

present and the future, indicating that the seeds of a climate utopia that values justice can be planted today.

3. Systemic Change and the Transformative Potential of Disaster in *New York 2140*

Like *Corvus*, *New York 2140* represents transformations leading to more equitable futures in a climate-changed world. Whereas Johnson represents personal and local transformations, Robinson depicts larger scale systemic transformation in response to climate change, and points to how local, personal transformations can be a first step toward larger change. *New York 2140* is set over a century beyond the novel's publication, in a New York that is referred to as "Super Venice" due to the new canal infrastructure developed in the aftermath of sudden and extreme sea level rise, referred to as the First and Second Pulses. Sea levels rose in two "pulses" as the Antarctic ice shelves broke apart, the first in 2050, and the second near the end of the twenty-first century, for a cumulative 60-foot sea level rise. Although, as in *Corvus*, climate change seems to have stabilized in *New York 2140*, characters are beset by Hurricane Fyodor, which provides the impetus for the utopian transformation about midway through the novel.

As a work of flood fiction, *New York 2140* makes use of the "dominant literary strategy" of the last forty years for "locating climate change" in literature (Trexler 82). Trexler argues that floods provide a "tantalizing combination of familiarity and disaster" (83)—this certainly applies to *New York 2140*, where defamiliarization is clearly at play in the flooded New York City. The city is both the same and different to the world of contemporaneous readers. Robinson's novel is interesting, however, as it does not

conform to Trexler's categorization of flood narratives; Trexler writes that climate change flood novels "take one of two forms" (86): the first is a post-flood narrative, wherein "the reader is confronted with a broken world after massive sea surges have subsided," and the second is a description of "the effects of floods and the transition from a recognizable world to one markedly remade by climate change" (Trexler 86). *New York 2140* merges and subverts these forms, as well as expected conventions of climate or Anthropocene fiction; the world is not broken but improved after sea-level rise. Further, the world of Robinson's novel remains recognizable, even after the effects of climate change, due to the persistence of the stock market's power to determine many elements of daily life; business continues as usual, despite climate change. Thus, rather than a dystopian cli-fi flood narrative, Robinson's novel exists in some third space—what I am calling climate utopianism—where climate change ushers in the potential for large scale social transformation—not an immediate, negative transformation, but one that is positive and occurs only after adaptation to climate change has first occurred. To qualify the claim that the transformation in the novel occurs after adaptation to climate change, it should be noted that even before Hurricane Fyodor strikes, the seeds of change are already planted in the intertidal, where intentional communities similar to those depicted in *Corvus* flourish; however, the largest and most utopian changes only come to fruition after the storm's immediate and local effects.

Robinson's novel centers the Met Life tower housing cooperative. The residents of the tower, through whom Robinson focalizes the novel, are at the heart of the utopian transformation but, notably, the tower already verges on a utopian enclave within the larger city, even prior to Hurricane Fyodor. Roughly two thousand people call the Met

Life tower home, living in seven hundred units that range from “single-person closets to big group apartments” (12). These people can live private lives, but most residents partake in communal life, eating in the shared dining room that serves produce grown in the building’s farm and meat raised and slaughtered by the building’s residents.

The novel’s chapters alternate between the seven diegetic narrators who are members of the housing co-op, as well as an extra-diegetic narrator, referred to as “the citizen.” Charlotte Armstrong and Vlade are the characters who are most involved in the housing co-op, providing insight into such a system. Inspector Gen is a member of the NYPD who helps Charlotte investigate the disappearance of Mutt and Jeff, two computer programmers who had been living on the Met Life tower’s greenhouse floor. Amelia Black is a “cloud star” whose show raises awareness about the extinction of animal life, Franklin Garr works on Wall Street, and finally, Stefan and Roberto are homeless boys taken in by the building and rescued by Franklin on several occasions. While the seven protagonists are involved in the novel’s various plot lines and provide a broad understanding of New York in 2140, the citizen’s chapters help to situate the novel historically and add a satirical distance to the narrative. One of the citizen’s roles is to push against “ease of representation,” resulting from identification with the novel’s characters, urging readers to look beyond the individual characters in the novel to see the big picture of both climate change and its utopian potential (Robinson 495, 603).

New York 2140 contains fewer dystopian elements than *Corvus*, although the citizen hints at dystopian conditions following the Second Pulse, after which there was a recession, hundreds of millions of displaced people, a surveillance state, and a permanent war on terror (207). Despite these elements, Robinson’s novel is a work of climate

utopianism, as it shows how climate change has the potential to destabilize the status quo. While the most significant, global, changes occur in the aftermath of Hurricane Fyodor, Robinson points to earlier changes that undermined the status quo, or what Johnson calls the “paradigm,” following the Second Pulse.

Despite warnings about climate change, the First Pulse came as a “profound shock” to the people of New York, and sea level rose by ten feet in ten years (Robinson 139). The ensuing disaster, refugee crisis, and disruption to trade were so catastrophic that the First Pulse was rated at “fifty katrinas,” the “unit [of measurement] popular at the time” (139);¹⁰⁹ Robinson’s reference to Hurricane Katrina is reminiscent of Sheri L. Smith’s in *Orleans*, and suggests the hurricane’s importance as a benchmark in terms of modern climate catastrophe. The catastrophic melting of arctic sea ice may come as a shock, but the First Pulse results in change: “people stopped burning carbon much faster than they thought they could” (139). Catastrophic climate change is the impetus for a radical change believed to be impossible in contemporary society, pointing to the transformative potential of crisis. However, despite de-carbonization, the Second Pulse is much worse than the First, with total sea-level-rise exceeding fifty feet, “thrash[ing] all the coastlines of the world” and “causing a refugee crisis rated at ten thousand katrinas” (Robinson 144). The Second Pulse re-shapes the global landscape, and New York is no exception, with buildings “giving up the ghost and slipping under [water] for good” (Robinson 123).

After the Second Pulse, new countercultures and lifestyles emerge in the intertidal.

¹⁰⁹ “Katrinas” as a unit of measurement refers to the number of people displaced by a natural disaster, based on the displacement that was measured during Hurricane Katrina. Kathleen Tierney notes that Hurricane Katrina left an estimated one million people homeless, in a “humanitarian crisis on a scale unseen in the US since the Great Depression” (Nigg, Barnshaw and Torres qtd. 122).

New York's intertidal is a place of utopian experimentation. Because New York follows Roman law with regard to the intertidal, which dictates that "the things which are naturally everybody's are: air, flowing water, the sea, and the sea-shore," anyone "is free to put up a hut [in the intertidal] to shelter himself" (Robinson 118-19).¹¹⁰ The lack of property ownership in the intertidal allows for various forms of communal living and social experimentation. New York's intertidal zone belongs to the "unorganized public" (Robinson 119), which establishes unorthodox ways of life, including squatting in buildings abandoned to the intertidal, which is "an upgrade in both material circumstances and quality of life" for many, given the cost of rent in New York City (Robinson 209). In Robinson's novel, climate change is not inherently dystopian, as it has the potential to create possibilities that were previously foreclosed.

The so-called "water-rats" of the intertidal are driven by the utopian impulse to live outside of the capitalist system. As the citizen puts it, "hegemony... drown[s]" and the flood ushers in a "proliferation of cooperatives, neighbourhood associations, communes, squats, barter, alternative currencies, gift economies, solar usufruct, fishing village cultures, mondragons, unions, Davy's locker freemasoneries, anarchist blather, and submarine techno culture" as well as "art-not-work...blue greens, amphibiguity, heterogeneticity, horizonatlization, deoligarchification" and "free open universities, free trade schools, and free art schools" (Robinson 209). In pushing against the status quo and imagining other ways of living, the intertidal is already utopian, in the sense that it is

¹¹⁰ Robinson's intertidal laws are akin to today's Public Trust Doctrine, which is based in Roman and English law, and holds that certain public uses ought to be protected. Thus, in the American context, "the seaside between high and low tide may not be routinely granted to private owners" (Sax 476).

comprised of intentional communities that deliberately seek better ways of living.

Lieven Ameal writes of the novel “that the flood pulses have overthrown the existing *nomos*, creating a new field of instability within which a new regime of order can take shape” (1336). However, while this new regime benefits the unorganized public, especially those who cannot afford life in the re-gentrifying New York, the intertidal’s status as the new “commons” presents a problem for anyone who wants to build, salvage, or invest in the “mangled [and] ambiguous zone still suffering the slings and arrows of outrageous tide flow” (Robinson 119). As in *Corvus, New York 2140* also depicts the persistence of certain dystopian conditions; one such dystopian element is how the forces of finance and development seek to undermine the new, equitable ways of living that have sprung up in the intertidal. This is represented in the novel through the process “aerating,” a term used to “describe the recapture of the intertidal by global capital” (Robinson 156), which leads to the re-gentrification of the area. This conflict over the intertidal points to how utopianism is up against the status quo; while utopian communities have developed in the intertidal, they remain threatened until the larger system is altered.

Robinson depicts the tension between the burgeoning utopianism of the intertidal and the persistence of a dehumanizing and totalizing financial system which seeks to undermine the new ways of life. This tension emphasizes the need for more than technological innovation to confront climate change. Although New York has decarbonized and runs on solar, this transition does little in terms of climate justice. Sheena Wilson argues that energy transition to what she terms “solarcultures” may reinforce the “structures of inequality that characterize the petrochemical regimes they otherwise

purport to replace” (138). Solarities, by contrast, include “social justice commitments at the forefront” (Wilson 147). I argue that Robinson’s work is a work of climate utopianism in its emphasis on the social, as well as material and systemic transformations required to confront climate change, which can be read as in line with the concept of solarities, even as solar energy does not play a large role in the novel. Like solarities, climate utopianism must foreground climate justice, not simply technological utopianism without accompanying social and systemic change.

The systemic change depicted in *New York 2140* is ushered in by Hurricane Fyodor, which strikes roughly midway through the novel. It is a devastating storm described in apocalyptic terms. As the building manager, Vlade, witnesses the storm from the top of the Met, he believes it resembles the “end of the world” (Robinson 461), and thinks that “the Third Pulse had come at last” (Robinson 465). The rain is so intense that the Empire State Building becomes a waterfall, the East River and the Hudson are white-capped (Robinson 460), and wind speeds reach 164 miles per hour (Robinson 466). In the aftermath of the apocalyptic storm, people immediately come to one another’s aid. Vlade and his ex-wife Idelba, who owns a large tugboat, spend two days braving the storm upon hearing radio reports of “people taking refuge in skybridges, rafts, life jackets,” “huddling on exposed wreckage, or nearby rooftops,” or “swimming to refuge [or] drowning” (Robinson 468). The ship ventures into New York’s canals, where desperate citizens wave it down and jump onto the tug. Vlade and Idelba are not the only people who respond rapidly to the storm. Central Park is quickly set up as a refugee camp, where uninjured refugees immediately begin cleaning up the park, collecting broken branches and clearing debris (Robinson 480). Inspector Gen Octaviasdottir, a police officer and

one of the protagonists, finds it surprising and “heartening” to “see people mostly calm and organized” in Central Park (480). In the immediate aftermath of the storm, Robinson depicts what Charles Fritz refers to as a “community of sufferers”: an emergent community in the aftermath of disaster which “does not have primary reference to the pre-existing social system” (28) and can “re-motivate the actors in the system to devote their energies to socially reconstructive and regenerative tasks” (30). This nascent community is at the forefront of the utopian transformation in the novel.

The response to the storm parallels the findings of disaster researchers, and Thomas King’s use of catastrophe in *The Back of the Turtle*. When Dorian experiences negative environmental consequences in the form of a mysterious illness, he begins speaking in metaphor of environmental catastrophe; Dorian’s sudden use of literary devices tied to the natural world suggests that catastrophe may have the potential to alter narratives, and given King’s belief in narrative’s ability to intervene in the world, may even suggest that catastrophe has transformative potential. The transformative potential of catastrophe is not only fictional but has also been noted by disaster researchers. For example, Charles E. Fritz analyzes eighteen years’ worth of sociological research to contend that, although “disasters may be a physical hell,” they can result, temporarily, “in the fulfillment of the utopian image” (66), and that although potentially traumatic, a shock, like a disaster, “always contains the seeds of change” (55). Similarly, Rebecca Solnit finds that disasters can challenge the status quo by allowing new social structures to emerge. Tracing the etymology of “emergency,” Solnit notes that “an emergency is a separation from the familiar, a sudden emergence into a new atmosphere, one that often demands that we ourselves rise to the occasion” (10). When people come together and rise to the occasion,

she finds that “many experience it as an experience of civil society that is close enough to paradise” (9). This is exactly the case in *New York 2140*; following the storm the community of sufferers that emerges is motivated to transform civil life and build on the nascent utopianism of the intertidal.

The utopian movement brewing in the intertidal prior to Fyodor reaches a critical mass following the storm. Amelia Black uses her clout and her vantage point as a cloud star to encourage her viewers to take action. From her cloudship, Amelia has a bird’s eye view of the wreckage, noting for her viewers that the empty superscrapers uptown survived the storm, contrasting with the view of Central Park where “lots of tents” cover the ground, as people prepare to live in the park indefinitely (Robinson 526). Amelia speaks candidly to her audience, telling them that she’s “sick of the rich” and of how they are “wrecking” the “whole planet” (Robinson 526). Amelia encourages her viewers to fight back against the domination of the planet and the city, by first joining the householder’s union, and then going on strike. She explains that a householder’s strike is when people stop paying their rents and mortgages or any other “private debt [they’ve] taken on” to survive (Robinson 527), and that they cannot be punished because “when everyone does it, [it’s] a strike. Civil disobedience. A revolution” (Robinson 527). Amelia’s impassioned plea demonstrates the problems with the way the dominant society is organized, wherein the rich have all the power and the poor are forced into debt merely to survive, which results in social alienation and environmental devastation.

Robinson’s novel is a work of climate utopianism due to the systemic changes that are implemented following Hurricane Fyodor. Despite the devastation of the city, the people of New York see the storm as an opportunity to push back against the rising cost

of and lack of housing. Amelia's plea is successful; the ranks of the householder's union swell and citizens go on strike, protesting the re-gentrification of the intertidal and lack of affordable housing for those displaced by the storm. The strike ultimately results in "tight currency controls, increased labor support, and environmental protections" and "universal health care, free public education through college, a living wage, [and] guaranteed full employment" (602).

Whereas *Corvus* focuses on the utopian potential of local, personal transformations, *New York 2140* is interested in global, collective change, as emphasized by the central role of housing cooperatives such as the Met Life tower in the novel and the important role played by the householder's union. While chapters alternate between perspectives of individual characters, who have more or less personal agency based on their positionality within the collective or within the broader social and economic system, the novel emphasizes the importance of collective action, and combats the urge to attribute the changes depicted to individual characters through the citizen, who counters the "ease of representation" within the novel. Mutt and Jeff describe ease of representation as "an availability heuristic [whereby] you think what you see is the totality" (Robinson 400), and the citizen challenges this view, both with regard to the characters in the novel, and more broadly. The citizen does so, especially with regard to Charlotte who is pivotal in the revolution, near the end of the novel, when they state that no single individual was responsible for the changes, because while "[i]ndividuals make history," "it's also a collective thing ... a wave made of individual actions" emphasizing that "people of this era did do it" (Robinson 603). Robinson thus encourages readers to join forces and push for change collectively. Read alongside *Corvus*, it is clear that both personal and systemic

changes are part of climate utopianism, and that the two can work together to create just climate futures.

Despite the utopian optimism of *New York 2140*, Robinson is not naively optimistic about disaster as a catalyst for change. Watching the newly homeless people congregating in Central Park, Charlotte demands decisive action from the mayor. Uptown New York escaped the brunt of the storm, and many apartments in the area are “empty because they’re owned by rich people from somewhere else” (Robinson 500). Thus, Charlotte demands that the mayor “declare an emergency and use all those rooms as refugee centres” (Robinson 501), but is met with political resistance. Characters confront “elite panic,” a reactionary response from “government or emergency management agencies” which sees “creativity and creative responses [to disaster] as inherently dangerous or threatening in some way” (Cameron, Montgomery, Moore and Stewart 11). Because disasters disrupt the status quo, elites and authorities may become uncomfortable or “panic” due to fear of “a loss of control and a loss of legitimacy” (Tierney 131). Elite panic often manifests as fear of social disorder and marginalized people, with particular attention paid to property crime, evidenced in the aftermath of Hurricane Katrina by “obsessions with looting and lawlessness” and “the issuing of shoot-to-kill orders arising primarily out of a concern with property crime” (Tierney 131). This response is evident in Robinson’s novel; the response to Hurricane Fyodor echoes the response to Katrina, as private security firms come to protect uptown apartments that remain undamaged and empty.

Like Sherri L. Smith’s *Orleans*, which relies on references to the dystopian and racist response to Hurricane Katrina, *New York 2140*, too, refers to the historical storm.

Charlotte's wariness that the responses to that storm will be repeated motivates her to push for utopian transformation following Fyodor; she recalls how "after Hurricane Katrina hit New Orleans, they had built prison camps faster than medical facilities" because "they had expected riots and so had put people of color in jail pre-emptively" (501).¹¹¹ Although Charlotte notes that "that was back in the twentieth century, in the dark ages, the age of racisms both home and abroad" and believes that people have learned better "since the floods" (Robinson 501), this dystopian response haunts the novel. Michał Kłata comments on the "puzzling dating of Katrina," noting that it "frustrates expectations of the reader of the novel, which was mainly written for the American market and published only 12 years after [Hurricane Katrina] hit" (112). Kłata notes that while Charlotte may have gotten the century wrong, "it is the reader's task to solve the puzzle ... decide to what extent the *present*-day America suffers from systemic racism ... and maybe check some facts" (112). This is a prime example of how Suvinian cognitive estrangement works in the novel;¹¹² as in *Corvus*, where Johnson refers to such

¹¹¹ Robinson clearly acknowledges the history of racism in the United States; however, his novel is silent on the question of race in 2140. In fact, Robinson could be accused of engaging in a naïve post-race utopianism. Characters have racialized names, and the race of some characters is specified (for example, Inspector Gen Octaviasdottir in Black (Robinson 179)), yet he is silent on how racism has been or is handled in his work of climate utopianism.

¹¹² In *Metamorphoses of Science Fiction*, Darko Suvin describes science fiction as the "*literature of cognitive estrangement*" (4); that is, SF develops a literary "hypothesis" or asks "what if" with cognitive rigour. This means that fiction is reported factually, implying or creating a new set of norms; however, these new norms are "*not impossible* within the cognitive ... norms of author's epoch" (viii). These new norms are what Suvin calls estrangement; what makes SF's use of estrangement different than other literary genres is, according to Suvin, the fact that SF "sees the norms of any age, including, emphatically its own, as ... changeable, and therefore subject to a cognitive view" (7). Thus, estrangement and cognition combine to create an "imaginative framework alternative to the author's empirical environment" (80). While many genres employ

historical events as Stephen Harper's muzzling of scientists, the historical references in *New York 2140* not only "transform [the] present into the determinate past of something yet to come" (Jameson, "Progress" 152), but also suggest that dystopia is not "something yet to come" but something that is already here, pointing to the necessity and urgency of utopian transformation.

Even with the initial elite panic following Fyodor, the disruption to the status quo holds utopian promise. According to Fritz, "disasters provide a form of societal shock" which "renders people amenable to social and personal change" as systemic inefficiencies are laid bare, and the "community of sufferers" work to alter the system (55). Because of the mayor's unwillingness to open vacant apartments for the refugees, the people decide to take matters into their own hands, converging around the towers uptown when the situation in Central Park becomes untenable (Robinson 513). When a private security company begins shooting at the crowd in an effort to protect private property, the NYPD, led by Inspector Gen, sides with the citizens.¹¹³ Thus, Robinson

estrangement, SF uses imagination "as a means of understanding the tendencies latent in reality" rather than a means of escape (8).

¹¹³ As Robinson's post-race utopia is naïve, so too, is this representation of the NYPD as protecting the interests of the displaced citizens, rather than the wealthy elite. Of course, in the material world, this is not the case; indeed, as Loïc Wacquant argues, poverty has been criminalized "to manage the effects of neoliberal policies at the lower end of the social structure of advanced societies" (401), and imprisonment has become an "instrument for managing social insecurity" (404). For a comprehensive view of the connections between mass incarceration, racist violence, and racial capitalism see Ruth Wilson Gilmore's *Abolition Geography* and for an examination of police brutality, see *Race and Police Brutality: Roots of an Urban Dilemma* by Malcolm D. Holmes and Brad W. Smith. Lynne Peoples notes that roughly 1,000 people are killed annual by police in the United States, with Black men being 2.5 times more likely than white men to be killed by police (22). Recent work (for example Kojola and Pellow and A. Wilson) connects police brutality, mass incarceration, and environmental injustice, seeing the three as symptomatic of products of "interlocking systems of racial capitalism, settler colonialism, and enslavement" (Kojola and Pellow 100).

depicts the tension between elite panic's desire to protect private property, and a more radical response that sees the storm as an opportunity to redistribute property and respond to climate change in a more just way, by privileging those people who have been directly impacted, rather than those wealthy people who have suffered little damage.

This conflict points to the necessity of local, in addition to global, environmental justice. The impact of the storm and its aftermath differ along class lines, with the wealthier uptown surviving the storm with minimal damage, while many residents of the intertidal, whether squatters or renters, become homeless. This point is emphasized through the parallels between the global climate refugees arriving in New York throughout the novel and the refugees following Fyodor. Both groups are helped by Charlotte Armstrong who practices immigration and intertidal law for the householder's union, "advocat[ing] for immigrants and displaced persons" (Robinson 11). Even before Fyodor, the stark divisions between Americans and foreign migrants had begun to collapse due to climate change's effects on bureaucracy and infrastructure. Although Americans should have had "citizen's rights that made them impervious to the kind of discrimination foreigners faced," many people lost their documentation during the Second Pulse, when the cloud had a "Very Bad Day" (Robinson 222) and millions of records were lost, creating challenges even for domestic migration. Thus, like Johnson who challenges the distinctions between "us" and "them" through Lenore, Robinson also challenges this distinction, especially in the aftermath of Fyodor, pointing to the necessity of climate justice for everyone, as climate change will inevitably disrupt distinctions between the Global South and North. While fear of this disruption has been criticised by

scholars such as Mitchell and Chaudhury,¹¹⁴ Robinson collapses this distinction to emphasize the importance of climate justice.

New York 2140 is a climate utopia as climatic changes catalyze the wide-scale recognition that everyday life under capitalism (especially during climate change) is already dystopian, and depicts a utopian transformation as a result of widening inequities post-storm. Robinson pushes back against the famous dictum frequently attributed to Frederic Jameson that it is easier to imagine the end of the world than to imagine the end of capitalism; rather, Robinson suggests that it is not that we cannot imagine utopia, but that we struggle with “the getting from here to there” (“Remarks” 8). *New York 2140* shows that climate change can provide the impetus for this change, opening up space to get from here to there in the recovery from Fyodor, which not only repairs storm damage, but also reimagines social and economic structures, limiting the power of finance, and retuning it to the people. Claire Colebrook cites Naomi Klein’s argument that “the destruction of people’s lifeworld is an opportunity for radical capitalist restructuring” (Colebrook 102); Robinson’s novel shows how the reverse can also be true. Motivated by her fears about the response to Hurricane Fyodor, and recalling how “after every crisis of the last century ... capital had tightened the noose,” Charlotte is driven to push for change, deciding to run for city council, and, more radically, to enlist Franklin’s help to “crash” the financial system (Robinson 513).

Charlotte aims to nationalize the banks, to prevent a bailout like the one that occurred during the 2008 financial crisis. She enlists the help of her ex-husband, Larry Jackson,

¹¹⁴ Mitchell and Chaudhury are critical of works of cli-fi that depict dystopian futures shaped by the loss of white privilege or the power of the Global North (311).

head of the federal reserve, and Franklin Garr, who helps her burst the bubble of intertidal speculation after Fyodor. David Sergeant suggests that Charlotte is the avatar of politics, whereas Franklin is that of economics, and that by working together they “bring together intellectual and strategic modes that find expression in the need for organizing frameworks [and] material and abstract infrastructures” (13); this means that they use Franklin’s knowledge of the financial system and Charlotte’s political savvy and connections to pop the bubble through an organized debt strike (Murphy 259). In a conversation between Charlotte and her ex-husband, Robinson again pushes against Jameson’s claim that we cannot imagine the future. When Larry responds to Charlotte’s idea that he “can’t even imagine it,” Charlotte responds: “your lack of imagination is not good grounds for making policy” (Robinson 563), suggesting the need to break with conventional thinking and act before we are able to fully envision the shape the future will take. Although Robinson himself imagines an alternate future in the writing of *New York 2140*, his characters struggle to see this vision for the future, or to imagine an alternative beyond capitalism. Furthermore, even as Robinson envisions the steps that might transform society (nationalizing the banks, creating affordable housing, reducing the disparities between rich and poor, and envisioning new ways of relating to the natural world), his novel only provides a first step, and does not imagine the consequences of the transformation he envisions even as he urges the need for transformation. Unlike *Corvus*, which emphasizes local, individual changes, the transformation in *New York 2140* is ultimately global; the citizen’s final chapter outlines how the “riots” that began in New York spread, until “the whole world was left standing in the rubble of a crashed economy” (Robinson 533).

Robinson's novel emphasizes the need for collective action and social change; however, it also shows how power facilitates this change. Because Robinson's characters are already in positions of power, they are able to enact change more readily, and at a larger scale than Johnson's. There is a tension in Robinson's novel between individual and collective action, and reform versus revolution, due to the positionality and relative power of some of the main actors in the utopian transformation. While Robinson tries to combat ease of representation, it is hard to read the characters in the novel as representative, given their places in society; rather, these powerful characters point to the critical role those in power can play by listening to and joining with the masses to enact change.

Charlotte and Franklin are instrumental in driving the changes after the storm and are able to facilitate these changes due to their positionality and power. Charlotte is one of the most radical characters in the novel, and thanks to her role in the householder's union and her seat on the board of the Met Life building's co-op she has more power than most people to enact social change. Through her job, she has a direct line to the mayor of New York City, whom she lobbies for the rights of immigrants and the homeless (Robinson 48). Furthermore, Charlotte also has the power to influence the chair of the Federal Reserve Bank, which she draws on during the general strike to push for the nationalization of the banks. Similarly, Franklin Garr is a day trader for the hedge fund WaterPrice, where he created the Intertidal Property Price Index, used to bet on sea level rise. Because Franklin's index plays a key role in the financial system, helping investors determine whether to invest in the global intertidal, he is also a powerful player. Franklin becomes radicalized over the course of the novel, joining forces with Charlotte and Larry

to use his knowledge of the financial system to short the market, facilitating the nationalization of banks and financing affordable and sustainable housing in the intertidal.

Franklin uses his knowledge of the financial system to explain the transformative potential of a general strike: because ordinary people make a steady stream of payments to keep assets such as their home, jobs, and health illiquid, the financial system counts on those payments, and borrows based on their certainty, using it as collateral and profiting from the spread between liquid and illiquid assets (Robinson 347). The crash in the novel is akin to the 2008 financial crisis, where “that bubble had to do with mortgages held by people who had promised to pay who couldn’t really pay” (347). When citizens strike and withhold their payments, the financial system crashes. The solution to previous economic crashes, including those following the First and Second Pules, is government bailout of the banks, protecting the interests of finance, rather than citizens (Robinson 348). The debt-strike in the novel works in terms of the utopian transformation as it crashes the system; then, rather than the classic response of bailing out the banks, Charlotte and Franklin organize an alternative response, to nationalize, so that taxpayers are not forced to “foot the bill” (Robinson 427). According to Franklin, nationalization will mean that the banks now work for the people as credit unions where their profits benefit the public (Robinson 427). The changes to the financial system are instrumental for the utopian transformation in the novel. While Hurricane Fyodor is the immediate impetus for the changes depicted, people respond more broadly to an unjust financial system that makes living in New York’s intertidal increasingly challenging, as the financial system privileges landlords and profitable housing and attempts to limit social

changes that envision other forms of life in the intertidal. By redistributing wealth, the transformation of the financial system begins to shape a more equitable society, and, as the role of power and privilege in implementing changes suggests, more changes should follow, as those living in the intertidal's access to more resources should allow for increased participation in an ability to shift the political system.

In addition to depicting climate justice through an altered financial system that should help all citizens of New York survive the ravages of a climate-changed world, like Johnsons', Robinson's novel also points to the value of ecological justice. Robinson represents ecological justice through Amelia and her cloud-show, *Assisted Migration*, in which she "assists the migration of endangered species to ecozones where they [are] more likely to survive the changed climate" (Robinson 38). Schlosberg argues that "to attain both environmental and ecological justice, we must be sure that views from the margins, the remote, and the natural world are recognized and represented, either directly, or through proxies" (187). Amelia is a proxy for the natural world; she is its voice and brings her viewers a perspective of the natural world that would not otherwise be available to them. Amelia's show relocates animals while bringing attention to their plight and the fact that the sixth mass extinction is well underway.¹¹⁵ Following the First Pulse, habitat corridors were created to combat habitat fragmentation and loss due to climate change, but nevertheless, certain animals still require assistance migrating (Robinson 40). Amelia's show could be read as further intervening in the natural world in problematic ways; however, it can also be read as a necessary counter to human damage.

¹¹⁵ There is widespread consensus that a sixth mass extinction is almost or already underway (McCallum; Barnosky et al.; Cafaro; Ceballos, Ehrlich, Dirzo), due to the fact that extinction is surpassing speciation (McCallum 2498).

Amelia's narrative focuses on the relocation of a group of six polar bears to Antarctica. Polar bear populations have declined to only two hundred bears in the entire arctic, and people are "freaking out" because the bears are "about to go extinct in the wild" (Robinson 44). Analysis suggests that the bears will do well on Antarctica's ice floes, while helping to keep the Weddell seal population in check, which is necessary given declining orca populations (Robinson 44). Amelia successfully transports six polar bears across the globe in her airship and deposits them in Antarctica; however, the Antarctic Defence League detonates a nuclear bomb, killing the bears to defend "the purity of Antarctica" (Robinson 260). The league is so militant in this belief they are willing to sacrifice not only the polar bears, but also the hundreds of native Weddell seals who are also killed in the explosion. This challenges the notion of purity that has been prominent in North American environmentalism and early ecocritical writing¹¹⁶ -- in their desire to protect the supposedly "last pure place" (Robinson 260), the terrorists condemn the arctic to radioactive contamination. This suggests a need to re-imagine our relationship to the natural world, and the role of human intervention in ecosystems. It

¹¹⁶ Rob Nixon notes that early ecocriticism was drawn to the discourse of environmental purity, which was also critical in North American environmental movements, especially preservationism (197). For a more detailed critique of the wilderness tradition of "purity," see William Cronon's "The Trouble with Wilderness," wherein he is critical of how Americans view wilderness as the "last remaining place where civilization, that all too human disease, has not fully infected the earth." Cronon argues that the notion of a pure wilderness is a human creation, emerging from the sublime and the frontier, which converged to "remake wilderness in their own image" and imbue it with the "moral values and cultural symbols" that it has today. Ultimately, Cronon argues that wilderness is a "flight from history" that overlooks the fact that "pure" wilderness was created by the removal of its Indigenous peoples and is an urban fantasy of people who have never had to work the land, who are merely looking for "an escape from responsibility." Although Amelia's intervention in the natural world may be extreme, as Cronon ultimately points out, humans have always intervened, at various scales, in the natural world, and thus the notion of a pure wilderness is patently false.

suggests that we must do away with the notion of purity in climate utopias, in favour of doing all that we can to limit biodiversity loss, to do justice for the natural world.

Assisted migration via airship is obviously not a sustainable or long-term solution to the problem of extinction. The novel does point to other, more manageable solutions, however, such as de-carbonization and the creation of habitat corridors, but uses the show to bring the natural world into a plot that is largely focused on abstract financial systems. After the explosion in Antarctica, Amelia appeals to her viewers in an impassioned speech:

We're in the sixth mass extinction event in Earth's history. We caused it. Fifty thousand species have gone extinct, and we're in danger of losing most of the amphibians and the mammals, and all kinds of birds and fish and reptiles. Insects and plants are doing better only because they're harder to kill off. Mainly, it's just a disaster, a fucking disaster. So we have to nurse the world back to health. We're no good at it, but we have to do it...It's the only way forward. (Robinson 259)

The death of the polar bears leads to Amelia's radicalization, and ultimately her involvement in the general strike, outlined above. Through Amelia's engagement in the two primary dystopian elements in the novel (the unjust distribution of capital and the sixth mass extinction), Robinson obliquely suggests that these issues are connected, pointing to the need for both environmental and ecological justice.

Before concluding my analysis of Robinson's novel as a climate utopia, it is worth noting the ways in which the novel may fall short of its revolutionary potential. In relying on the very systems and power structures responsible for the climate crisis, the solutions to the crisis depicted in *New York 2140* are inevitably more akin to liberal reform than

they are to revolution. Soderstrom notes that the novel “offers the prospect of change, which relies on addressing ecological limits with economic action and political organization” (122). This emphasis on economic and political solutions might be read as a continuation of business as usual, rather than true socio-ecological change. After the banks are nationalized, congress introduces a “Piketty tax” a “progressive tax levied not just on incomes but on capital assets” ranging from “zero for assets less than ten million dollars, and twenty percent on assets of one billion or more” (602), as well as “tight currency controls, increased labor support, and environmental protections” (Robinson 602). In *Capital in the Twenty First Century*, Thomas Piketty proposes that a progressive tax (like the one Robinson draws on Piketty to envision in his novel) is “an ideal

compromise between social justice and individual freedom” (Piketty 505).¹¹⁷ Despite the progressive nature of Piketty’s global taxation scheme, its implementation in Robinson’s novel relies on trusting those in power to do the right thing, for both the environment and their constituents, and, as Piketty himself asserts, the tax offers a “compromise” between two groups with contradictory interests.

In its top-down revolution/reform, *New York 2140* also points to the role that power plays in social change. Whereas in *Corvus* Johnson does not depict large scale social change, due to the positionality and limited power of his characters, Robinson specifically points to the difference that starting from a position of power makes.

¹¹⁷ As several reviewers have pointed out, *Capital in the Twenty-First Century* is more properly concerned with inequality in the twenty-first century, as compared to capital, as such. In chapter 15 of his prolific work, Piketty describes a progressive tax as a tax whose rate is higher for some than for others, “whether it be those who earn more, those who own more, or those who consume more” (495). Piketty proposes that such a progressive tax is a “relatively liberal method for reducing inequality” as “free competition” and private property are respected, while “private incentives are modified in potentially radical ways” (505). Branko Milanovic elaborates that high (“confiscatory”) taxes on the rich do little to boost the economy but may reduce inequality by dissuading “bankers and managers for asking for such exorbitant salaries” (528). Nguyen and Khieu use a “standard small open economy model featuring labour income heterogeneity” to find that, like Piketty suggests, “a wealth tax seems to be a promising instrument to policy-makers who are concerned about wealth inequality and consumption inequality” (125). Although, in general, reviews of Piketty’s work are favourable, some question the underlying assumption of Piketty’s work, which is that when the rate of return on investment is greater than the economic growth of a country ($r > g$), inequality will increase, or have suggested that Piketty does offer an “accompanying theory of social justice” (Facchini and Couvreur) to reduce inequality, although, as Piketty is an economist, this seems beyond his purview. Facchini and Couvreur, even as they point to Piketty’s failure to provide a social justice theory, criticize the work for its “political ambition,” and Piketty for arguing that the market is unjust, rather than inefficient” (284), suggesting an issue with Piketty’s politics may shape their view of his economic theory. Ultimately, a global tax on wealth may be impractical, which Piketty himself acknowledges, calling it a “useful utopia” (qtd. in Milanovic 532); given Piketty’s utopian proclivities, it is unsurprising that Robinson draws on his economic theory in *New York 2140*.

Charlotte and Franklin are not the only characters who have utopian social visions. Mutt and Jeff, two computer programmers who live in the Met Life tower, are kidnapped for their meddling in the financial system by hacking Wall Street and introducing “sixteen revisions to the financial code” (Robinson 6). However, because the programmers attempt to modify the system illegally, from the back door, without powerful people backing them, their plan backfires, pointing to how the utopian transformation in the novel is facilitated by those in power who are supportive of the cause. Thus, read alongside *Corvus*, it is apparent that individual actions or personal transformations are only one part of climate utopianism; *New York 2140* points to the role of systemic transformation, and suggests that such transformation is only possible when individuals in power get on board.

Robinson himself is aware of the conservative nature of his utopianism, writing in “Remarks on Utopia in an Age of Climate Change” that “facing climate change, proposing utopia as in effect the only solution that will work, we still need to think of the project as ... transgenerational” (14-15). Robinson concedes, “I’m aware that I’m arguing conservatively here, but I’m arguing for reforms so numerous that ultimately they will add up to revolution” (15); this is what is depicted in *New York 2140*: the beginning of the reforms that may ultimately lead to revolution. In representing a first step in a process that has the potential to lead to revolutionary change, Robinson’s novel is a work of climate utopianism, especially when relying on Levitas’ understanding of utopia as method. To reiterate, Levitas writes that utopian thought should engage with “the actual institutional structure of the present and the potential institutional structure of the future” (126). This is the case in *New York 2140*. Sweeping utopian changes will not occur

overnight, even when driven by climate change; thus, although Robinson's novel may be read as not ultimately utopian, in its depiction of reform, rather than revolution, I argue that it is a work of climate utopianism that confronts the pessimism characteristic of many fictional and non-fictional responses to and depictions of the climate crisis.

4. The Utopian Potential of Art and Literature in Shaping Climate Futures

The novels examined in this chapter demonstrate the power of individual and collective action to overcome inequalities that increase as a result of the climate crisis. Climate change, whether acute climate catastrophe, as depicted in *New York 2140*, or ongoing climate injustice, as in *Corvus*, are the impetus for the transformations depicted; therefore, I have argued that such works can be read as examples of climate utopianism. In terms of both content and genre, the novels challenge the status quo; that is, they represent people or collectives going against hegemonic inequality, and break with the predominantly bleak futures depicted in many cli-fi texts. In this final section, I argue that representing climate-changed futures not only as climate catastrophe, but also as sites of continuing advocacy for change, even when the situation seems dire, is important for cli-fi, especially as scholarship on the genre often speaks to its educational power. Much utopian scholarship also speaks to the educational power of utopian futures; as Levitas notes, one of the functions of utopia is the "education of desire" (*Concept 6*). Both novels speak to the importance of art in "the education of desire." I conclude by turning to the role each novel envisions for art, and argue that for both works, art—and, by extension, cli-fi—is central to breaking with pessimistic cli-fi conventions, or more broadly, dystopian climate change discourse, and to creating the possibility of imagining

more just futures.

In addition to depicting climate change and justice in a way that is contradictory to many mainstream works of cli-fi, *New York 2140* and *Corvus* are not only utopian in how they imagine the future, but also take a utopian stance toward the value of art in the face of the climate crisis, making them fitting novels to analyze in the final chapter of this project. As mentioned throughout this project, there is debate as to whether dystopian cli-fi scenarios motivate change. However, both *New York 2140* and *Corvus* are optimistic about the role of art in confronting climate change, and by extension, I see climate fiction as offering viable suggestions of ways forward not rooted in dystopian fear. Although Jameson is perhaps more well known for his claim that we cannot imagine utopia, in the final chapter of *Archaeologies of The Future*, he contends that “utopia as a form is not the representation of radical alternatives; it is rather simply the imperative to imagine them” (416). Both Robinson and Johnson adhere to this notion, and through their climate utopianism their works provide such an imperative for readers.

Johnson emphasizes the importance of imagination in his non-fiction work *Two Families*, where he writes, “I have learned that I cannot do anything until I can imagine doing it,” urging readers to “help others to imagine their own visions and support them as they walk toward them,” and to “take down the barriers that limit imagination and open up space within our structures for imagination” (112). These ideas are reinforced by the structure of *Corvus*, which does not depict the overarching social change of Robinson’s novel. What Johnson explores through the personal transformations he depicts is the necessity of imagination, and the impossibility of enacting social change without first having an idea of what such a transformation might look like. It is important to note,

however, that this need for imagination is not the paralyzing inability to imagine the future that Jameson outlines in “Progress vs. Utopia,” but rather a nudge to imagine small transformations within existing structures. Johnson elaborates: “we can critically examine the existing structures to find where they limit imagination” (112), and work to reduce this limitation. This is similar to what Robinson depicts by the changes his novel creates within a capitalist system. Although some critics have argued that *New York 2410* fails in its utopianism by not breaking enough from capitalism,¹¹⁸ if we see utopia as an impetus for imagination, the novel provides fertile ground.

In addition to emphasizing the importance of catalyzing social change, both novels also comment metatextually on the importance of art. In *Corvus*, Richard laments the failure of government to lead the people, and when Lenore asks him who is leading the population, if not the government, Richard responds: “the artists” (Johnson 114). Richard believes that “the artists imagine the future ... through their art they imagine the direction” and people move “in the direction that’s imagined for them” (Johnson 114). If people follow the artists unquestioningly, this is a further argument for the importance of the inclusion of climate justice themes in cli-fi, or even climate utopianism; as Richard puts it, if “the artists only imagine pornography and violence, we end up in a pornographic and violent place” (Johnson 114). In the context of climate change, if we

¹¹⁸ For instance, Lieven Ameel concludes that despite the transformation at the waterfront in *New York 2140*, the novel ultimately “give[s] into the impulse to privatize and monetize water” (1331), contending that while the novel raises the possibility of the water as commons, it is “never a practical or viable option” (1332).

only imagine climate change as the end of the world, there is little reason to modify our behaviour, and little reason to save what we can; thus, climate fiction, or art more broadly, that goes beyond envisioning the “end of the world,” may inspire and motivate change.

Robinson also comments on the value of the arts in confronting climate change, although his view is less optimistic than Johnson’s. Whereas Richard believes that artists shape the future by shaping how people imagine it, the citizen seems to believe the opposite, lumping authors in with scientists who warned of climate change; while scientists “published their papers, and shouted and waved their arms” and “a few canny and deeply thoughtful sci-fi writers wrote up lurid accounts of [climate change]” the public paid them little heed, continuing to “[torch] the planet like a Burning Man pyromasterpiece” (140). Nevertheless, Robinson expresses optimism about the role of art through Amelia’s cloud show. Even as Amelia recognizes that her show is “silly,” she believes that “to the extent it gets people thinking about [animal habitats] it’s helping the cause” (Robinson 259). Robinson also comments explicitly on the tradition of American nature writing, from which some cli-fi evolves, through a conversation between Mutt and Jeff, wherein Mutt likens Jeff’s efforts to rebuild the Met Life tower’s damaged greenhouse to “one of those dreadful back-to-the-land fantasies you keep giving me” where “everyone goes Amish and all’s right with the world” (540). Robinson is critical of the strain of environmentalism and nature writing that relies on the American belief in rugged individualism and self-reliance, as it does not represent a realistic response to the climate crisis. In *New York 2140* there is no untouched nature to return to, and the novel promotes community building rather than retreat in the face of crisis, ideas which are

both promoted through Amelia's cloud show, suggesting the educational potential of art.

Like the authors analyzed in this chapter, I have a utopian view of the role of literature itself in confronting the climate crisis. I have argued that understanding works of cli-fi that depict utopian transformations emerging out of dystopian climate conditions as works of climate utopianism is important for re-evaluating the educational and inspirational potential of cli-fi. Breaking with dystopianism may benefit the genre, as many researchers in the field of climate communication point to the sense of powerlessness and fear that result from dystopian scenarios and argue that such emotions are not conducive to climate action.¹¹⁹

In contrast to many works of mainstream cli-fi or general climate change discourse, young adult cli-fi tends to be more optimistic; as Weik von Mossner argues, "few readers ... would voluntarily engage with anything that frightens them without at least offering them emotional compensation" (554). Thus, in "young adult dystopian writing, narrative elements that cue negative emotions such as fear and anger are deliberately combined with elements that evoke more positive emotions ... in order to make the reading palpable for young readers and to not extinguish their hope for a better future" (Weik von Mossner 554). I argue that cli-fi, more generally, may benefit from such a strategy, and suggest that works of climate utopianism do so. Climate utopianism is not naïve about the

¹¹⁹ See, for example Michelle Jordan, Jeremy Bernier and Steven and Lucy Burnett.

climate crisis. Works of climate utopianism do not depict techno-utopian solutions¹²⁰ or business as usual within a climate-changed setting. Rather, they engage productively with the climate crisis, depicting the seriousness of its consequences, as Johnson does through the Intra-American Wars, and as Robinson does through the Pulses. These works are utopian, however, in their willingness to move past the climate crisis as “the end of the world,” and in their attempts to depict tangible (if not always realistic) steps taken by characters to transform their world (whether local and personal, or global and systemic), centering climate and ecological justice, and emphasizing the importance of breaking with the systems that have led to this point.

¹²⁰ Per Imre Szeman, “techno-utopianism” describes discourse employed by “government officials, environmentalists, and scientists from across the political spectrum” (61) that sees technology as a *deus ex machina* for climate change and associated problems, such as the end of oil. This term can be extrapolated to include those technological solutions proposed for reducing global warming, such as “using the world’s fleet of aircraft to inject huge quantities of sulfur dioxide into the stratosphere to block a portion of the incoming sunlight, reducing the solar energy reaching the earth” or “dumping iron filings throughout the ocean, to increase its carbon absorbing capacities” (Foster 7).

Chapter Eight: Conclusion

I began this project by outlining the tangible effects of climate change in Halifax as I have been working on my PhD. As my analysis of the texts read herein demonstrates, climate change is both a local and a global problem; thus, I conclude by thinking about the highly visible climatic changes that have occurred in the summer of 2023, and how the increasing visibility of climate change necessitates re-thinking understandings and representations of the climate crisis. On July 27, 2023, United Nations Secretary-General Antonio Guterres “pleaded for immediate radical action on climate change,” as “Climate change is here. It is terrifying. And it is just the beginning. The era of global warming has ended; the era of global boiling has arrived” (qtd. in *Al Jazeera*). The current U.S. President, Joe Biden, meanwhile, has declared that climate change is an “existential threat” (Fabian and Gardner). Given the record-breaking temperatures of summer 2023 (NASA), alongside the various (un)natural disasters, ranging from the Canadian wildfires and wildfire devastation in Maui (Sengupta, Weber, Milman), heat domes in Europe, Puerto Rico, and Texas (Sinclair, Acevedo, Milman), and both catastrophic flooding in Canada, the United States, South Korea, Pakistan, India, China and Turkey (Zhou, McKenzie) and drought (Weber), it is impossible to deny the reality of climate change. Climate change can no longer be considered a future problem. Thus, any climate fiction that intimates such can no longer be viewed as contributing to the solution and must be seen as contributing to the problem.

Fortunately, my dissertation has shown that critiques of cli-fi’s failures to engage with climate justice by projecting the end of the world into the future, and further by presenting that future as the end only of the white world, are somewhat overblown. Many

works of climate fiction, including those by King, Vanderstooop, Bacigalupi, Smith, Mohamed, Miller, Robinson and Johnson do depict the need for climate justice, even as they do not always succeed at depicting just futures. I have argued that these works grapple with how climate, environmental, and ecological justice may be enacted in a climate-changed world, and that there is a utopianism inherent in their attempts to imagine alternatives to the current status quo. By raising the question of how to represent climate justice in literature, and how to enact it more broadly, the authors brought together in this project contribute to a “cultural ecology,” that includes an “imaginative counter-discourse” which “deconstructs hegemonic ideologies” (Zapf 61), which matters even if cli-fi does not motivate readers to change their behaviours.

I have suggested that the problem with representing climate justice in climate fiction is twofold. On the one hand, the lack of representation of climate justice identified by some critics, or the challenges of envisioning climate futures that enact climate justice, may be broadly representative of anxiety regarding the redistribution of wealth, resources, and privilege that climate justice entails, rather than a problem with genre. To repeat Kim Stanley Robinson’s statement: “those of us in the developed world, the privileged world, tend very naturally to ask: Even if we do survive... will it be bad for us? Will we be unhappy? Will we lose our privileges?” (“Remarks” 11). Robinson suggests here that resistance to climate policies—specifically policies that re-distribute resources or require a degree of sacrifice on the parts of those accustomed to a certain way of life in the global north—may be due to a fear of the loss of a privileged way of life, which is then reflected in climate fiction. On the other hand, it is possible, as I have suggested by choosing lesser-known works of climate fiction, that the problem *is* one

with genre, but not with the thematic focus on climate change; rather, the cli-fi canon has been narrowly defined, prioritizing texts of speculative fiction (an inherently future-oriented genre) that tend to be apocalyptic or dystopian in nature. As I have shown, many works do, in fact, engage with climate and environmental justice, but they may also belong to other genres, including YA and satire, or Afro- and Indigenous futurisms. Perhaps, in this era of “global boiling,” cli-fi is no longer an adequate label. Adam Trexler uses the broader “Anthropocene fiction,” which does not have the generic resonances with science fiction, and which acknowledges the historical and ongoing effects of humans on the planet. At the conclusion of this project, I find myself of the mind that while cli-fi has been a useful shorthand, it may no longer be, given the wide reaching and ongoing effects of climate change.

More important than the label used to categorize these works, however, using wild time as the organizational foundation for this project has allowed me to explore how climate change is represented in literature in the present moment, near future, and far future, and how at each interval there are unique requirements for climate justice. For the authors discussed in this study, the climate crisis cannot be disentangled from justice whether climate, ecological, or environmental, and their works point to how the climate crisis has the potential to exacerbate injustices for racialized peoples or those in precarious financial situations. Regardless of when they are set, as works of climate or Anthropocene fiction, the works read herein must engage with temporality, looking back and forward simultaneously, and are inherently political in how they implicitly or explicitly represent the climate crisis and its causes. As they foreground the need for climate justice, whether by painting dystopian futures that negate justice, or by

envisioning futures that move towards it, these works simultaneously betray the challenges of envisioning and enacting climate justice under neoliberal capitalist regimes.

As with climate action, climate justice will require systemic change; this is apparent in *The Back of the Turtle*, *Watershed*, *The Water Knife*, and *Orleans*. As long as people and the natural world are seen as disposable because they do not contribute to the market, it will be impossible to enact climate, ecological, or environmental justice. *The Annual Migration of Clouds*, *Blackfish City*, *New York 2140* and *Corvus* gesture toward the changes that could occur, whether positive or negative. *The Annual Migration of Clouds* only gestures towards the systems that existed in its pre-diegetic past, but as in *Blackfish City*, these are dystopian, protecting the rich and oppressing women; *Blackfish City* also, however, like *New York 2140* and *Corvus*, gestures toward the systemic changes that may foster justice: commonalities include the need for affordable housing, strong communities (both human and with the natural world), and changes to the financial system that re-distribute wealth. The hope depicted in *New York 2140*, *Corvus*, and *Orleans* is rooted in collaboration that is unofficial, improvisatory, and interpersonal; the changes that enact justice occur outside of the confines of government, military, or other state mechanisms. This suggests that while the collapse wild time may be chaotic, it is also full of potential.

Perhaps, as I suggested in the previous chapter, climate justice and climate-changed futures that avoid the apocalypticism envisioned in many works of cli-fi require utopian thinking. Imagining alternatives is now more necessary and urgent than ever, as the 2023 IPCC report suggests that “global GHG emissions in 2030 ... would make it *likely* that warming will exceed 1.5 ° C during the 21st century and would make it harder

to limit warming below 2 ° C if no additional commitments are made or actions taken” (57). Climate justice will require, as my project has suggested by including works of Indigenous and Afrofuturism, listening to historically marginalized and oppressed voices, who have already survived apocalyptic attacks on worlds and environmental change, due to colonialism and environmental racism; climate justice must include reparations and decolonization, and the creation of true multi-ethnic coalitions and cross-cultural collaboration. Business as usual can no longer continue. This applies to climate policy (or lack thereof) and climate fiction; climate change is no longer a future problem, and fiction and the arts must reflect the urgent nature of climate change.

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