Whose Odds?

The Absence of Climate Justice in American Climate Fiction of the 2000s and 2010s

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Climate change is a physical fact, but humans comprehend it as a narrative via frames that are employed in everyday discourse, sublimated in popular culture, and highlighted by paraphrasers and tastemakers such as journalists, bloggers, filmmakers, celebrities, and politicians. The emergence of popular climate frames carries tremendous consequences, as these frames shape public and elite opinion and, through them, political and policy responses. In the 1990s and early 2000s, Americans conceived of climate change as a matter of contested science and gradual warming. In the 2010s the advent of the Anthropocene concept emphasized climate change as a looming catastrophe facing an undifferentiated humanity. The most important emerging frame—highlighted by every successive not-so-natural disaster—is that climate change is about justice for the already disadvantaged humans who bear the least responsibility and are least able to respond to its gradual transformations and pulsing cataclysms. This is the frame of climate justice.

Around the same time as this frame began gaining traction, cultural commentators and environmentalists heralded the arrival of a new genre of fiction, dubbed climate fiction, that "engage[s] with climate change as an important theme" (Trexler and Johns-Putra 187). Though storytellers have speculated about the consequences of climatic change for millennia, novels based on scientific evidence and plausible projections began appearing in large numbers in the 1990s. Works such as Octavia Butler's *Parable of the Sower* (1993) and T. C. Boyle's *A Friend of the Earth* (2001) were early examples, and by the late 2000s the trend was clear, with speculative

fiction authors such as Kim Stanley Robinson, best-selling popular fiction novelists such as Clive Cussler, and mainstream literary heavyweights such as Barbara Kingsolver contributing groundbreaking and widely read novels focused on the environmental, psychological, social, cultural, and political dynamics of climate change. As this development gained recognition from literary critics and readers, climate fiction was welcomed as a sign of American artists and culture industries grappling with anthropogenic climate change.

This was undoubtedly true, and these literary pioneers deserve recognition. But especially in retrospect, it is clear that authors of this generation of American climate fiction chose to depict climate change through specific, limited, and surprisingly problematic frames. They primarily portrayed climatic destabilization as a problem for white, wealthy, educated, and privileged Americans, and secondarily gestured towards its consequences for human beings of all socioeconomic levels—the monolithic and flattened "we" of *homo sapiens*. In this way, they 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 (Schlosberg and Collins 2014).[1] Ironically, then, these authors unwittingly mirrored the historical myopia of the American environmental movement itself (Gottlieb 307–346). The literary elision of climate injustice reflected and potentially reified a narcissistic tendency among many white American readers.

This chapter examines the absence of climate justice concerns in this critical first generation of American climate fiction (in the 2000s and early 2010s), which produced popular texts that created a template for future authors to follow. I focus on two representative texts that have been widely reviewed, assigned, and analyzed and are therefore likely to have reached a large number of readers: Nathaniel Rich's *Odds against Tomorrow* and Kim Stanley Robinson's *Science in the Capital* trilogy.[2] While we cannot expect a particular text, author, or genre to address every conceivable perspective, examining cli-fi novels on socioeconomic grounds is hardly a critical imposition. Works such as *Odds against Tomorrow* and the *Science in the Capital* trilogy owe a significant portion of their sales, critical attention, and reputation to the explicit centrality of climate change to their narratives. In interviews, Rich, Robinson, and other authors spoke with an admirable desire to expand their readers' environmental awareness and spheres

of moral concern. Given that these authors consciously addressed climate change with an ethical and activist bent, it is worth asking which frames this consequential genre employed and which ones it largely avoided.[3]

FRAMING CLIMATE CHANGE

In 2009, geographer Mike Hulme identified six common narrative frames for climate change: scientific uncertainty, biodiversity, economics, national security, catastrophe, and justice and equity. To these we might also add two more recent frames: climate change as a public health concern and a patriotic challenge. Framing is an incredibly consequential matter, since the frames by which we individually and collectively apperceive any issue shapes our beliefs and subsequent actions (Nisbet)—or whether we take any action at all.

In the three decades that climate change has been an issue of public concern in the United States, particular frames have dominated media coverage and popular discourse. Until recently, most journalists stubbornly insisted on the scientific uncertainty frame, reflecting the modern American journalistic norm of "balance"; scientists and environmentalists tended to promote the catastrophe frame, mistakenly believing it the most persuasive; and corporations and well-heeled think tanks advanced the scientific uncertainty and economic frames. It is only recently that activists from and representatives of small and developing nations along with Northern environmentalists have succeeded in publicly advocating for the justice and equity frame, or what's commonly referred to as *climate justice.* Over the past decade, scholars and activists in the Global South and allies in the North have argued compellingly that climate change should be viewed through a moral lens, since it produces an unjust distribution of vulnerabilities and impacts not only between generations (intergenerational injustice) but between different groups in the present and future (distributive injustice), often reflecting and reinscribing historical cartographies of exploitation and colonialism.

The gulf between the responsibility for and current and expected suffering from climate change is staggering, and cannot be emphasized too frequently. Approximately 20 percent of the global population has been responsible for 75–80 percent of historical greenhouse gas emissions since the Industrial Revolution: historically wealthy nations like the United States (responsible for 27 percent of all emissions from 1850 to 2011) and Britain

(6 percent), with China (11 percent) catching up quickly (Ge et al). However, "75 to 80% of the damages will be suffered by the developing countries," according to one analysis (World Bank, *World Development Report*). A map of historical emissions is almost the inverse of expected vulnerabilities, losses, and casualties. Climate change, with its geographic ubiquity and temporal near-permanence, will constitute the greatest collective act of injustice in the history of our species.

The colossal injustice of global warming is illustrated by shining a spotlight on specific vulnerable countries. Take Bangladesh, which carries almost no responsibility for current climate change. This is true whether we calculate "responsibility" as a nation's total historical contribution or on a per capita basis—in 2013 Bangladesh ranked 210 out of 250 nations and territories in per capita greenhouse gas emissions, with the average American responsible for more than thirty-seven times more than the average Bangladeshi (World Bank, "CO2 Emissions").[4] As one of the lowest-lying, poorest, and most densely populated nations on the planet, Bangladesh is already suffering from climate change—as demonstrated by the devastating floods in May 2022, which left nine million people homeless (Paul and Hussain)—and it faces a catastrophic future. Even if warming is successfully limited to only 2 degrees (Celsius), nearly 20 percent of Bangladesh will be underwater—the equivalent of the entire East Coast of the United States—and twenty million people, or one out of seven Bangladeshis, are expected to be displaced by 2050 (CDMP II).[5] Agricultural regions will be inundated with saltwater, creating the conditions for famine. As the Syrian refugee crisis in Europe illustrated, even in the best of times other countries are not likely to welcome twenty million refugees, and Bangladesh's neighbors (such as India) will be dealing with their own climate-exacerbated problems, including drought and diminished agricultural yields (Guzman 2013). Epidemiologists caution that the expected conditions—rising seas, higher temperatures, unpredictable patterns of precipitation, people living in cramped and unsanitary spaces without access to water, and an overwhelmed medical infrastructure dealing with a mobile population—are ideal for the spread of disease.

Bangladesh is only one country. Similar stories can be told of every other country that is highly vulnerable to climate change, especially poorer ones, including India, Pakistan, the Philippines, Oman, Sri Lanka, Colombia, Mexico, Kenya, South Africa, and many others. Citizens of these nations will disproportionately suffer not only because they tend to be located closer to

the equator and are often more dependent on local agriculture for survival, but because they will be unable to fund expensive adaptation measures. These include levees, seawalls, green infrastructure such as constructed wetlands and permeable pavements, mass relocation, and many other strategies currently in development and implementation. That wealthy nations will fund their adaptation (and build walls) with capital gained from decades (and in some cases centuries) of exploiting fossil fuels only adds a cruel layer of injustice to this dynamic.

WHOSE ODDS?

Given the reality of catastrophic climate injustice, it is worth asking, as cultural and literary historians will in the decades to come: how did art, literature, and media, including climate-change novels, represent this issue? As Antonia Mehnert notes in her study of climate fiction, fiction can "serve as a way for readers and viewers to empathize with people across time, and thus with future generations, as well as with people in different social, economic, and ethnic contexts" (Mehnert 88). In this sense, representational choices carry weight. While ecocritics have highlighted individual works that feature environmental justice and climate justice (e.g., Mehnert 183–220; Ziser and Sze), few have focused on whether these concerns appeared in some of the genre's popular and subsequently imitated works.[6]

Cli-fi novels in the late 2000s and early 2010s were heralded by environmental activists, critics, and scholars for their potential contribution to environmental politics. The liberal media was almost uniformly positive in its praise for the emergence of climate fiction, due to its perceived trickle-down impact on environmental consciousness and politics. Works such as Theroux's *Far North* and Kingsolver's *Flight Behavior* were praised not so much for their literary merit as their ecopolitical potential—their ability to persuade and mobilize readers to change their patterns of consumption, become more politically engaged, and support national and international agreements to limit greenhouse gas emissions (e.g., Evancie; Siperstein). Nathaniel Rich's *Odds against Tomorrow* floated on this wave of hype, earning praise from the gatekeepers of liberal intellectual and middlebrow magazines as well as popular websites. For years it was regularly assigned in climate fiction courses in the United States and referred to as one of the top cli-fi novels in magazine features and online listicles.

Odds against Tomorrow's focal character is Mitchell Zukor, a University of Chicago graduate and quantitative wizard who begins the novel as a junior analyst in an investment banking firm in New York. Zukor's lifelong obsession with the risk of catastrophic events quickly lands him a plum job in a new kind of financial firm, FutureWorld, whose consultations with large corporations allow them to claim active preparation for various disaster scenarios, from extreme weather events to nanobot attacks, and thereby indemnify themselves against future lawsuits. Once New York is flooded in a Superstorm-Sandy-like hurricane ("Tammy"), the exaggerated postmodern novel becomes an action-adventure story, with Zukor and his romantic interest, Jane, navigating the debris-filled canals of Manhattan. Hailed as a prophet for his prediction of the flood, Zukor reconsiders his vocation and relocates to the decimated and abandoned neighborhood of Flatlands, Brooklyn, where he stoically anchors a self-reliant community of similarly resilient survivors.

Most critics applauded *Odds against Tomorrow,* claiming that it describes and examines the "modern condition" (Evancie) and the future of "human communities" (Newitz) in the era of climate change. In reality it describes the condition and perspective of a small and lucky portion of our species. Zukor and Jane are white, highly educated (graduates of the University of Chicago, Princeton University, and the Wharton School of Business), young (in their mid-twenties) and highly mobile, having recently moved to New York City. Due to their success in exploiting financial loopholes, they amass the financial resources to survive Tammy with minimal hardship—for example, Zukor purchases a $28,000 canoe, which they use to escape downtown Manhattan after the storm. Indeed, when Jane first views the canoe she notes, "we're making enough money to buy almost whatever we want, when we want it" (151). As they leave New York, Zukor is able to ensure their easy passage with the $50,000 in cash he carries with him. Their financial resources and disentanglement from communities of place, which allows them to relocate easily and painlessly, is not representative of most Americans, people of color, Indigenous communities, or the vast majority of the 7.5 billion people who live outside the United States. This wealth is not just a material advantage in a time of crisis but shapes their outlook throughout the novel. For example, while eating rations at a post-Tammy FEMA (Federal Emergency Management Agency) camp, Mitchell whispers to Jane, "We're too rich for this" (259).

Where are poor people and people of color in *Odds against Tomorrow*? This is a question that should be asked of every climate-change narrative. The first nonwhite voice appears halfway through the novel, in a Native American epigram. Mirroring the cultural appropriations of previous generations of white American environmentalists, Rich mines Indigenous culture to provide a disembodied source of wisdom and a veneer of multiculturalism. When Zukor and Jane find themselves in a FEMA camp, their response to being placed alongside more socioeconomically average Americans is telling:

> Who were all these people? Waiting on line outside the food tent, taking fluids intravenously in the medical trailers, lingering by the administrative desk in the hope of hearing news, any news, the children racing wildly around the island in unsupervised games of tag, the babies screaming. It was clear what they weren't: Manhattanites. Many were first-generation immigrants. They didn't have friends with guesthouses in other parts of the country; they couldn't afford hotels or airfare. In many cases their entire family had lived on the same block. They were also stubborn: they didn't want to start over. (241)

This is the sole paragraph in the novel that focuses on poor people, people of color, or non-Americans, and it describes them in contemptuous terms by what they are not: residents of Manhattan. Elsewhere, descriptions of these outer-borough denizens frequently contain a hint of disgust. For example, a middle-aged woman who approaches Zukor's FEMA trailer is described as "a woman with a crumpled, washed-out face" who "smelled of detergent" (248).

While some critics have read the novel as a satirical critique of corporate capitalism and disaster profiteering (e.g., Siperstein), that element only describes its first third. As Tim Lanzendörfer notes, the rest of *Odds against Tomorrow* abandons its quasisatirical tone and establishes FutureWorld as a valuable and productive enterprise for both its clients and the world at large. Reader responses suggest the novel was not understood as a satire. In a survey of American readers of climate fiction, not one of the readers of *Odds against Tomorrow* appeared to view the novel as satire, and some reported that its primary lesson concerned the need for personal disaster preparedness. For example, a woman in her fifties wrote, "It made me very concerned about the effects of global warming. I also have thoughts of being more prepared for emergencies."[7] At least one reader seemed to view

Zukor as a model for climate adaption, saying, "It made me feel like I need to be smarter. I need to see things in different perspectives and angles." Similarly, an analysis of fifty randomly-selected reviews of the novel posted on the website Goodreads shows that while a minority of readers considered *Odds against Tomorrow* to be satire, most did not.[8] As a representative Goodreader put it, "The novel is a disturbingly *realistic* portrayal of the way things could go" ("Odds"; my emphasis).

Most of these readers seemed disappointed by the novel's conclusion. After escaping from the FEMA trailers, Zukor makes his way to the Flatlands neighborhood of Brooklyn, "just about the end of the earth . . . or as close as you can get without leaving New York City" (251). Renouncing the fortune he could earn through climate profiteering, Zukor takes up residence in an abandoned (but charmingly antiquated) former bank and develops the sense of masculinity and Emersonian self-reliance that comes from postapocalyptic gardening. Other stragglers trickle into the neighborhood. The novel ends with Jane—now running a new company, FutureDays—making regular deliveries of goods to support the budding community. In their eagerness to anoint *Odds against Tomorrow,* liberal critics, apparently unaware of the whiteness and problematic apoliticism of the North American back-to-the-land movement, praised this conclusion as a novel and radical proposal. Annalee Newitz of *Slate* even called Mitchell a "hero for the Occupy age," arguing that "there's a real sneakiness to Rich's story, which comes on like a deluge of disaster porn but then flows backward to reveal the fractured, reconfigurable landscapes of a David Graeber essay." In the leveled Flatlands, Zukor "forgot everything and decided he was exploring an abandoned world at the edge of the universe" (Rich 270), where he could finally put his neurotic obsession with risk and disaster behind him and embrace his (white) manhood: "Walking around the property, swinging the ax, he felt for the first time as if he owned the land. The Canarsie Bank Trust, as well as the adjacent plot, whatever it had been, was his domain" (290). This is a Lockean claim that by making of use of the land, Zukor now owns it.

This is deeply problematic from a justice perspective. While Flatlands might seem like the end of the Earth from the vantage point of Manhattan's Upper West Side, where Rich was raised (Holson), it is in reality a stable, middle-class neighborhood of sixty thousand. Home to African-Americans, Caribbeans, Latinxs, and Asian Americans, the neighborhood was not even flooded during Hurricane Sandy, when its denizens generously organized

aid for their less fortunate neighbors in Brooklyn and Queens through organizations like the Flatlands Lions Clubs ("Superstorm"). To recapitulate: two white, wealthy, educated, twenty-somethings find a complicated financial means to profit off of climate disasters, then use these funds to settle a destroyed minority neighborhood, where they discover themselves by working the land. The familiar echoes of settler-colonial land appropriation and historical erasure are too loud to ignore. While we should not expect every climate-change novel to highlight specific perspectives, Rich's apparent ignorance of these settler-colonial reverberations and the absence of diversity and climate justice considerations constitute a deficient and pernicious framing of climate change.

WHITENESS IN THE CAPITAL

The absence of the climate justice frame was not isolated to *Odds against Tomorrow* but extends to other widely read and critically acclaimed American climate-change novels in this period. Let us consider from the same perspective Kim Stanley Robinson's *Science in the Capital* trilogy, *Forty Signs of Rain* (2004), *Fifty Degrees Below* (2005) and *Sixty Days and Counting* (2007). It is a fitting object of analysis, having received a great deal of attention by ecocritics as an exemplar of climate fiction. Rightly hailed as one of the most thoughtful and prolific environmentally engaged science fiction authors of the last three decades, Robinson also writes popular nonfiction essays on literature and environmental politics and has had a significant influence on contemporary environmental discourse.

Science in the Capital depicts a near future of abrupt climate change in which a carbon concentration of 400 parts per million leads to accelerated glacial melting, the stalling of the Gulf Stream, and dramatic temperature fluctuations and weather events. The focal character shifts from chapter to chapter, from Charlie Quibler, the environmental adviser to Senator-turned-President Phil Chase; to Anna Quibler, an administrator at the National Science Foundation; to Frank Vanderwal, a bioengineer and sociobiologist working at the same institution. The conceptual focus is on the relationship between science and politics in an era of abrupt climate change, expressing Robinson's utopian desire that science might someday become a kind of progressive political praxis (Canavan et al.). This wish is evident in his choice of a setting: Washington, DC, home of "big government," is flooded in the

first novel and then frozen in the second, only to emerge as a global savior under enlightened leadership in the third. Robinson's primary goals are to depict potential political and technological responses to climate change and, secondarily, to investigate its psychological and philosophical implications.

Robinson gestures at an atmosphere of global cataclysms through short italicized interchapters that intermittently list weather events around the world even as the primary narrative focuses exclusively on Americans and the United States: "A tornado in Halifax, Nova Scotia; the third and catastrophic year of drought in Ireland . . . In Lisbon, a 60 degree drop in 7 minutes" (*Fifty* 369). However, as is the case in many American disaster films and novels, these descriptions are mere line items from a newsreel. They represent a nod towards planetary scope in which, as Ursula Heise has noted, "the narrative never develops any cultural," social, or political "perspective on the global" (Heise 207). Moreover, this gesture suggests, along with many American climate-change novels, that either climate change is ultimately a story that ought to be told through an American lens—the United States as axis mundi and global hero—or that climatic, social, economic, and political developments in the United States are a fitting synecdoche for parallel events worldwide. Neither is true.

In a novel set in Washington, DC, a "Chocolate City" whose population was approximately 30 percent white at the time of the trilogy's publication, all of Robinson's focal characters are not only white but educated, professionally secure, and financially well-off. In the trilogy's 1600 pages, the primary diegetic engagement with nonwhite experiences of anthropogenic climate change is the protagonists' serendipitous friendship with the displaced citizens of the fictional Khembalung. A Buddhist island nation of twelve thousand and a charter member of the (also fictional) League of Drowning Nations, the Khembalis have come to Washington because the rising seas will shortly drown their entire country. While Frank, Anna, and Charlie visit, that is exactly what happens. Every last Khembali abandons their home island in a stoic and orderly fashion while their white American visitors are whisked to safety in a helicopter, watching the ocean swallow the island from a safe distance. Resettling in Washington, all twelve thousand Khembalis somehow squeeze into a small property in Arlington, Virginia. When asked about his peoples' displacement, Rudra Cakrin, a Khembali leader, does not mourn the loss of his homeland or describe the difficulty of life as a refugee but merely says: "I do not mind it. It seems to be good

for people. It wakes them up" (*Fifty* 213). Within the novel, Khembalung is a stand-in for other soon-to-be-drowned nations, such as Tuvalu and the Maldives, but also an opportunity for Robinson's Western characters to explore his synthesis of Buddhism and ecology. In seeking to develop connections between Eastern religion and resilience, Robinson sacrifices climate justice verisimilitude to use non-Western characters as stereotypical representatives of ancient and exotic wisdom.

The Khembalis' perspective could not be more different from the forceful and public activism of real island nations' citizens and leaders. At climate conventions, on social media, and through international environmental organizations, small island nations have been at the forefront of demands for rapid decarbonization and climate justice. For example, Tony de Brum, former president of the Marshall Islands, called climate change "a war for nothing less than the future of humanity" and asked, "in whose warped world is the potential loss of a country not a threat to international peace and security" (De Brum)? Mohamed Nasheed, former President of the Maldives, famously staged an underwater cabinet meeting and stated that if the 2009 Copenhagen COP (Conference of the Parties) were to fail, "We are going to die" (BBC). In *Science in the Capital,* the Khembalis have little trouble becoming permanent residents of the United States, purchasing land in Maryland, and constructing a utopic farm complete with treehouses for their guests. In the real world, climate refugees stand to lose their traditional homelands and cultures, there is no international legal recognition of the category of environmental refugee, and there are major obstacles to its emergence. Necessary land and funding for resettlement will be difficult to secure, especially as wealthy nations face their own challenges and find excuses to shirk their historical culpability.

Surprisingly few characters in *Science in the Capital* seem particularly troubled by its tremendous climate catastrophes. There is an exemplary level of individual and community resilience in Robinson's storyworld, which makes *Science in the Capital* one of the few positive (or even non-dystopic) popular visions of climate futures. At times, however, this rosy outlook obscures as much as it reveals. This is evident in *Fifty Degrees Below,* when a prolonged cold snap culminating in temperatures of fifty degrees (Fahrenheit) below zero is repeatedly deemed to be a "good thing" by his protagonists (456), because it will finally motivate conservative legislators to take action. Meanwhile, average Washingtonians jump at the opportunity to play in the snow:

> Late in the day Frank went back down to the Potomac to walk out on the ice. Scores of people had had the same idea. Now on the Potomac people were mostly standing around or skiing, playing football or soccer or ad hoc versions of curling. . . . When sunset slanted redly across the Potomac the light struck Frank like another vision out of Bruegel. One of his Flemish winter canal scenes, except most of the Washington, D.C., population was black. . . . It was like Carnavale on ice. . . . A giant steel drum added to the Caribbean flavor. . . . It seemed to him to be an extraordinarily beautiful populace, every race and ethnicity on Earth represented—the many black faces vivid and handsome, cheerful to the point of euphoria, laughing as they took in the scene. (421–22)

In reality most of these smiles would be frozen in place, since frostbite begins within five to ten minutes of skin exposure at such a low temperature. (Disorientation, slurred speech, and uncontrollable shivering, which might be mistaken for "euphoria," are also likely.) Retrospectively cringeworthy passages like this—a "giant steel drum" adding "Caribbean flavor" amidst the "laughing" "black faces"—should lead us to examine the portrayal of people of color within Robinson's work, especially given his stature within environmental literature and climate fiction in particular.[9] As one of the few appearances of people of color in these novels, this portrait of the impact of abrupt climate change on already disadvantaged minorities in the United States might be read as comic, if only his intentions in this work of "proleptic realism" (Luckhurst 173) were not so serious. Not even on the novel's wide radar, however, are the millions of poor, isolated, or elderly Americans for whom such an extreme and rapid temperature shift would prove fatal. Readers might well question whether his protagonists' admirable resilience is due to their indefatigable spirit or their racial and economic privilege.

Ecocritic De Witt Douglas Kilgore sees the role of race within the trilogy differently. Kilgore argues that Frank embodies an attempt to move beyond whiteness, constructing a new postcapitalist subjectivity in the face of climate change while using his racial privilege as a force for good, especially in his selfless friendship with the homeless "bros" who congregate in Rock Creek Park, where Frank lives in a treehouse for much of *Fifty Degrees Below*. "If the racial hierarchy sponsored by an extractive capitalism is splintering," Kilgore asks, "then what would replace it" (104)? Thus Kilgore explains Frank and Robinson's interest in sociobiology as a generative attempt to resuscitate distant subjectivities in the Anthropocene present.

However, as Jeanne Hamming notes, by the end of the trilogy Frank abandons his Paleolithic lifestyle, having achieved the heteronormative masculine American dream of marriage, fatherhood, and homeownership. Whether or not we agree with Kilgore's generous interpretation, Robinson's narrative proves unable to move beyond the concerns of his white, American, wealthy, educated protagonists, which has the effect of "backgrounding the environment" as well as people outside the cocoon of American whiteness and "foreground[ing] the floundering masculine subjectivity" that is threatened by global climate change (Hamming 27). Frank's blinding whiteness is manifest in an exchange that occurs during the titular freeze in *Fifty Degrees Below,* as Frank discusses winter clothing with city workers busily cutting down trees. "They were all black," the omniscient narrator notes. "They lived over in Northeast but had worked mostly Northwest when they had worked for City Parks. One of them went on about being from Africa and not capable of handling this kind of cold." At which point, Frank, the scientist and sociobiologist with the expensive down vest and nylon wind-jacket says, "We're all from Africa" (*Fifty* 427). This remark, simply passed over by the workers and narrator, seems to demonstrate Frank's ignorance (and Robinson's deprioritization) of the basic, critical claim of climate justice: that there are vastly different experiences of climate change according to race, ethnicity, gender, wealth, and nationality. At no point do we see Frank move beyond this ignorance, and at no point are the problematic dimensions of Frank's sociobiology—such as racism and social Darwinism (e.g., Ruse)—critiqued. However noble his intentions, Robinson ultimately uses climate change, the Khembalis, and the occasional appearance of Black characters as a means of reinvigorating the subjectivities and sensibilities of his white protagonists.

The overwhelming Americanness and whiteness of *Science in the Capital* inevitably influences the trilogy's recommendations for responses to climate change. In the final installment, *Sixty Days and Counting,* Charlie and Frank become consequential figures as Phil Chase is elected president on a platform of addressing climate change and transforming the United States' relationship with the world. While Charlie and Frank's friendship with the Khembalis and President Chase's anti-imperialist statements and blog posts are intended to demonstrate that the United States is opening itself to a less imperious and hierarchical relationship with other nations, the novel's large-scale geoengineering and bioengineering responses to climate change are not described as the product of a horizontal, democratic process. These interventions include

unilaterally and haphazardly releasing a gene-edited carbon-sequestering lichen (developed by one of Frank's former students) into the Siberian forest, where it spreads at a perilously rapid and uncontrollable rate. Similarly, a massive amount of saltwater is pumped from oceans into glaciers and dry basins around the world, most of which are located in Asia and Africa. As Frank suggests in a meeting of top government officials, the "infrastructural value of property" is low in these regions and there are "statistically insignificant population to displace" (*Sixty* 243), which makes them ideal areas for terraforming. The justification for these experiments, sanctioned by the United Nations, is that "people were ready to try things," so that "even the more blatant interventions, like bioengineered bacteria or lichen, had the support of an admittedly smaller majority [of the population], like sixty percent" (*Fifty* 534). What's unstated is that this "sixty percent" refers to the American public and not the people whose lives are at stake. Robinson does not mention a mechanism for global decision-making about geoengineering, and these risky and consequential choices seem to be made by a small circle of American (and largely white) politicians, bureaucrats, and scientists.

As policymakers, ethicists, and scholars of international relations have noted, geoengineering presents a collective action and governance problem at least as complicated as climate mitigation. There is the distinct possibility that geoengineering will be carried out by wealthy and geopolitically powerful nations that consider grave risks to distant people to be acceptable. While these interventions are miraculously successful in the trilogy, they might just as easily go disastrously wrong at a planetary scale. For example, scientists note that the most popular candidate for geoengineering, solar radiation management, could disrupt the Indian monsoon, which could negatively affect billions of people and lead to the starvation of tens of millions (Brewer). Indeed, the growing interest in geoengineering has led to a field of research on geoengineering justice (e.g., Preston). In *Science in the Capital,* the exclusion of minority characters and climate justice considerations constitutes a structuring absence that enables Robinson's endorsement of potentially catastrophic and unjust technologies as commonsensical technosolutions.

AMERICA FIRST

This chapter has focused on two critically acclaimed works of American climate fiction of the 2000s and 2010s. While a thorough analysis of the

framing adopted by all American climate fiction of this era is not possible in this space, we would come to a similar conclusion by examining the vast majority of it. Indeed, in Adam Trexler's *Anthropocene Fictions* (2015), the most exhaustive early survey of the novels of climate change and the Anthropocene, justice is not mentioned as a major or minor theme. Though literary critics have highlighted a number of important texts published during this period that did focus on socioeconomic, climate, or environmental justice, they are the exceptions. Despite the apocalyptic or dystopic focus of most American cli-fi, well-known authors generally shied away from depicting in detail the violence (both slow and spectacular) of climate injustice. Novels such as Marcel Theroux's *Far North* and Robert Charles Wilson's *Julian Comstock: A Story of 22nd-Century America,* like many cli-fi novels set decades or even centuries in the future, recall only vague periods of tribulation and hardship that time has transformed into legend. Especially as the resettlement of climate refugees from poorer countries becomes an increasingly urgent topic in the decades to come, these elisions constitute a missed opportunity to cultivate an awareness of climate justice and empathy in American readers.[10]

How do we explain this representational lacuna? Answers to this question are admittedly speculative, but important to consider. We might note, first, that these works were conceived, published, and received within an American political and cultural context in which colorblindness still held hegemonic power (Bonilla-Silva) and class, racial, and ethnic difference were invoked primarily as a contrast with normative wealth and whiteness. As a result, even well-intentioned texts by progressive authors tended to universalize or neglect race, leading to the erasure of differences that are due to race as well as ethnicity, class, gender, sexual identity, and nationality.

Second, we might view this failure of imagination as a tertiary consequence of the long history of organized and well-funded climate denial in the United States. The result of this coordinated campaign of confusion was a woefully low level of belief in anthropogenic climate change despite the scientific consensus—in a 2014 poll, 61 percent of Americans said there was "solid evidence the earth is warming," but only 40 percent believed it was due to human activities (Pew). As a result of the manufacture of doubt, the goals of concerned novelists were stunted, centered on the most basic questions of cause and effect, with less space to explore some of the second-order consequences that were not yet well understood by most Americans, such as infectious diseases, food security, mass migration

from poor countries, and climate justice. So it is that the central drama of the most accomplished cli-fi novel of this period, Barbara Kingsolver's *Flight Behavior,* concerned the environmental awakening of a rural Tennessee woman who comes to accept the reality and gravity of anthropogenic climate change when millions of monarch butterflies, their established migration route disrupted, arrive in her backyard. Almost five decades after the first public reports on the consequences of greenhouse gas emissions, this was a principal goal of a major American novelist addressing climate change: to show that even poor, white, rural conservatives could accept a long-established scientific consensus.

Third, we might conjecture that the lack of interest that Americans seem to have in other peoples and places inevitably colors the stories that American authors choose to tell. In their quest for relevance and influence, Rich, Robinson, Kingsolver, and other authors attempted to meet their readers halfway, and most Americans remain squarely focused on the United States. Although globalization and digital technologies have allegedly shrunk the world, they have not appreciably expanded Americans' knowledge of and interest in other places and cultures. The stereotype of the American ignorant of global affairs is confirmed by cross-cultural polls that test Americans' knowledge of other countries. In a 2006 poll of eighteen-to-twenty-four-year-olds in Canada, France, Germany, Great Britain, Italy, Japan, Mexico, Sweden, and the United States, Americans placed second to last in knowledge of foreign countries and affairs (*National Geographic*). One reason for this relative ignorance is the lack of attention to foreign languages and international issues in American primary and secondary education (Devlin); another is the (often deliberate) spread of misinformation by some mainstream news networks (Fairleigh Dickinson). A more diffuse but perhaps more robust influence is what Rob Nixon called "superpower parochialism" (Nixon 35) combined with an imperial narcissism that accumulated during the long "American century," which leaves many Americans believing themselves to be firmly and eternally at the epicenter of most events of global and historical significance (Caldwell). Indeed, cultural myopia is part of what enabled support for the isolationism, unilateralism, and white supremacy of the Trump administration. Although prayers and small donations are always forthcoming to the victims of the latest not-so-natural disaster, many Americans fail to empathize with those beyond their borders or acknowledge the historical responsibilities generated by a near-century of fossil-fueled superpower status. Knowing this,

many environmentally engaged American authors seem to have catered to their readers by featuring settings and characters with whom readers might readily identify.

WHITHER CLIMATE JUSTICE?

As empirical scholarship on the reception of climate fiction demonstrates, these works can have a potent impact on the way that readers conceive of anthropogenic climate change (Schneider-Mayerson, "Influence"; Schneider-Mayerson et al., "Environmental"). Given the influence of these novels on subsequent framings, and given the temporal lag of climate change, climate justice delayed is climate justice denied.

Due to the negative consequences of thinking about climate change, including anxiety and depression, even concerned Americans often avoid detailed reflections on our potential climate futures. In this context, climate fiction, and environmental media in general, can play a powerful role in influencing the frames that readers perceive, prioritize, adopt, and share with family, friends, coworkers, and others. The novel in particular has great potential to encourage and cultivate transnational empathy for the already disadvantaged victims of climate change, due in part to the extended temporal engagement that the form requires.

As we see in *Odds against Tomorrow* and the *Science in the Capital* trilogy, American climate fiction in the 2000s and early 2010s tended to emphasize particular climate frames: the catastrophe frame and, secondarily, the biodiversity, national security, and patriotic challenge frames. The justice and equity frame is important and necessary, because it constitutes the only frame that is likely to motivate a program of individual and collective mitigation and adaptation that will address and not exacerbate existing inequalities. As we move deeper into an era in which socioenvironmental concerns will be defined by adaptation, triage, and migration in addition to mitigation, keeping justice firmly in mind will be critical.

As such, scholars and critics ought to ask of *every* climate-change narrative, in literature and other media: whither climate justice?

NOTES

1. To identify the frame employed by a novel, critics must examine a text holistically, with attention to some combination of content, form, and structure. In some

sense, then, the identification of a particular frame (or combination of frames) is subjective, though critics familiar with these two texts are unlikely to disagree with my claim that the climate justice frame is largely absent.

2. Both texts have been widely reviewed and either won or were nominated for numerous awards. *Odds against Tomorrow* was named an NPR Best Book of the Year, *New York Times Book Review* Editors' Choice, and a *New Yorker* Book to Watch Out For, while *Forty Signs of Rain* (the first novel in the *Science in the Capital* trilogy) was nominated for the British Science Fiction Award and the Locus Award. Anecdotal data gathered at ecocriticism conferences supports the claim that these two works have been regularly assigned in college (and even some high school) classes. As of this writing, *Odds against Tomorrow* and *Forty Signs of Rain* have been cited in 86 and 179 scholarly articles, respectively. Whether a text is representative is largely subjective, but, as I note in this essay, surveys of the genre or category of "cli-fi" rarely include a mention of climate justice, suggesting that this theme has indeed been largely absent from most American climate fiction.

3. Studying absences and silences is an increasingly critical approach in the humanities and social sciences, due to the growing acknowledgment of the importance of selection, representation, and diversity. However, it seems to be less common within literary criticism (outside of psychoanalytic criticism, African American studies, and ethnic studies), perhaps because of the traditional focus on individual works or authors and the general tendency for critics to write about works that they enjoy or support, aesthetically or politically—a focus on absences is in some ways an inherently critical perspective. Studying absences and silences seems to be more common within some social scientific disciplines, such as communications. In this sense, importing the concept of "framing" from media studies enables us to evaluate the framing of American climate fiction, demonstrating the value of mobilizing concepts from multiple disciplines.

4. In other indices the United States' per capita carbon footprint is much higher. The emissions involved in the production and transportation of consumer goods from outside the United States are not counted in this data, allowing Americans to outsource their pollution to other countries.

5. This assumes no population growth. If Bangladesh's population doubles, as many demographers expect, the number of internally displaced persons and emigrants could be twice as high.

6. A related question is whether the themes and arguments that ecocritics see in particular texts are picked up by readers. Such questions are critical to assessing the influence of environmental literature on its readers and demonstrate the need for more empirical research. See Schneider-Mayerson, Weik von Mossner, and Małecki.

7. Survey conducted via Amazon's Mechanical Turk in September 2016, with 161 respondents. See author for more information.

8. As of April 20, 2017, *Odds against Tomorrow* had 254 ratings on Goodreads, which crowdsources literary reviews. Every fifth review was selected for analysis.

9. In *Science in the Capital* these examples abound. For example, in *Forty Signs of Rain,* Frank describes an Asian American character as an "Asian dragon lady" (27) who is "good-looking in an exotic way" (23).

10. The term "climate refugees" is used deliberately, even though "climate migrants" has become more common amongst scholars of the climate-migration nexus. From the perspective of climate justice, "refugee" acknowledges that those forced from their homes and homelands are, in a sense, victims of climate change, whereas for some scholars "migrant" signals agency—migration as a form of neoliberal adaptation. See Dreher and Voyer.

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