From an Ethics of Proximity to an Ethics of Connectivity: Risk, Mobility, and Deterritorialization in Barbara Kingsolver's *Flight Behavior*

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ABSTRACT

This essay discusses the participation of Barbara Kingsolver's climate change novel *Flight Behavior* in the ethical discourse of anthropogenic climate change by paying particular attention to the connection between the representation of geographical mobility and the experience of place. It approaches climate change as a global risk and the novel as a risk narrative that explores the spatial instabilities and transformations caused by climate change. It argues that the novel's focus on mobility—both nonhuman and human—and on deterritorialized place creates an environmental ethical space that transcends traditional notions of an ethics of proximity, which are based on concepts of place as bounded. Instead, *Flight Behavior* suggests an ethics of connectivity, a globalized ethics that recognizes mobility and processes of deterritorialization as fundamental to any assessment of the meanings and consequences of the climate change risk.

Introduction

Current anthropogenic climate change must be understood as both a manifestation and a driving force of globalization. It is defined by ecological transformation that is inextricably linked to technological, economic, social, political, and cultural forces and that has already reshaped the planet in a multiplicity of ways. Receding glaciers, melting polar ice caps, the flooding of coastal areas, desertification and related shifts in precipitation and vegetation patterns, storms, or droughts all signal ongoing ecosystemic changes in various regions of the earth. Human interference in the climate system—caused by the ever-increasing emission of industrial greenhouse gases and its complex effects on the planet's atmosphere, including its temperature—has had concrete geographical effects, interlinking the local, the regional, the national, and the global.[1]

As a globalizing force that drives ongoing "spatial differentiation" (Murray and Overton 27), anthropogenic climate change involves various types of mobility and processes of deterritorialization. Globalization in general has been characterized by the mobility of resources, commodities, capital, and information as well as by the mobility of people, animals, plants, and microorganisms, including pollutants. It has, moreover, been characterized by an increasingly deterritorialized experience of "place," by the recognition that any specific geographical location is

[1] See the chapter "Environment, Sustainability and Globalization" in Murray and Overton, *Geographies of Globalization*, 370-408.

today experienced, and must therefore be conceived of, as impacted by a dynamic network of technological, economic, socio-cultural, and ecological forces the origins of which transcend the local and are, more often than not, global in scope.

Anthropogenic climate change can, finally, be regarded as one of the central global risks of our time, marking a transitory period of uncertainty and instability that demands a reconceptualization of environmental ethics. In the field of philosophy, climate ethics, as a more recent development of environmental ethical discourse, has thus begun to systematically address the ethical dimensions of climate change: the moral implications of its extensive spatial and temporal scales, its historical development, and its possible future consequences. Also contributing to the discourse of climate ethics, however, are other modes of ethical inquiry, including literary texts, which imaginatively explore the complexity and diversity of individual and collective responses to the climate change risk.

This essay discusses the participation of Barbara Kingsolver's novel *Flight Behavior* in the ethical discourse of anthropogenic climate change by paying particular attention to the representation of geographical mobility and the experience of place. It approaches climate change as a global risk and the novel as a risk narrative that explores the spatial instabilities and transformations caused by climate change. It argues that the environmental ethical space that arises in the novel transcends traditional notions of an ethics of proximity, which are based on concepts of place as bounded and thus largely ignore the place-shaping impact of climate-induced nonhuman as well as human mobility. The essay shows that Kingsolver's novel instead suggests an ethics of connectivity, a globalized ethics that recognizes different forms and agents of mobility and processes of deterritorialization as fundamental to any assessment of the meanings and consequences of the climate change risk.

The Climate Change Risk: Globality, Deterritorialization, and Mobility

"In recent decades, changes in climate have caused impacts on natural and human systems on all continents and across the oceans" ("Summary" 6). This statement, taken from the most recent report of the Intergovernmental Panel on Climate Change, leaves no doubt that contemporary climate change is one of the key global risks we are confronted with today. It suggests, moreover, that discourses of place need to incorporate a sense of the forces released by complex globalization processes on any geographical location, on how it is experienced, shaped, and conceptualized. The effects of greenhouse gas emissions on the planet's ecosystems—since the onset of industrialization in the late eighteenth century, but especially after World War II, when economic activities worldwide began to increase rapidly (see Steffen, Crutzen, and McNeil)—have strongly contributed to both the widespread risk awareness that characterizes our cultural moment and the concrete, intensified global connectivity that becomes manifest in changing experiences of place.

Sociologists Ulrich Beck and Anthony Giddens have emphasized the pervasive impact of risk perception and risk experience in their concepts of late mod-

ern, increasingly globalized societies as "world risk society" and as "risk cultures" (see, for instance Beck, *World Risk Society*; Beck, *World at Risk*; Giddens, *Consequences*; Giddens, *Modernity*). Beck defines risk as "the perceptual and cognitive schema in accordance with which a society mobilizes itself when it is confronted with the openness, uncertainties and obstructions of a self-created future" (*World at Risk* 4). Giddens describes the impact of risk on late-modern subjectivitites as "living with a calculative attitude to the open possibilities of action, positive and negative, with which, as individuals and globally, we are confronted in a continuous way in our contemporary social existence" (*Modernity* 28). Both postulate a historically new type of risk: human-made; extensive, ultimately global, in scale; the result of technological innovation that is marked by an unprecedented degree of complexity; and, in many ways, intangible and latent in its effects. Risk, moreover, in this context, is predominantly defined as threat, as the anticipation of future catastrophe. Risks such as the nuclear threat or the dangers of genetic engineering or anthropogenic climate change defy the calculations and strategies of traditional forms of risk management and in their reach transcend local, regional, or national boundaries. By doing so, they contribute to the experience of deterritorialization, to the realization that socioeconomic relations, cultural practices of meaning making, and processes of identity formation in a globalized world rely to a large extent on an understanding of place as shaped not only by local forces, but also by, for instance, economic, political, and ecological forces that originate in other places and that often become manifest in the mobility of both humans and nonhuman nature.[2]

The concept of deterritorialization has also been central to discussions of the meanings of contemporary globalization from a cultural studies perspective. John Tomlinson regards the concept as "a valid way of grasping a mode of cultural experience which is *particular* to global modernity" (130). Globalization, he argues, is characterized by "complex connectivity," by "the rapidly developing and ever-densening network of interconnections and interdependences that characterize modern social life" (2). He identifies several modalities of connectivity—most importantly, social-institutional, technological, and material[3]—that become manifest in a transformed, deterritorialized sense of place in which practices of inhabitation and processes of identity formation must rely on knowledge, values,

[2] Giddens, in this context, argues that "globalisation is best understood as expressing fundamental aspects of time-space distanciation. Globalisation concerns the intersection of presence and absence, the interlacing of social events and social relations 'at distance' with local contextualities" (*Modernity* 21). He, moreover, emphasizes a fundamental change in conceptualizing place: "locales are thoroughly penetrated by and shaped in terms of social influences quite distant from them. What structures the locale is not simply that which is present on the scene; the 'visible form' of the locale conceals the distanciated relations which determine its nature" (*Consequences* 19).

[3] Tomlinson argues that connections "exist in a number of different modalities, varying from the social-institutional relationships that are proliferating between individuals and collectivities worldwide, to the idea of the increasing 'flow' of goods, information, people and practices across national borders, to the more 'concrete' modalities of connection provided by technological developments such as the international system of rapid air transportation and the more literal 'wiredness' of electronic communication systems" (2).

and emotional attachments that acknowledge the impact of nonlocal forces on locally situated life. Globalization, he claims, "fundamentally transforms the relationship between the places we inhabit and our cultural practices, experiences and identities" (106). It both destroys former securities of a locality and, at the same time, provides new opportunities and insights that a globalized experience of place offers. In this context, Tomlinson also draws attention to the fact that the cultural practices that invest place with meaning emerge not only from "the flows and connections between 'cultures,'" but also from "people 'on the move'" (29). Global labor migration and war refugees but also large-scale, climate-induced migration and displacement turn place into "a more complex cultural space" (149), and by doing so reshape people's sense of place and sense of self. Acknowledgment of the fact that the complex cultural spaces of globalization—and, by implication, the cultural spaces of global anthropogenic climate change—become manifest and meaningful in concrete geographical mobility, must, however, be extended to the geographical mobility of nonhuman species. As, above all, environmental histories of European colonialism and imperialism have shown (see Crosby; Grove), "the historical process of [nonhuman] nature's mobility, transplantation, and consumption" has been a major component of both our current globalized moment and of earlier phases of globalization. Elizabeth DeLoughrey and George Handley therefore insist that "biotic agents were participants in human history and the radical ecological changes wrought by empire" (13).[4] If, therefore, we define mobility as again and again generating a "meaningful world of social space and social time" (Cresswell 5), we must proceed from the premise that the construction of such a world is always, in Donna Haraway's well-known phrase, a "co-construction" by the human and the nonhuman (297).

Climate Change and the Pluralist Discourse of Climate Ethics

A global risk such as anthropogenic climate change demands the development of an ethics that acknowledges its specific global and temporal scales, the complex history of its emergence in terms of responsibilities and vulnerabilities, and its socioeconomic, political, and cultural implications for the future.[5] It also demands an ethics that recognizes the necessity to conceive of place as defined by deterritorialization and by various types of mobility, an ethics that takes into consideration the ongoing reconfiguration of proximity and distance that globalization involves.[6] To Ulrich Beck, "global risks open up a complex moral and political space of responsibility in which the others are present and absent, near and far" and in which "[t]he meanings of proximity, reciprocity, dignity, justice and trust

[4] The inextricable connection between human history and natural history is also a key argument in the discourse on the Anthropocene; see especially the pathbreaking essay by Chakrabarty.

[5] For an introduction to current climate ethics scholarship see Gardiner and the essays in the volumes edited by Arnold and Skrimshire.

[6] The production of new kinds of proximity and distance as central to an understanding of globalization is discussed in detail in the contributions to Barnett et.al.

are transformed" (*World at Risk* 188). Picking up Tomlinson's phrase, I call such a globalized ethics an "ethics of connectivity."

The gradually emerging body of climate ethics scholarship within the broader field of environmental philosophy and environmental ethics has, up to this point, focused on concrete political and economic issues. It has focused on the just distribution of the costs of climate adaptation and mitigation measures in a world in which vulnerabilities are very unevenly distributed and in which Western industrialized countries, as the main originators of greenhouse gas emissions, bear a particular responsibility. Moreover, this scholarship has largely concentrated on issues of climate justice and responsibilities as they relate to human beings, to peoples and nations, to human life in the present and in the future. The nonhuman—"the ethical implications of climate change for species, ecosystems, organisms, and sentient animals"—is only gradually becoming the subject of systematic moral deliberation. As Clare Palmer points out, "ecosystems and species have been important in existing political and ethical debate about climate, because climate change may affect them in ways that have serious implications for human beings" (272). Such relative lack of attention to the ethical considerability of the nonhuman, independent of its usefulness to humans, shows that systematic climate ethics scholarship has only begun to map the climate ethical terrain and that it has only begun to address the "complex moral and political space of responsibility" that Beck identified as a consequence of this global risk. It draws attention, moreover, to the necessity to conceive of climate ethics as a "pluralist" discourse that recognizes the contribution of various modes of ethical inquiry—including ethical inquiry performed by literary texts (Kamminga 109).[7] Literary texts that engage current anthropogenic climate change complement systematic ethical discourse in that they explore the concreteness, complexity, diversity, and often contested nature of specific climate change experiences more fully, thereby offering to their readers both cognitive and emotional orientation in moral space that nonfictional texts, including texts of moral philosophy, cannot provide. Literary texts thus accomplish a task that no other type of text is able to accomplish. As Scott and Paul Slovic have pointed out, "[t]he risks of global climate change, deforestation and biodiversity loss cannot be conveyed without presenting quantitative data—and yet these contemporary environmental phenomena can have little visceral, emotional meaning for the public unless they are also presented by the way of stories and images" (81-82).

The analysis of literary texts that engage climate change can, moreover, shed light on the relevance of place in conjunction with the shaping forces of both human and nonhuman mobility for climate ethical thought. With her concept of an

[7] This argument is forcefully brought forth by Menno R. Kamminga, who distinguishes between four discourses that complement each other: ethical, narrative, policy, and prophetic discourse. The latter corresponds with, but does not engage with, the literary, or fictional, mode of ethical inquiry that is central to this essay. Scholars of literary ethical studies have emphasized for some time now that, due to the relevance of language and narrative to processes of meaning making, literature must be regarded as a specific and essential mode of ethical inquiry. On the development of literary ethical criticism and on the so-called "ethical turn" in literary studies, especially since the 1980s and 1990s, see the surveys by Korthals Altes and Phelan.

eco-cosmopolitanism, Ursula Heise has provided central insights into how literature that articulates the deterritorialized nature of place in a globalized world participates in environmental ethical discourse in general. An eco-cosmopolitan ethical stance transcends any traditional "ethics of proximity" that regards place as bounded, as exclusively shaped by local political, socioeconomic, and ecological forces.[8] Eco-cosmopolitanism, according to Heise, "is an attempt to envision individuals and groups as part of planetary 'imagined communities' of both human and nonhuman kinds," including "both animate and inanimate networks of influence and exchange" (61). From a climate ethical perspective, this suggests what I call an "ethics of connectivity," an ethics that recognizes the globalized nature of place.

Heise regards literary forms as particularly well-suited to express an ecocosmopolitan stance. The "digital aesthetic" used in a novel such as David Brin's *Earth*, for instance, makes use of techniques of fragmentation and collage to highlight the role of global communication networks in an epic story of future environmental crisis. But she also points out that the environmental imagination of the global has been expressed "through the detailed exploration of a local site that on close inspection turns out to be linked to the global in unanticipated, sometimes unsettling, and sometimes exhilarating ways" (210). The following discussion will show that Barbara Kingsolver's *Flight Behavior* performs just such an exploration of a local site. It will show how this climate change novel contributes to the discourse of climate ethics by developing a complex cultural space in which an ethics of connectivity emerges that recognizes the globalized nature of place. Kingsolver's novel is read as a risk narrative that responds to the ethical challenge a globalized sense of place poses.

Risk Narratives, Place, and an Ethics of Connectivity: Barbara Kingsolver's *Flight Behavior*

Due to their engagement with the global risk of anthropogenic climate change, climate change novels can be categorized as risk narratives. A survey of the emerging genre of the climate change novel shows that it is possible to distinguish between two types of risk narratives: risk narratives of anticipation and risk narratives of catastrophe (Mayer "Explorations"; Mayer "World Risk Society").[9] Risk narratives of anticipation, on the one hand, develop a fictional world that is marked by the anticipation of climate collapse, by the moment of uncertainty in a late-twentieth- and early twenty-first-century present when awareness of the

[8] In the chapter "Localism and Modernity: The Ethics of Proximity" (28-49) of her study *Sense of Place and Sense of Planet*, Heise discusses in detail the shortcomings of notions of proximity as a basis for environmental ethical deliberation and activism, in particular in U.S.-American environmentalism. She also stresses the role of risk perception in the reconceptualization of place when she claims that "risk scenarios contribute to deterritorialization processes as they prompt individuals and communities to reconfigure their practices of inhabitation in relation to […] larger sociospatial scales" (152).

[9] For a general survey on climate change fiction and its criticism see Johns-Putra.

climate change risk figures prominently in a culture. They put emphasis on the strong sense of uncertainty and controversy about how to respond to the various threats—and possible first signs—of climate change; future large-scale catastrophe is envisioned only briefly and only as a possibility, typically indicated by weather anomalies and their socioeconomic and cultural consequences, and by references to future scenarios developed by climate science. Risk narratives of catastrophe, on the other hand, develop a future fictional world in which what used to be a climate risk scenario has materialized in global climate collapse, in which catastrophe has become manifest. They explore a world in which climate change has caused devastating changes in the ecological, socioeconomic, political, and cultural orders. Life in these narratives is marked by dramatic experiences of enforced displacement, species extinction, toxic pollution, and scarcity. The period that precedes this future, the stage of the mere anticipation of catastrophe, is, if at all, only briefly introduced, usually by means of flashbacks that delineate the characters' world before the onset of catastrophe.

In their focus on a world in which global climate collapse is still largely a threat, risk narratives of anticipation engage with the same situation of moral uncertainty as does contemporary climate ethics in philosophy. They thus lend themselves more comprehensively to an analysis of the contribution of climate change fiction to the current discourse of climate ethics than risk narratives of catastrophe. Highlighting the controversial character of the risk—Beck defines contemporary global risk as "the controversial reality of the possible" (*World at Risk* 9)—they explore fictional worlds which are characterized by the still ongoing debate on whether climate change is, indeed, anthropogenic, and in which the uncertainties and indeterminacies that mark climate change discourse in general are still very present: the problems that greenhouse gas emissions are invisible, for instance, and that their accumulation has occurred on a temporal and spatial scale that not only eludes the individual's perception but, in its effects, goes far beyond the lifetime experience of any single generation; or the problem that the results of the climate sciences are always marked by a degree of uncertainty since climate models are always approximations, not predictions (see Moser).

Barbara Kingsolver's *Flight Behavior* can be categorized as a risk narrative of anticipation. The novel presents a contemporary world marked by the first threatening signs of climate change, by uncertainty and controversy in terms of making sense of these signs, by an emphasis on spatial instability and transformation, and by a growing awareness of an increasingly globalized experience of place. Set in rural Tennessee, in the community of Feathertown, *Flight Behavior* tells the story of twenty-eight-year old Dellarobia Turnbow—the novel's sole focalizer—and her family. The Turnbows live in an economically impoverished region. They support themselves as sheep farmers, by means of odd jobs, and, of central importance to the novel, by the occasional selling of a piece of land and its timber. The novel opens on a day in November when Dellarobia, who is deeply frustrated with her life, decides to run away and leave her family, including her two small children. Walking up a mountainside owned by the family, she is suddenly confronted with the appearance of millions of monarch butterflies that have begun to roost there. At that point, Dellarobia does not realize what it is she has encountered, but she is

so overwhelmed by the experience that she returns home—finding out only later, when the entomologist Ovid Byron and his research team have arrived at her place, that the animals have changed their annual migratory route to accommodate climatic change wrought by the effects of global warming on their accustomed winter roosting site in Mexico. The encounter with the butterflies becomes a turning point in Dellarobia's life, easing what seems to be an essential part of her sense of frustration: an "underemployed mind" (6). In the months that follow the discovery of the monarchs, her world expands dramatically. Once the news about the appearance of the butterflies spreads, the place becomes the focus of media attention and an attraction for a variety of strangers: scientists, journalists, environmentalists, and tourists. It even becomes a refuge to a few people who share the fate of the butterflies: to the Delgado family from Michoacán, Mexico, who, due to the destruction wrought upon the butterflies' former roosting site, also had to leave their home and were thus turned into climate refugees. Dellarobia, moreover, becomes centrally involved in the question of what to do with the tract of forest where the butterflies now roost. When she learns that their appearance is caused by climate change, that their change of migratory route may eventually lead to their extinction, and that the logging of the trees may cause environmental problems that will eventually make the family's precarious economic situation much worse, she successfully convinces her husband Cub to oppose his father, who is about to log the trees for short-term monetary relief. In the process of the dramatic extension of her social contacts, Dellarobia undergoes a process of intellectual, emotional, and moral growth. In the end, she separates from her husband, negotiates an arrangement with him concerning the two children, moves to the nearest college town, and enters a work-study program to begin a college education.

Central to the risk scenario that unfolds in the novel is the transformation of place caused by climate change. This transformation becomes manifest in ecological change and in the attendant mobility of animals, people, and microorganisms, as well as in a changing perception and experience of place on the part of the protagonist. Ecological change becomes visible in the appearance of the butterflies that suddenly descend on the Turnbow mountainside—in the appearance, that is, of nonhuman biotic agents of change whose mobility also reshapes the geography of the place, both its concrete features and the meanings it accumulates. Their arrival, moreover, is accompanied by the arrival of the Delgado family, climate refugees whose lives had been as dependent as the butterflies' on the functioning ecosystem of Michoacán. Ecological change also becomes visible in the dramatic changes in weather patterns that have troubled the Feathertown community for some time. By November, large amounts of rain have fallen throughout the preceding months and have caused considerable damage in the forests, fields, and orchards of the region. At one point Dellarobia muses: "The world of sensible seasons had come undone" (49). Earlier on she ponders the role of other, nonendemic biotic agents that seem to have arrived with the unusual amounts of rain: "Trees were getting new diseases now. […] The wetter summers and mild winters of recent years were bringing in new pests that apparently ate the forest out of house and home" (12). The flood that inundates the region at the end of the novel

is a final manifestation of ecological change that points toward the destabilizing and threatening power the global climate risk has over place. All these ecological changes draw attention to nonlocal forces that deterritorialize place experience.

Dellarobia develops a thorough understanding of this ongoing process of ecological deterritorialization, especially in her conversations with the scientists once she starts to work for—and with—Ovid Byron and his team. She learns that the scientists assume that the monarchs' changed migratory route is a "bizarre alteration of a previously stable pattern" which indicates a "continental ecosystem breaking down," most likely "due to climate change" (228). She also learns about the mechanisms of global warming and the effects that the emission of greenhouse gases has on the atmosphere, changing "[t]he thermal stability of the planet." Such destabilization, Ovid tells her, has changed places all over the country and all over the world. When he mentions disastrous changes elsewhere—"Hurricanes reaching a hundred miles inland, wind speeds we've never seen. Deserts on fire. In New Mexico we are seeing the inferno. Texas is worse. Australia is unimaginably worse—a lot of the continent is in permanent drought. Farms abandoned forever"—she immediately relates these changes to changes in the Feathertown area: "She pictured orchards like the Cooks' dying on the other side of the world for the opposite reason" (278). By doing so, she starts to develop a global perspective from which a climate ethical stance can emerge.

Dellarobia, moreover, learns that ecological deterritorialization is firmly linked to socioeconomic and cultural practices, practices that also reflect striking differences when it comes to assigning responsibility for ongoing global warming. When the environmentalist Leighton Atkins approaches her with his "Sustainability Pledge" (327)—a list of questions that are intended to convince you to "lower your carbon footprint […] to use less fossil fuel. To relieve the damage of carbon emissions to the planet" (326)—it becomes immediately clear that the questions target only that part of the population that can afford certain practices and commodities. Dellarobia can neither bring Tupperware to a restaurant for leftovers (she hasn't eaten at a restaurant in over two years) nor afford to buy bottled water or a low-emission vehicle or shift stocks from socially irresponsible to socially responsible investments. It becomes clear to her that ecological change due to climate change, and with it the deterritorialization of place, is to a large extent a class issue.

Her growing insight into the deterritorialization of place is further deepened by the realization that the place she has lived in—and has never left—for almost three decades has for quite some time been defined by global economic forces. She reflects on this when trying to find Christmas presents for her children at the Feathertown dollar store. Looking at the many plastic products in the aisles, she remembers her mother criticizing such products as made by "slave children in China" (157). Recalling her mother's anger, she remembers, moreover, that the relocation of manufacturing to countries where labor costs are cheaper had cost her mother—and others—her work, not only as an accomplished seamstress but, during the final years of her life, even as an ordinary worker in a "knitwear factory" (158). Daily living in Feathertown, she realizes, in its reliance on commodities originating in far-away places, has been impacted by, and has thus been part of, a globalized economy for many years.

With the arrival of the butterflies Delarobia experiences an intensification of the impact of translocal, ultimately global, forces on place. Her home and the Turnbows' mountainside, for instance, all of a sudden become populated by people from other parts of the country and even from other parts of the world, people that engage with, and thereby redefine, the place in ways unheard of in Feathertown. Ovid Byron, a Virgin Islander by birth, and his team of graduate and postgraduate students come from New Mexico and engage with the place from a scientific perspective. The Delgado family joins the group of migrant "Mexican workers" that have come to Feathertown "for the winter labor" and remind her that the place has been part of a transnational labor migration for several years (51). Environmental activists from around the country and from abroad bring their activism to the place, and the journalists and tourists—"people with binoculars, butterfly nets, telescopes, expensive-looking cameras" (252)—engage with the place as an attraction, often as a spectacle that largely obliterates the difficult living conditions the local population faces. In Dellarobia's perception and experience, the mountainside is transformed by these different forms of engagement; the multiplicity of conceptualizations and practices turns it into a globalized cultural space that is no longer only defined by its monetary value for the Turnbow family. It is redefined as ecologically endangered, as politically contested, and as a tourist attraction opening new economic possibilities for the family and the community.

An intensification of Dellarobia's experience of the globalization of place, furthermore, occurs through the media. The interview she gives to the local journalist Tina Ultner turns her home and the mountainside into places of national and, ultimately, even international interest since parts of the interview are also shown on CNN and reappear on the Internet. Most significantly, however, the electronic media and the Internet begin to thoroughly deterritorialize the place. It becomes known to a global audience in the image of Dellarobia as "The Butterfly Venus" (214), created and put online by a web user who manipulated a picture from the Ultner interview; through the Facebook page of "Women Knit the Earth" (300), British activists who come to the mountainside for sit-ins against the logging of the trees and to protest against global warming (299); through the interview Ultner conducts with Ovid Byron, later on posted by Dellarobia's friend Dovey on YouTube (370); and through digital mapping. Asking "how in the world they found this place," Dellarobia learns from three environmental volunteers from California that her home can be easily located on the Internet: "[T]hey showed her a computer program that drew a map directly to her house. All they had to do was type in her address on their little flat screen, and open sesame, there it was. Her address was public knowledge, they said, and so was the photograph taken from the sky, apparently, showing the gray rectangle of their roof and Cub's truck and her Taurus sitting slightly askew in the drive" (252-53). Dellarobia realizes gradually that the butterfly mountainside and her home have become places in a world that is connected not only ecologically and economically but also digitally, and that they have become known to a vast number of people from all over the world, some of whom—especially scientists, environmentalists, and tourists—she even meets in person.

With the recognition of the deterritorializing impact of global ecological, economic, and cultural forces, Dellarobia's sense of place becomes increasingly globalized. Towards the end of the novel, it is characterized by an awareness of complex connectivity, of the "network of interconnections and interdependences" that John Tomlinson has identified as central to global modernity. For Dellarobia, the concrete transformation of place and the perceptual multiplicity it generates involves major changes concerning her social life and her sense of self. Discovering the butterflies and being, from then on, at the center of public attention, she experiences and actively engages in a dramatic expansion of her social contacts. Thinking back to the day of her first encounter with the animals on the mountain, she realizes that "[f]rom that day on, week by week, the size of her life had doubled out" (342). She starts to work for Ovid Byron, becomes, for some time at least, the major wage earner in the family, and learns to deal with the many strangers in an open and increasingly self-confident way—a self-confidence that also affects her relationships to the other family members. Introduced, at the beginning of the novel, as a young woman who feels trapped in a place she experiences as bounded, stagnant, and stifling, she turns into a person that has learned to perceive this place as open and dynamic, as both threatening and suggestive of the opportunities that life in a globalized world offers.

The environmental ethical space that arises in *Flight Behavior*, and, in particular, the novel's engagement with climate change as a moral issue, is developed in its focus on its protagonist's growing sense of globalized place. Initiated by the appearance of the butterflies and the transformation of the mountainside, Dellarobia's changing sense of place is paralleled by an expansion of knowledge and moral concern about the risky, simultaneously exhilarating and threatening, situation she and her family and community all of a sudden find themselves in.

The arrival of the monarch butterflies on the Turnbows' mountainside, the incident that indicates the place-changing force of the climate change risk, marks the moment when Dellarobia and the Feathertown community are forced to reconsider their attitude towards global warming. Up to this point, the majority of the townspeople had dismissed the idea because to them it was linked to an environmentalist stance that they were suspicious of or even held in outright contempt. To them, environmentalism means social and economic privilege—a notion that environmentalists such as Leighton Atkins seem to confirm. Dellarobia remembers her husband's attitude toward environmentalist concerns as one of rejection: "Worries like that are not for people like us. We have enough of our own" (172). Even Dellarobia, during her first conversations with Ovid Byron and his team, stays skeptical about their explanations that climate change was causing the changed migratory behavior of the butterflies: "She wondered whether any of this was proved. Climate change, she knew to be wary of that" (147). The Feathertown people prefer to understand the appearance of the butterflies as an act of God that does not point to global environmental risk but to the power and beauty of divine creation. Even with respect to the drastically changed weather, Cub rejects any scientific explanation that involves climate change and insists that "[W]eather is the Lord's business" (261). While Dellarobia is gradually convinced by the scientists' explanations, the skepticism of her family and of the townspeople

remains. She realizes that, in addition to resisting a condescending attitude on the part of the socially and economically privileged, it is also insecurity and fear that makes them hold on to their skepticism or total denial. She explains to the scientists: "I think people are scared to face up to a bad outcome. That's just human" (231).[10] By putting such emphasis on the resistance of the townspeople to acknowledge the impact of climate change on their region, *Flight Behavior* highlights the controversial character of the climate change risk and foregrounds that a climate ethical stance can only be developed once the global risk of anthropogenic climate change is recognized and accepted as a reality—a reality, moreover, that has detrimental effects on human and nonhuman nature alike.

Dellarobia's reconsideration of her own attitude towards global warming leads her to gradually develop an environmental ethical stance that is grounded in the conviction that climate change is real. This stance is based on gaining scientific knowledge, but also, and strongly so, on a growing concern and on worries about the possible effects of climate change. Ultimately disagreeing with her husband, Dellarobia realizes that they, too, after all, belong to the kind of people who need to worry about climate change. In the course of the winter that follows the discovery of the monarchs, she finds out that there is, indeed, evidence for anthropogenic climate change. Working with the scientists and discussing the reasons why the butterflies have come to the Turnbow mountainside, she learns to understand their unusual flight behavior as the result of dangerous climate-related changes—for instance, changes in weather patterns that affect their nutritional base and that have made them more susceptible to parasites. She, moreover, learns to place their "aberrant" behavior (227) in the context of many more indicators that point toward ecological change, in this case species extinction, on a global scale: "[…] in the lab Dellarobia listened to Ovid and Pete speaking hopelessly about so many things. The elephants in drought-stricken Africa, the polar bears on the melting ice, were 'as good as gone,' they said with infuriating resignation as they worked through what seemed to be an early autopsy on another doomed creature" (246). Ovid also insists that all these threatening indicators of climate change were not the results of the usual, long-term geological-climatic cycles that characterize the history of the planet, but the results of only "decades" (281) of human intervention. Observing the responses of the townspeople, Dellarobia gets increasingly impatient with them since "[n]obody was asking why the butterflies were here; the big news was just that they *were*" (212). Realizing that scientific knowledge is essential in assessing the situation she is, however, also impatient with the scientists. Given the deplorable state of science education in Feathertown and frustrated with her neighbors, but also with the local media that are unwilling to address the issue of climate change, she again and again urges Ovid Byron to explain the phenomenon to the public. She does not fully accept his explanation that the task of science is to "measure and count" (244) and that "[h]aving a popular audience can get us pegged as second-rank scholars" (324). Instead, it seems to her "that

[10] Dellarobia's answer points toward psychological attempts to understand and explain the phenomenon of climate change denial. As Axel Goodbody shows, *Flight Behavior* must be seen as a novel that engages this issue extensively.

the task of science was a good deal larger than that. Someone had to explain things. If men like Ovid Byron were holding back, the Tina Ultners of this world were going to take their shots" (244). Dellarobia's impatience reveals her growing concern and worries, her emotional involvement with the situation. While she is at first disappointed that "the one rare, spectacular thing in her life"—the butterflies—had "to be a sickness of nature" (149), she rather quickly overcomes her self-centeredness. Observing how worried the scientists are about the precarious condition the animals are in—Ovid, she realizes at one point, was "held captive by despair" (239)—she sympathizes with them and even empathizes with the butterflies that are facing the threat of extinction. Watching them in their largely unsuccessful search for flowers and hearing that this would, in fact, weaken them since they were depleting their fat reserves, "[s]he felt for them" (150).

While feeling for the butterflies suggests a climate ethical stance that draws nonhuman nature into the moral universe, Dellarobia's strongest worries are still centered on people. She is appalled by finding out more about the history of the Delgados and worries that the logging of their own trees may cause the same disaster as the logging of those in Michoacán. She is unable to forget the images of destruction she had seen on the Internet:

> She wished she hadn't seen them herself, they haunted her so. There were children involved, a school buried. Her mind would not quit posing horror-movie images against her will. And questions she didn't want asked. Would a village just flatten like a house of cards? Or would the homes lift and float, the way vehicles did, giving a person some time to get out? (171)

She worries about the Delgado family's present and future, and she worries about the future of her own children. In a conversation with Ovid they talk about rising global temperatures. Ovid tells her that it "will only take a few degrees of change, global average, to knock our kind out of the running" (279). When Dellarobia asks for concrete proof, he mentions that such proof could easily emerge during the period of her "children's adulthood" (280) and shocks her with this answer. Earlier on, realizing that her son Preston has become fascinated by the butterflies, by the scientists and their work, and by all things natural, she finds it hard to cope with the scientists expressing their fears about the uncertain future of the planet: "Dellarobia felt an entirely new form of panic as she watched her son love nature so expectantly, wondering if he might be racing toward a future like some complicated sand castle that was crumbling under the tide. She didn't know how the scientists bore such knowledge. People had to manage terrible truths" (247). All these new worries and concerns make Dellarobia realize that climate change is a moral issue, that it is necessary to find out about its causes and to think about the right ways of responding to it in order to secure a livable world for future generations. Her concern and worries, like the concern and worries of the scientists, moreover, draw attention to the important role that emotions play when it comes to understanding the moral impact of the risk of climate change (Roesner).

The one decision in which Dellarobia acts upon her developing climate ethical stance is the decision concerning the logging of the trees on which the monarchs roost. She opposes the logging strongly, not only because she is aware of the dan-

gers of erosion, but also because she knows that the butterflies, as precarious or even desperate as their situation may be, need as much protection as they can get. She clearly sees that cutting and selling the trees would have only short-term, economic, effects—but might, in the long term, endanger both the ecology of the place and the family's economic situation. She sides only strategically with the pastor, who opposes the logging because he believes in "caring for God's Creation," or with some community businessmen, who see "tourism opportunities" in the butterflies' presence and dream of creating a kind of "Disneyland" (212). Beyond the scope of these strategic alliances, Dellarobia always bases her stance on the scientific knowledge she has accumulated and on the concern she shares with the scientists. Knowing that their "global worries […] would not help her case with Cub" (171), moreover, she also strategically does not mention climate change to him when she tries to convince him that he should oppose his father. Instead, she tries to win him over by pointing out that soil erosion might lead to a landslide that would severely endanger their home and thus, ultimately, their economic survival.

Dellarobia Turnbow's climate ethical stance gradually emerges from the transformed experience of a locality that has been undergoing processes of deterritorialization, i.e., from the transformed experience of place that can no longer be conceptualized as bounded. Yet her ethics must be understood as heavily affected by nonhuman and human mobility, by ecological, economic, and sociocultural forces that originate elsewhere. Her encounters and her engagement with animals, people, and ideas that "move" to her place and transform it turn her world, in the sense of Ulrich Beck, into the increasingly complex moral and political space of responsibility that characterizes the world risk society. Learning to relate her own situation to the deplorable fates of Mexican climate refugees and of Australian farmers that have lost their farms due to drought and fire storms, developing concern about endangered species such as the monarchs on her own mountainside or the elephants in Africa, and worrying about the future not only of her own family, but also of other people and species mark an ethical stance that is characterized by an awareness of increased global connectivity. Towards the end of the novel, Dellarobia reveals a growing ability to "envision individuals and groups as part of planetary 'imagined communities' of both human and nonhuman kinds" (Heise 61). She has begun to develop an eco-cosmopolitan stance that redefines proximity as a relational category, as a category in which distinctions between locality and globality collapse, an eco-cosmopolitanism stance based on an ethics of global connectivity.

Conclusion

Despite the overwhelming international consensus that has by now been reached concerning the anthropogenic causes of climate change, the risk discourse on global climate change is still marked by a high degree of uncertainty as to its concrete future effects on the planet's diverse geographies, economies, societies, and cultures. Climate change fiction must be understood as contributing to the de-

bate on the ethical significance of this uncertainty. A reading of a novel like Kingsolver's *Flight Behavior* that focuses on various forms and agents of mobility, both nonhuman and human, provides a way of drawing attention to an essential feature that any attempt to formulate central principles of a global climate ethics needs to be aware of: the deterritorialization of place. Only if the many local, translocal, and ultimately global forces that keep changing single localities—and with them their inhabitants' sense of place and sense of self—are acknowledged, and only if these changes are recognized as emerging from inextricable interdependencies of the human and nonhuman world, can ethical frameworks hope to adequately provide orientation for an uncertain (climate) future. Moreover, reading *Flight Behavior* as developing a risk scenario that draws attention to mobility and deterritorialization shows that a focus on the concreteness of the dynamic, i.e., constantly changing, experience of place is able to communicate the experience of climate change in a way that is much more easily intelligible than any scientific risk scenario analysis that has to succinctly explicate the meanings of vast amounts of statistical data. Finally, the novel's focus on mobility and deterritorialization ultimately sheds light on the two faces of risk, threat and chance. In its protagonist Dellarobia Turnbow, *Flight Behavior* presents a character that demonstrates that even in the world risk society, which is permeated by the impact of ultimately incalculable global risk, the personal confrontation with risk can have both threatening and liberating effects. Becoming increasingly aware of the magnitude of the climate risk as it plays out in the dramatic changes that occur in the place she has lived in all her life, she is deeply worried. However, as worrisome as this process is, the experience still allows her to grow, intellectually, emotionally, and morally. Dellarobia decides to leave, to move away from a life that had, indeed, been stagnant. What she envisions is a life that will remain uncertain, but that still offers the opportunity to actively engage with a world whose complex connectivity may be frightening, but at the same time also generates the beauty which helps people "respect the earth" (152).

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