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2019

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Climate-Change Fiction and Poverty Studies: Kingsolver's *Flight Behavior*, Diaz's "Monstro," and Bacigalupi's "The Tamarisk Hunter"

If we log the mountain, then the trees are gone. But the debt isn't. Does it make sense to turn everything upside down just to make one payment? Like there won't be another one next month, and the month after that? (*Flight Behavior* 171)

For its nuanced attention to a terrible ecological consequence of our carbon economy, Barbara Kingsolver's best-selling and critically acclaimed novel *Flight Behavior* (2013) has been hailed as a major work in the growing genre of cli-fi (climate-change fiction).¹ However, I see *Flight Behavior* as also making a significant contribution to the interdisciplinary field of poverty studies. The passage above compellingly encapsulates the novel's overlapping themes of environmental degradation and socioeconomic struggle. *Flight Behavior* tells the story of Dellarobia Turnbow, a frustrated, low-income, stay-at-home young mom in rural Tennessee, who makes the startling discovery of millions of monarch butterflies roosting in her husband's family's forest. An entomologist travels to Feathertown to study the anomaly and realizes that the butterflies' aberrant behavior is due to calamitous global climate change. Much of the conflict in *Flight Behavior* revolves around whether the Turnbow family should escape their perpetual financial

hardship by destroying the natural world around them through a clearcutting of their hundreds of acres of mountaintop trees. In the passage from the novel cited above, Dellarobia debates the strategy of temporarily getting out of debt by logging their only resource, which will ultimately result in the family being bereft of both trees and money. In *Flight Behavior*, Kingsolver provides readers with an incisive analysis of issues facing low-income workers such as the economics of farm life, sheep shearing, balloon payments on equipment, wage inequality, women's employment, the finances of childcare, and problems paying rent.² Such plot developments illustrate economic issues that directly relate to anthropogenic climate change in the real world; for example, farming in general produces large amounts of methane and CO₂ from both animals and farm equipment, and the deforestation eliminates carbon sinks that would absorb the greenhouse gases produced by the farming.³ Since wealth inequality and climate change are both socially constructed forces of economics and politics, an "ecopoverty" critical lens—of reading one in terms of the other—can reveal and connect the exploitation of the poor to the exploitation of the earth.⁴

Before I discuss *Flight Behavior* through an "ecopoverty" perspective, I want to recognize that sometimes the fields of environmental studies and poverty studies might seem at odds: a biocentric approach so important to an environmental aesthetic needs to foreground non-human nature—for example, Kingsolver's monarch butterflies and the changing weather patterns in Tennessee. Oppositely, a reading of *Flight Behavior* through a poverty studies lens would be committed to focusing on the Turnbows' lived experiences and identities.⁵ What's at stake when literary works could appear on a syllabus for a course on environmental studies as well as on a syllabus for a course on poverty or wealth inequality? What questions arise at the often contradictory intersection of poverty studies and climate change fiction? My analysis of *Flight Behavior* will be complemented by readings of two other works that could similarly be placed at the imbrication of the two genres: Junot Diaz's "Monstro" and Paolo Bacigalupi's "The Tamarisk Hunter." Because they appear in high-profile publications, Diaz's and Bacigalupi's stories stand as important examples of the overlap of ecopoverty themes: Diaz addresses the Dominican Republic upper class's ability to avoid a disease caused by climate warming that devastates the impoverished, while Bacigalupi's story imagines how an anthropogenic draught in the American Southwest restructures society to disadvantage the working poor.

Before I turn to a literary discussion, I want to frame my ecopoverty analysis with a brief discussion about climatological and economic reports that similarly find the conjunction of planetary atmospheric

change and poverty studies to be relevant. I then want to provide an overview of why the conjunction of cli-fi and poverty in literary representation, as opposed to scientific or economic representation, presents some conflicts and then how the two genres complement each other. If we recognize that both intergovernmental climate scientists and economists agree that it is imperative to look at the intersecting concerns of climate change and financial disparities, then literary scholars might benefit from a similar investigation of the overlap in genre. I will demonstrate that the genres of cli-fi and poverty studies are at once resistant to each other and simultaneously politically akin, and thus that studying literary works at the intersection of the two genres can heighten political advocacy to ameliorate planetary warming.

Before the publication of *Flight Behavior*, "Monstro," and "The Tamarisk Hunter," major scientific reports on climate change disseminated crucial information about the changing atmosphere's effects on the world's poor.⁶ Affirming that "climate change is a serious risk to poverty reduction that threatens to undo decades of development efforts," the Organization for Economic Co-operation and Development clearly understands the intricately linked concerns of socioeconomic struggle and anthropogenic global warming (OECD v). Economists similarly investigate the relationship between global warming and income inequality: to take one of many examples, in an article in *Applied Economic Perspectives and Policy*, economic researchers Thomas Hertel and Stephanie Rosch ask, "What are the likely impacts of rising temperatures and changing rainfall patterns on agriculture and poverty?" (Hertel and Rosch 357). Their report emphasizes not only agriculture, but goods and services needed by the poor that can be negatively affected by changing weather. I find that their economic analysis of agriculture, climate, and poverty elucidates the literary representations of such issues, and thus reinforces the importance for humanities scholars of considering the effects of planetary warming on the world's low-income earners.

While this conjunction of cli-fi and poverty makes complete sense in the scientific and economic communities, the literary representation of the overlap of the two fields can sometimes run into challenges. For example, the genres of cli-fi and poverty studies might seem to conflict with each other regarding their temporal settings, or where in time such works take place. Since we have not yet experienced a complete climate collapse, nor any of the three "pictures" that Margaret Atwood lays out in her thought experiment (Atwood, "Everything Change"), the genre of cli-fi is often speculative and set in the future. Its premises are predicated on informed guess and not on actual lived experience. Thus, the genre of poverty studies stands in great contrast to cli-fi in

terms of temporal setting because the long history of the literary representation of poverty in American life has depended on depicting the actual lived experiences of people facing great material deprivation. From antebellum poverty discourse, to the Great Migration, to Progressive Era reforms, to the Depression, to Appalachian Studies, to reservation literature, to urban studies, to Matthew Desmond's Pulitzer-Prize-winning *Evicted* (2016) and more, it has been critically important for writers to accurately and sensitively depict people's real-life challenges as they live on the margins of society. Poverty studies is not considered a speculative genre; writers derive their stories from ample real-life evidence, often personally experienced, of the struggles of low-income survival.

While cli-fi and poverty studies might seem at odds in terms of their representations of speculative conditions of life versus actual existence, they share the similar challenge of trying to be relevant and urgent to readers. Works of fiction that fall into the categories of cli-fi or poverty studies often overlap in their goal of being politically meaningful and efficacious to readers. It is important for literary scholars to consider whether and how fiction attuned to both the environment and to economic inequality can intervene in political discourse and possibly motivate readers to move towards reversing or ameliorating planetary damage and its devastating socioeconomic effects on the world's poor. Hayden Gabriel and Greg Garrard note that many readers might think that there could only be two types of writing about earth's climate: "either mimetic (writing novels that represent climate change) or exhortatory (writing non-fiction that communicates climate science with passion and urgency)" (Gabriel and Garrard 117). However, they remind us that literature's capaciousness can actually generate a multitude of responses to the scale of climate change and that perhaps fiction is uniquely situated to speed up what scientists lament as the "knowledge-action gap" that causes cognitive dissonance and prevents people from acting when they acquire frightening knowledge (Garrard "Conciliation" 297).

The genres of cli-fi and poverty studies share the same challenge of moving readers to a position of deep concern or action. Rob Nixon discusses cli-fi's inherent challenge in motivating readers in terms of what he calls slow violence, which refers to the climatological effects of greenhouse gas emissions that do not tend to attract as much attention as large explosions or such catastrophes as hurricanes or earthquakes. The slow, gradual pace of climate change (although rapidly accelerating in recent years), challenges the human imagination. If we cannot "see" the violence, we are less motivated to act with urgency. Big blockbuster movies and novels that promise excitement, action, and

violence, tend to draw the major crowds. Nixon is right to point out that quieter movies or novels that attempt to track the slower movement of planetary warming over time might be harder pressed to attract a wide audience. Cli-fi writers hope that the literary imagination can help us understand the scale and urgency of what Knadler terms "necropolitical neglect" that "inflict[s] a gradual collateral damage disproportionately on the lives of the poor and people of color" (Knadler 22) and be moved to political awareness and action.

On the one hand, the rather too-slow pace of planetary warming may be too boring and not exciting enough to attract readers to a novel. Yet on the other hand, the representation of a too-violent environmental disaster may produce cognitive dissonance. Timothy Clark refers to this disjuncture as "scale framing" in that "the time scales at issue may challenge forms of narrative geared to an easily identifiable section of lived human time" (143). For example, the Tyndall Centre for Climate Change Research published a report called "Is this climate porn? How does climate change communication affect our perceptions and behavior?" The study looked at whether popular representation of global warming spurred readers or viewers towards action; in other words, do images of a dire future motivate audiences? Thomas D. Lowe, the author of the Tyndall Centre's report, labels "climate porn" the fast-action violence that Rob Nixon claims attracts the biggest following. The study hopes that a compelling story can "enable the audience to examine a difficult social and environmental problem from an informed yet quasi-fictional perspective" (Lowe 3). To the contrary, however, the study instead presents initial findings that stories, fiction, and movies that convey the very real dangers of environmental degradation and socioeconomic inequality can actually thwart their intended political awareness and action. The "slow violence" that Nixon fears might not attract attention, actually proves to be *not* as ineffective as riveting sugar-high violence that numbs or jades the audience and paralyzes them into inaction. Although his study is based on a small sampling of undergraduate students, Lowe suggests that "whilst 'shock' may make compulsive news, it may distance individuals from the reality of the risk, thus reducing the likelihood that they will act to mitigate the risk" (Lowe 6). Thus, while cli-fi is timely and pertinent, the representation in popular culture of the devastation wrought by the carbon economy can either be too boring and thus dismissed or else too intense and thus alienating. This argument pertains to the endings of *Flight Behavior*, "Monstro," and "The Tamarisk Hunter": they might either motivate the readers to want to change their environmental and political behavior, or the works may cause readers to feel helpless in the face of such environmental ruin.

A similar pedagogical conundrum about the efficacy of cli-fi to stimulate political agency may also hold with poverty studies. After teaching a course on the literature of poverty, John Marsh doubts that such an educational opportunity actually helps students learn about such a pressing social issue. He argues that to think that teaching about poverty can help ameliorate it “is to fall prey to a pervasive, favorite myth in the United States today, one that holds that problems of social justice, including and especially poverty, can be solved through education. They cannot. And believing that they can does considerably more harm than good” (Marsh 605). My own years of teaching the literature of poverty corroborate some of what Marsh argues: since professors should not impose their own personal beliefs on students, it becomes difficult for me when students insist that the poor suffer due to their lack of effort. My urge towards advocacy somewhat fails when I realize that I should not force my own agenda or beliefs on my students. I also face a conflict in use-value: while I aim for my students to have a deeper understanding of the historical arc of poverty in the United States, we end up “using” real people’s stories of impoverishment and hardship to reinforce my students’ middle-class identity. It is easy for students to feel deeply for an author or character who struggles economically, but then the students close the book with a sigh and feel grateful that they do not have to face such indignities. I also agree with Marsh’s harsh realization that “we may try to understand the poor, or poverty, but what matters, finally, is our own critical thinking about them. (Or worse yet, what finally matters is our grade in the course.)” (Marsh 614). I feel the same conflicts with my students, but the doubt is lessened somewhat by the heavy service-learning orientation of my course. Students enhance their classroom learning by working throughout the semester with the same group of homeless, incarcerated, or otherwise impoverished adults. Developing a personal relationship with those facing gross material hardship lessens the distance between the issues we read about and the way people experience those issues in real life.

While the above paragraphs outline how cli-fi and poverty studies share the commonality of possibly facing roadblocks in getting readers to understand the issues’ urgency, both genres have another conundrum in common: how anthropogenic climate change affects current ideas about the local versus the global. For example, the generic conventions of place-based realism challenge the discursive representation of climate change and poverty. Historically, American literary regionalism and contemporary environmental literature emphasize the specificity of location or bioregion. Writers who try to evoke a sense of rootedness or place rely on ecological indicators—such as weather,

topography, seasons, and local customs—to evoke the particularity of a locale. However, a changing climate threatens to disrupt the very foundational essence of place-based literature. Regionalism's devotion to biome uniqueness and autonomy gets undermined by the leveling factor of planetary collapse (Malewitz 716). Yet, just as scholars consider the dual nature of the pace of cli-fi literature—whether the inherent slow violence remains too uninteresting, or its devastating consequences too numbing—so, too, could scholars see two sides to the regionalist devotion of cli-fi literature. Rather than being antithetical to place-based literature, planetary warming could actually positively reinforce the specific identity of a geographic location since each bioregion will become ecologically devastated in a regionally different way, and thus solidify bioregional distinctiveness and identity. The technological advances and machinery that dot the landscape in order to adapt to changing weather patterns also eventually define the characteristics of the area, and thus alter the original identity of “regionalism.” Part of the local color of a region might come to be particular pieces of hi-tech industrial equipment, such as wind turbines, flood dams, or water pipes. Ironically, according to Malewitz, various “climate-change infrastructure might become the central marker of regional difference in an era of anthropogenic climate change” (Malewitz 727). “The Tamarisk Hunter” by Bacigalupi illustrates this concern well—the “Straw” water transport system that scars the draught-stricken landscape might come to be its defining regional feature. But, on the other hand, the same large-scale machinery is used to mitigate the effects of climate change around the world and their ubiquity thus threatens to homogenize landscapes; asserting local identity could come to be seen as a form of resistance to globalization. Asserting a regionalist identity, once considered given and ahistorical, can, under the threat of climate change, ironically come to be seen as “a means of resisting the imperialist dimensions of globalization” (Heise 7).

Climate change also affects received wisdom about regionalism because ecocriticism's presumed deep connection to a sense of a local place occludes the wider effects of globalism and planetary warming. Mehnart points out that ecocritics rely too heavily on an “ethics of proximity” and that “localism” prevents us from seeing larger global processes. In other words, devotion to regionalism may naively miss the larger forces affecting that very region (Mehnart 62). If we apply this idea to poverty studies, we may realize that defining “our” poor by nearby neighborhoods, or the catchment area of a university's social outreach, might occlude the inbound approach of normally faraway economic migrants. For example, Kingsolver's *Dellarobia Turnbow* in Tennessee slowly becomes aware of the plight of the Delgado family,

who can be seen as both economic and climate migrants from Mexico. Reading *Flight Behavior* through an ecopoverty lens permits readers to see previously unacknowledged links between Dellarobia and the Delgado family. Similarly, Junot Diaz's unnamed narrator's wealth allows him to escape from the Dominican Republic to the United States and thus avoid the spread of disease from climate warming. And Bacigalupi's Lolo likely will end up an economic climate-change migrant when his water source and income get cut off.

Considering *Flight Behavior* together with "Monstro" and "The Tamarisk Hunter" might rankle some readers because the former can fall into a different cli-fi sub-genre than the latter two. Thus, examining the three together can illuminate two differing strands of cli-fi: "the narrative of catastrophe" and "the narrative of anticipation." According to Sylvia Mayer, while the narrative of catastrophe "explores the risk of climate change by creating a future fictional world when climate collapse has already occurred, the narrative of anticipation focuses on the present moment when the climate collapse can still be avoided, when it is still a risk scenario that needs to be fully grasped in order to be averted" (Mayer and Weik von Mossner, 13). As a novel of anticipation, *Flight Behavior* focuses on a "strong sense of uncertainty and controversy" that face those who do not fully understand or who want to deny their human agency in the upcoming disaster (Mayer, "Explorations," 26).

Although Mayer discusses *Flight Behavior* as a risk narrative of anticipation, she does so exclusively in terms of risk due to climate change. Because *Flight Behavior*, as well as "Monstro" and "The Tamarisk Hunter" also thematize socioeconomic inequality, I would argue that we can similarly read them as risk narratives of anticipation and of catastrophe in poverty studies. In other words, we can see them as risk narratives of anticipation of economic deprivation, of social marginalization, of financial default, of educational inequality, or of the looming threat of poverty. As I have been outlining, an ecopoverty perspective shifts readers' attention from one focused exclusively on the environment to one on eco-social justice. Because much of cli-fi literature is speculative due to its reliance on scientific predictions or estimates of what life might possibly be like due to extensive planetary warming, Mehnart refers to the lack of actual lived experience under climate catastrophe as "time-delayed hazards" (Mehnart 59). In poverty studies, however, we do not have such a need for hypothesized future estimates about quality of life—literature that thematizes socioeconomic struggle powerfully portrays the actual lived reality of people facing conditions of impoverishment. Cli-fi literature is based on what Mehnart calls "second-hand non-experiences" because no one

has actually lived through a climate apocalypse. Again, this is the opposite of the work done in poverty studies that seeks to represent the known and current reality of living with restricted material resources.

After having set up the above discussion about the overlap of cli-fi and poverty studies, I'd like to now make some observations about *Flight Behavior* when examined through an ecopoverty lens. The Turnbows face two major obstacles to their plan to gain financial security through deforestation. First, anthropogenic climate change has led to heavy rains that caused ecologically and financially catastrophic mudslides on neighbors' properties who clear cut on their mountains. If the Turnbows do deforest their mountain, they may similarly risk losing their home and farm due to a massive mudflow when the next heavy rains arrive. Second, since the trees on the Turnbow property marked for clearcutting now unexpectedly serve as an overwintering haven for millions of climate-refugee monarch butterflies, the family's decision to log will have devastating ecological consequences for a species. The novel also derides irresponsible media outlets that foster climate-change denial among low-income, uneducated rural folk, who might then become complicit in the destruction of their own natural resources.

Flight Behavior parallels two stories: one addresses the journey of working-poor protagonist Dellarobia Turnbow from being a dissatisfied stay-at-home low-income mom planning an affair with a telephone repairman, to becoming a more mature and self-aware woman who leaves her husband to pursue an education, a career, and financial stability. The second arc of the novel addresses the migration of millions of Mexican monarch butterflies that aberrantly overwinter in Feathertown, TN rather than in Michoacan; the novel provides the reader with a thorough understanding of how climate change could tragically cause a species to be wiped out.

While Kingsolver could present a condescending view towards an uneducated teen mom, she instead sympathetically crafts Dellarobia as a smart and sarcastic protagonist trapped in an early marriage to a low-wage farm and construction worker. Kingsolver carefully puts in many class markers so that middle-class readers understand the characters to be lower class. For example, Dellarobia distinguishes her friend Crystal by her big hair and wonders about Crystal naming her sons Jazon and Mical: "what kind of mother misspelled her kids' names on purpose?" (29). When Dellarobia looks at herself through the PhD students' eyes, she sees herself as a redneck (162), and understands that Billy Ray Hatch's hillbilly ways are mocked by well-to-do outsiders (187). Gavin Jones posits that such literary representations of poverty have "inevitably been as much a cultural as an economic

issue" (Jones 771). Such scenes demonstrate Dellarobia's double consciousness of class—as both the judger and the judged. An ecopoverty reading of the novel offers a vital contribution to reading environmental literature for its critique of the middle-class sport of making fun of the rural white impoverished people who will suffer disproportionately from planetary warming.

Flight Behavior coalesces cli-fi narrative and the literature of poverty when Dellarobia and her financially strapped family must make decisions regarding the nesting of the climate-refuge butterflies on their property. The lepidopterist Ovid Byron attributes the monarchs' presence to a "bizarre alteration of a previously stable pattern" that points to a "continental ecosystem breaking down" caused by anthropogenic climate change (*FB* 228). Alterations to the biotic system from climate change affects human economic difficulty as the Turnbows's earning income is limited by the heavy rains caused by a warming planet.

Dellarobia's husband Cub agrees with his father's decision to try to get out of debt by selling his family's tract of forest to a lumber company for clear-cutting.⁷ The Turnbows desperately need the huge sum of money, but rising temperatures due to climate change have forced monarch butterflies to migrate from Mexico and settle in the very patch of land that the lumber company wants to purchase. Cub cannot afford to worry about conserving nature and cannot see the possible long-term effects of endangering a vulnerable species when his children have needs now. The developers' offer to clear cut puts in relief the novel's concerns with both environmental and socioeconomic issues, and the ways that cli-fi productively challenges parochial regionalist concerns. This tension calls to mind the epigraph that set up this paper. Because of their precarious economic situation, the Turnbows find it difficult to prioritize long-term planetary health when their bills need to be paid immediately. Dellarobia makes it evident that sacrificing the environment might provide financial relief for a short time but might not be a beneficial long-term economic solution.

Dellarobia's father-in-law Bear will only change his mind about logging if he stands to gain money. Naydan astutely notes that "in his devotion to capitalist ideals, [Bear] sustains a sort of patriotism, at least according to Dovey's definition of reverence of wealth as patriotic in America" (Naydan 167). However, readers do sympathize with Bear because he stands to lose a lot as his balloon payment on farming equipment comes due and the heavy rains have prevented him from securing contracts. Selling his forest is an immediate solution to his financial woes. Murphy points out that clear-cutting "becomes an example of how people can be persuaded by the consumerist culture in which they live to make decisions that run counter to their own

personal long-term interests, as well as the long-term health of their human communities, their ecoregional communities, and the biosphere" (Murphy 159). According to Goodbody, farmers usually prefer clear-cutting over selective felling because of higher profits (Goodbody 50). The combination of hard-core science about planetary vulnerability, and readers' sensitivity to the Turnbow's lived experience of limited material resources, brings questions of eco-social justice to the fore. Trexler calls these issues "anthropocene economics for the working poor" (Trexler 228) and recognizes that middle-class consumers unfairly benefit from a high-carbon lifestyle. The Turnbow family exemplify the lower class that produces a lower-impact carbon footprint and is taught that climate change is a hoax, but who then suffer more from the extravagances of the upper-class's proclivity to burn fossil fuels.

The Turnbows' hard-scrabble, poverty-line status derives in large part from their lack of opportunity to attend college. Their generational poverty will be inherited by their children because they do not think it important or likely for their offspring to receive a higher education. Dellarobia remarks, "Kids in Feathertown wouldn't know college-bound from a hole in the ground. They don't need it for life around here. College is kind of irrelevant." Yet at the same time, Dellarobia also realizes that, "educated people had powers." Kingsolver's novel makes evident that education is crucial to understand and combat climate change, yet the halls of academe can also avoid recognizing that the poor disproportionately bear the impact of environmental degradation and cannot sacrifice immediate survival needs for far-off gain.⁸

Kingsolver brings together cli-fi and poverty studies when the novel offer a critique of the educated middle class's approach to ameliorating climate change that disregards the lived experience of those at or around the poverty line. For example, Dellarobia is approached by Leighton Akins, an environmental activist, who asks her to pledge to reduce her carbon footprint. Dellarobia and her husband, Cub, struggle to feed their family and so find it absurd to pledge to reduce their air travel when they can't afford to fix the car, or to pledge to stop buying bottled water when they rely on a well. They also cannot comprehend the pledge's insistence that they buy more energy-efficient appliances when they cannot afford to buy any new appliances at all. Dellarobia recognizes that "an environmentalist stance, as valid as its goals may be, often goes hand in hand with an unacknowledged privileged socioeconomic status, and that the response to environmental problems of poorer people is to a large extent motivated by socioeconomic insecurity and fear" (Mayer "Explorations" 29).

Are Dellarobia and Leighton on opposite sides of the “green gap”? Leighton wants Dellarobia to pledge to do her part to help with climate mitigation, defined as “human intervention to reduce the sources or enhance the sinks of greenhouse gases” (“Summary for Policy Makers” 4). Yet, her low socioeconomic status means she already does not benefit from a cozy wasteful lifestyle. Ross argues that such a green gap “has already opened up between the eco-oases of affluent carbon-conscious communities and the human and natural sacrifice zones on the other side of the tracks, where populations have to fight to breathe clean air and drink uncontaminated water” (Ross “Climate Change,” 41). While the Turnbow family has clean air and water, they are still on the other side of the green gap, and ironically live a low-carbon-impact lifestyle that affluent city folk try to emulate. Yet, the Turnbows still struggle financially and sometimes miss paying bills—for example, their electricity gets cut off and cannot power Ovid Byron’s generators that he uses to study the butterflies. Ovid pays the Turnbow’s bill in order to continue his research. Economic globalization thus proves to be a force twinned by global climate change.

Dellarobia’s pursuit of an advanced education as a woman mirrors some challenges faces by such climate refugees as the Delgado family from Michoacan. Climate change will likely impact women worldwide more seriously than it will affect men because of “social roles, discrimination, and poverty” (Gaard 70). According to Gaard, “women’s gender roles restrict women’s mobility, impose tasks associated with food production and caregiving, and simultaneously obstruct women from participating in decision making about climate change, greenhouse gas emission, and strategies for adaptation and mitigation” (Gaard 70). The Delgado family as well, if they manage to stay in Tennessee or elsewhere in the United States, will likely increase their reliance on fossil fuels because Latin American immigrants will likely increase their carbon footprints when they move North (Ross 39).

But Kingsolver levels some of her most biting criticism at unfocused, overzealous climate activists who do not have accurate information and who protest at the wrong house. For example, when students from the local community college show up to protest in an effort to save the monarchs, they go to the wrong house. Kingsolver portrays the British knitting eco-do-gooders Elda and Myrtle as naïve and bumbling “slactivists.” They squat on the Turnbow’s land and knit figures of butterflies as their chosen form of resistance. By posting updates about their knitting activities on social media, they attempt to raise awareness about the butterflies’ plight due to anthropogenic climate change. Dellarobia doesn’t understand how the knitters have the financial means to support their yarning resistance. Through the

knitting protesters, Kingsolver raises questions about the most effective type of activism, and who has the socioeconomic means to engage in activism.

Flight Behavior thematizes migration and flow not only through the monarch butterflies' flight behavior, but through the circulation of low-cost goods that problematizes conservation and green attitudes. While Dellarobia values the craftsman expertise of her parents, she also benefits financially by shopping in cheap dollar stores. One of the novel's most extraordinary scenes occurs in Chapter 7: Kingsolver dissects the problem of worldwide circulation of cheap items and shows the interdependence of people and goods, just as the butterflies are dependent on their rapidly changing environment. The mass migration of crappy products made by low-wage workers and purchased by other low-wage earners stands in ironic contrast to the natural flow of the butterflies from exploited south to privileged north and back again. This scene in the dollar store twins ecologic and economic injustices by contrasting the circulation of the monarchs to the circulation of cheap crap that threatens to "naturalize" as timeless and ahistorical the bottom-line market profit of disposable plastic trinkets.

While climate amelioration and mitigation stands as extremely urgent, it is possible that Dellarobia and Preston's ability to adapt by the end of the novel undermines the urgency to stop anthropogenic climate change. By leaving her husband, arranging amicable child custody, and pursuing an education, Dellarobia shows that she can adapt to change. She convinces her small son that migrating back and forth between her household and his dad's will actually make him stronger. I strongly disagree with Linda Wagner-Martin's claim that Dellarobia dies at the end of the novel (Wagner-Martin 197). Instead, I understand the ending to indicate that Dellarobia survives and thrives. However, a possible unintended takeaway message from the novel is that climate disaster might not be all that bad: we can adjust and adapt, which will make us stronger.

While *Flight Behavior* conjoins cli-fi and poverty studies in what Mayer would call a narrative of anticipation, Junot Diaz's "Monstro" thematizes both issues in a narrative of catastrophe. Published in *The New Yorker* as a piece of high-brow fiction, "Monstro" is a narrative of catastrophe that depicts an already changed Earth. "Monstro" tells the first-person story of a rich, privileged, spoiled (and unnamed) Brown University student—"a flash priv kid" (Diaz 107)—from the Dominican Republic who hangs out with other rich brats as a terrible disease, buoyed by a hot climate, ravages the poor over the border in Haiti. Looking for work, the narrator returns to the sweltering heat of his home in the Dominican Republic with to its "ole-time climate

change" (Diaz 108). The narrator informs us that "Shit, a hundred straight days over 105 degrees F. in our region alone, the planet cooking like a chimi and down to its last five trees—something berserk was bound to happen" (Diaz 107).

The narrator and his friends remain unconcerned about the spread of a global-warming disease since it only affects the socioeconomically marginalized. The changed climate causes the "negrura" disease to spread: "the infection showed up on a small boy in the relocation camps outside Port-au-Prince, in the hottest March in recorded history" (Diaz 1). The new disease is something strange and unprecedented: "A black mold-fungus-blast that came on like a splotch and then slowly just started taking you over, tunneling right through you—though as it turned out it wasn't a mold-fungus-blast at all. It was something else. Something new" (Diaz 107). In this story, the planet is heating up so dramatically that the diseased skin of the infected come to resemble the coral reefs that once existed, as if some sort of somatic substitution took place: "[c]oral reefs might have been adios on the ocean floor, but they were alive and well on the arms and backs and heads of the infected" (Diaz 107).

While "Monstro" clearly can claim a place on a cli-fi syllabus, it could equally appear on a poverty studies syllabus for its critique of wealth inequality in the face of a climate collapse. The narrator makes it clear that a combination of an economic depression and draught conditions forces him to return from college to live with his mother in the Dominican Republic: "I wouldn't have come to the Island that summer if I'd been able to nab a job or a summer internship, but the droughts that year and the General Economic Collapse meant nobody was nabbing shit" (Diaz 108). "Monstro" cleaves a difference between the impoverished victims and the uninfected wealthy. For example, the narrator's best friend, Alex, comes from such a wealthy family that Alex was kidnapped and ransomed as a child. In contrast, the poor are forced to live in relocation camps in Haiti. But authorities do not worry about the spread of the disease since it only affects low-status Haitians. The narrator comments, "'And since it was just poor Haitian types getting fucked up—no real margin in that'" (Diaz 107). According to Leyshon, Diaz is fascinated by "outbreak stories." In an interview, Diaz says that "If it's true that writing the future is just another way to write the present, then my present is all about climate change, inequality, capitalism's cruel optimism, femicidal violence, and the survival, against all odds, of the utopian imagination" (Leyshon). In Diaz's hands, the apocalyptic cli-fi plot horrifies readers while emphasizing the rich-poor disparity. Sarah Quesada argues that with the story's zombie ending, "[t]his Caribbean sic-fi journey is, in essence, a

futuristic account of an unimaginably prosperous sugar island, turned darkly decadent, whose only hope is found in an allegorical signifier—that is, the legend of the living dead” (Quesada 291). It is clear in the story that the brunt of the suffering from heat and the spread of disease will be borne by those with the fewest resources.

Likewise, Paolo Bacigalupi’s “The Tamarisk Hunter” imagines how different economic classes form due to the “postnatural condition” of high-tech climate-change mitigation (Malewitz). “The Tamarisk Hunter” tells the story of Lalo who lives in the American Southwest that has been turned into a desert due to the “Big Daddy Drought.” Lalo eeks out a living as a “water tick”: the government pays him to dig up water-sucking tamarisk plants for state water-conservation efforts. To Lalo, being a water-tick “is a living; where other people have dried out and blown away, he has remained: a tamarisk hunter, a water tick, a stubborn bit of weed” (Bacigalupi 511). Poorly paid, Lalo gets around by camel in the Colorado River Basin as he rides past one “eviscerated town” (513) after another. To secure himself an income in the future, Lalo breaks the law by secretly replanting some tamarisks in a hidden area. He wants to tell his friend Travis about his “insurance plan” of reseeding tamarisks to guarantee himself continued work, but he realizes “the stakes are too high. Water crimes are serious now, so serious Lolo hasn’t even told his wife, Annie, for fear of what she’ll say” (515).

In “The Tamarisk Hunter,” wealthy Californians secured water rights and have constructed a wall to keep others out. This type of futuristic scenario is not too far-fetched: according to du Shutter, “[c]limate change with more frequent and extreme drought and floods and less predictable rainfall is already affecting the capacity of some communities to feed themselves, and is destabilising markets” (de Schutter 33). As one of the “have nots,” Lalo lives on the margin of unemployment and poverty. He fears that the federal government will deprive him of his small earnings and bankrupt him due to his “crime” of working against California’s exclusive access to water rights: “They’ll want him all right. Put him on a Straw work crew and make him work for life, repay his water debt forever” (520). Bacigalupi suggests that planetary warming has been rather rapid because Lalo recognizes one of the “guardies” as a former childhood friend, before anthropogenic climate change brought on the drought. Lalo recalls that “[t]hey played football together a million years ago, when football fields still had green grass and sprinklers sprayed their water straight into the air” (522). Clearly this nostalgic memory of lush lawns and sprinklers is meant to shock readers into realizing that our everyday lawns could become extinct and nothing more than a fond memory. In the

suspenseful ending, Lalo thinks the guardies will arrest him for his water crimes. Instead, Lalo finds out that the Department of the Interior decided to end the water bounty payout program and that he will be unemployed (524). He realizes he will have no other way of eeking out a living: "What am I supposed to do, then?" (525). The guardies offer him an early buyout of \$500 and the small consolation that "It's enough to get you north. That's more than they're offering next year" (525). The story ends with Lalo and Annie, already low on the socioeconomic scale, facing even more dire impoverishment due to the excesses of the carbon economy.

Once again, I will be teaching some of the same fictions in both a course on cli-fi and a course on poverty studies. An ecopoverty reading of these three fictions effectively conjoins ecological and economic inequity. Studying the overlap of the genres of climate fiction and poverty studies makes more urgent the necessity to consider the twinned maltreatment of our environment and of the poor. Such overlap is already evident to climate scientists, and ecopoverty readings can emphasize such immediate issues to literary scholars, students, and the general reading public. One danger of literarily portraying damaged environments is that human and planetary suffering becomes aestheticized in order to produce a satisfying reading experience. On the one hand we do want to close a book and feel emotionally satisfied, yet on the other hand we cannot afford such complacency. Because economic and scientific reports of catastrophic environmental damage and of the dire growing income gap between rich and poor are not enough alone to move the public towards ameliorative action, the literary imagination has much to contribute to a discussion of how we can change public policy to move us towards more green and equitable lives.

O T E S

1. Gregers Andersen is correct to assert the term "cli-fi" should only be used "to describe fictions that specifically employ the scientific paradigm of anthropogenic global warming in their plots" (Andersen 856).

2. Gavin Jones's *American Hungers* directs much-needed attention to writers who have been concerned with poverty in the United States, including Herman Melville, Theodore Dreiser, Stephen Crane, Edith Wharton, James Agee, Richard Wright, Stephen Crane, Richard Wright, and Rebecca Harding Davis.

3. These quick fixes will eventually loop back and harm those originally trying to escape trouble, constituting one of Timothy Morton's "strange loops." In a heartbreaking real-life parallel, a school in Newton Falls, OH, is planning to raise money by selling timber on the school grounds. A school graduate's reaction exactly mirrors Dellarobia's point: "After the money has

been spent, all we will be left with is the eyesore of a fragmented forest that will take a hundred years or more to regenerate. The need for money will still be there” <http://www.tribtoday.com/news/local-news/2018/06/falls-schools-plan-timber-harvesting/>. Many thanks to Kyle Keeler for pointing out this article and reminding me of Morton’s idea.

4. The environmental justice (EJ), ecojustice, and environmental racism movements have brought much-needed attention to structural disparities that make it more likely that impoverished disenfranchised communities will suffer from a toxic landscape. The EJ movement shares much in common with green cultural studies, ecopoetics, and environmental literary criticism. The EJ movement can be defined as “the right of all people to share equally in the benefits bestowed by a healthy environment. We define the environment, in turn, as the places in which we live, work, play, and worship” (Adamson 4). An ecocritical or green reading, which I am doing of cli-fi literature, certainly can be considered one aspect of the EJ movement. In general, however, EJ “primarily names a social movement, plural and engaged in the urgency of local campaign work” (Clark, *Cambridge Introduction* 88). While we literary critics certainly aspire for our textual analyses to be effective in the world, I realize that my readings of the conjunction of cli-fi literature and poverty literature are not that same as on-the-ground activism as done by EJ activists.

5. Poverty literature certainly depicts the landscape or built environment of those facing socioeconomic hardship, and cli-fi fiction definitely has a decidedly human interest as well.

6. For example, see the *Fifth Assessment Report* published by the Intergovernmental Panel on Climate Change, and “Poverty and Climate Change” published by the Organization for Economic Co-operation and Development at <http://www.oecd.org/env/cc/2502872.pdf>

7. Dellarobia’s parents also both lost their livelihood when mass production of cheap crap supplanted the appreciation for handmade furniture and hand-tailored clothes. Chapter 7 of *Flight Behavior* is particularly stunning for the way Dellarobia and Cub discuss their relationship, money, and environmental concerns in the dollar store.

8. John Marsh argues to the contrary. He maintains that a guiding myth of American culture is that “problems of social justice including and especially poverty, can be solved through education. They cannot. And believing that they can does considerable more harm than good” (Marsh 605).

WORKS CITED

- Adamson, Joni, Mei Mei Evans, and Rachel Stein, eds. *The Environmental Justice Reader: Politics, Poetics, and Pedagogy*. U of Arizona P, 2002.
- Andersen, Gregers. “Cli-fi and the Uncanny.” *ISLE* 23 (2016): 855–66.
- Atwood, Margaret. “It’s ot Climate Change—It’s Everything Change.” *Medium, Matter*, 27 July 2015. <<https://medium.com/matter/it-s-not-climate-change-it-s-everything-change-8fd9aa671804>>.

- Bacigalupi, "The Tamarisk Hunter." *Loosed Upon the World: The Saga Anthology of Climate Fiction*, edited by John Joseph Adams, Saga P, 2015.
- Clark, Timothy. *The Cambridge Introduction to Literature and the Environment*. Cambridge UP, 2011.
- . "Some Climate Change Ironies: Deconstruction, Environmental Politics, and the Closure of Criticism." *The Oxford Literary Review* 32 (2010): 131–49.
- "Climate Fiction: Science, Stories, or Seeds of Transformation?" *ASU Magazine*, April 17, 2015. <<https://magazine.asu.edu/blog/arts-culture-sustainability/climate-fiction-science-stories-or-seeds-transformation>>.
- de Schutter, Olivier. "Eco-farming Addresses Hunger, Poverty and Climate Change." *Pacific Ecologist* (2012): 33–37.
- Diaz, Junot. "Monstro." *New Yorker*. June 4 and 11, 2012.
- Gaard, Greta. "Ecofeminism." *Keywords for Environmental Studies*. Ed. Joni Adamson et al. New York UP, 2016.
- Gabriel, Hayden, and Greg Garrard. "Reading and Writing Climate Change." *Teaching Ecocriticism and Green Cultural Studies*. Ed. Greg Garrard, Palgrave, 2012.
- . "Unbearable Lightness of Green: Air Travel, Climate Change, and Literature." *Green Letters: Studies in Ecocriticism* 17 (2013): 175–88.
- Goodbody, Axel. "Risk, Denial and Narrative Form in Climate Change Fiction: Barbara Kingsolver's *Flight Behavior* and Ilija Trojanow's *Melting Ice*." *The Anticipation of Catastrophe: Environmental Risk in North American Literature and Culture*. Ed. Sylvia Mayer and Alexa Weik von Mossner, Universitätsverlag Winter, 2014.
- Heise, Ursula. *Sense of Place and Sense of Planet: The Environmental Imagination of the Global*. Oxford UP, 2008.
- Hertel, Thomas W., and Stephanie D. Rosch. "Climate Change, Agriculture, and Poverty." *Applied Economic Perspectives and Policy* 32 (2010): 355–85.
- Jones, Gavin. *American Hungers: The Problem of Poverty in US Literature, 1840-1945*. Princeton UP, 2008.
- . "Poverty and the Limits of Literary Criticism." *American Literary History* 15 (2003): 765–92.
- Kingsolver, Barbara. *Flight Behavior*. Harper Press, 2012.
- Knadler, Stephen. "Narrative Slow Violence: Post-Reconstructions Ecopolitics and Speculating Beyond Liberal Anti-Race Fiction." *J19: The Journal of Nineteenth-Century Americanists* 5 (2017): 21–50.
- Latour, Bruno. "Agency at the Time of the Anthropocene." *New Literary History* 45 (2014): 1–18.
- Leyshon, Cressida. "This Week in Fiction: Junot Diaz." *The New Yorker*, 27 May 2012.
- Lowe, Thomas D. "Is this climate porn? How does climate change communication affect our perceptions and behavior?" Tyndall Centre for Climate Change Research, Working paper 98, December 2006. <<http://www.tyndall.ac.uk/sites/default/files/wp98.pdf>>.

- Malewitz, Raymond. "Climate-Change Infrastructure and the Volatilizing of American Regionalism." *Modern Fiction Studies* 61 (2015): 715–30.
- Marsh, John. "The Literature of Poverty, The Poverty of Literature Classes." *College English* 73 (2011): 604–27.
- Mayer, Sylvia. "Explorations of the Controversially Real: Risk, the Climate Change Novel, and the Narrative of Anticipation." *The Anticipation of Catastrophe: Environmental Risk in North American Literature and Culture*. Ed. Sylvia Mayer and Alexa Weik von Mossner, Universitätsverlag Winter, 2014.
- Mayer, Sylvia, and Alexa von Mossner. "Introduction: The Anticipation of Catastrophe: Environmental Risk in North American Literature and Culture." *The Anticipation of Catastrophe: Environmental Risk in North American Literature and Culture*. Ed. Sylvia Mayer and Alexa Weik von Mossner, Universitätsverlag Winter, 2014.
- Mehrnart, Antonia. "Things We Didn't See Coming—Riskscapes in Climate Change Fiction." *The Anticipation of Catastrophe: Environmental Risk in North American Literature and Culture*. Ed. Sylvia Mayer and Alexa Weik von Mossner, Universitätsverlag Winter, 2014.
- Morton, Timothy. "The Oedipal Logic of Ecological Awareness." *Environmental Humanities* 1 (2012): 7–21.
- Murphy, Patrick D. "Pessimism, Optimism, Human Inertia, and Anthropogenic Climate Change." *ISLE* 21 (2014): 149–63.
- Naydan, Liliana M. *Rhetorics of Religion in American Fiction: Fundamentalism and Fanaticism in the Age of Terror*. Bucknell UP, 2016.
- Nixon, Rob. *Slow Violence and the Environmentalism of the Poor*. Harvard UP, 2013.
- Quesada, Sarah. "A Planetary Warning?: The Multilayered Caribbean Zombie in 'Monstro.'" *Junot Diaz and the Decolonial Imagination*. Ed. Monica Hanna et al., Duke UP, 2016.
- Ross, Andrew. "Climate Change." *Keywords for Environmental Studies*. Ed. Joni Adamson et al., New York UP, 2016.
- "Summary for Policy Makers." <http://www.ipcc.ch/pdf/assessment-report/ar5/wg3/ipcc_wg3_ar5_summary-for-policymakers.pdf>.
- Trexler, Adam. *Anthropocene Fictions: The Novel in a Time of Climate Change*. Harvard UP, 2015.
- Wagner-Martin, Linda. *Barbara Kingsolver's World: Nature, Art, and the Twenty-First Century*. Bloomsbury Press, 2014.