
The Intricate Weave: Mediating Climate Science and Nonhuman Agency in Contemporary Ecocriticism and Narrative

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Abstract:

This paper examines how contemporary ecocriticism navigates the complex relationships between climate science and literary representation through an analysis of Barbara Kingsolver's *Flight Behavior*. The study highlights the challenges of translating scientific knowledge about environmental crises into public understanding. It draws on posthumanist and feminist ecocritical frameworks to investigate the tension between scientific rigor and public communication.

The paper further examines how environmental discourse becomes a system of power and knowledge production. Through the lens of the Monarch butterfly crisis depicted in the novel, this research argues that effective environmental literature can embrace strategies of mediation that recognize nonhuman agency and challenge conventional narrative structures. The study concludes that ecocritical practices must foster new forms of writing that address cultural and ethical questions while remaining rigorously connected to environmental realities.

Keyword: Ecocriticism, Climate Change, Narrative Mediation, Posthumanism, Non

Introduction

Ecocriticism has fundamentally transformed literary studies. It has moved from the academic margins into the mainstream. It has become an important aspect as the world has also seen differences in ecological factors. The movement originated largely in the U.S. in 1992 with the founding of the Association for the Study of Literature and Environment. This organization initially focused heavily on American nature writing.

Now, ecocriticism has diversified into complex theoretical areas. It has incorporated ideas from postcolonial ecocriticism and has bridged environmental justice and feminist science studies over the last two decades. It has also created a shift in the dominant environmental issues of climate change, and many contemporary essays explicitly focus on this.

The attempt to grapple with climate change, which is an environmental crisis that is geographically and temporally immense, poses a challenge for narrative forms. Anthropogenic global warming is expansive, with distant emissions leading to far-reaching effects like rising sea levels globally. It also complicates traditional narratives.

history. It also challenges the anthropocentric or human-centered bias embedded in conventional historical narratives. Barbara Kingsolver's 2012 novel *Flight Behavior* provides a potent case for examining these issues. The novel deals directly with Monarch butterflies, which are affected by increasing parasite infestation and rising average temperatures in the region. The scientific work within the novel, led by Dr. Ovid Bryan, grounds the narrative and observes the biological consequences of climate change. It echoes the author's note of drawing an expert's sources from a plausible biological framework.

The fictional environment of the novel becomes a space where pressing real-world environmental concerns are explored through the lens of local experiences and scientific inquiry. This paper also investigates how contemporary ecocriticism provides theoretical tools. It helps to understand the Monarch die-off depicted in *Flight Behavior*. The sections will analyze the difficulty of translating scientific findings into public understanding and using an ecological critique of power and knowledge. They will also explore how the novel engages posthumanist thought by emphasizing nonhuman agency and how environmental systems are in deep crisis.

Ecocriticism, Science, and the Challenge of Mediation

The communication of climate science to the public is intrinsically challenging because climate is a pattern demonstrated over time. This makes direct and immediate experience of its overall shift difficult. The public must therefore rely on mediators to translate scientific data and models into understandable language. This necessity for translation immediately turns climate change into a social problem.

In *Flight Behavior*, the character Dellarobia Turnbow sees firsthand the necessity for scientific rigor, where Dr. Ovid Byron states that the task of science is to measure and count. However, Dellarobia believes the task of science is much larger and requires someone to explain things, especially if measured scientific restraint allows figures like Tina Olmstead to take their shots. This tension between scientific measurement and public explanation highlights a core area of modern ecocritical theory. It not only shapes how environmental knowledge is produced but also how it is communicated.

Ecocriticism influenced by Foucault has underscored how the environment is rendered legible through systems of discourse and power: ecological knowledge does not merely describe nature but participates in organizing it. As Gabrielson and Parady note, “The problem is not only what is said about climate or species but the epistemological structures that allow them to be known, counted, and administered. Thus, ecological discourse becomes entangled with governmentality, situating climate change at the intersection of scientific credibility and public intelligibility” (198). This Foucauldian perspective situates *Flight Behavior* within a broader framework of how scientific knowledge about climate change is both constructed and circulated.

Dr. Ovid Byron confronts journalist Tina Olmstead, accusing her of working for a public relations firm that writes her scripts. He claims it is the same firm that manufactured misinformation about the link between smoking and cancer contagion and later worked for the fossil fuel industry. Byron further accuses her of having no interest in real inquiry and of doing a two-step with her sponsors. This demonstrates the high stakes of environmental communication.

The misrepresentation of scientific truth by journalists, as preceded by characters like Pete and Norbert, underscores the societal difficulty in discerning correlation from causation. Pete sarcastically shouts headlines linking Facebook use to low grades or breast implants to suicide rates. This journalistic tendency stands in stark contrast to Dr. Byron's scientific mandate to withhold judgment until experimental conditions can be seen. Moreover, the novel shows the politics of public action through characters like Mr. Atkins, who asks people to sign a lifestyle pledge. The pledge includes specific actions such as driving less and reducing energy consumption. Such individual actions can be ambulant while public efforts encourage individuals to do their bit, but they remain pitifully inadequate to the immense scale of the problems desired or despaired.

The tension between the scientific imperative to measure, the political necessity to explain, and the public tendency to dismiss or misunderstand reflects the crisis of representation. Hazards like synthetic pesticides or climate change only become visible through the “sensory organs of science—theories, experiments, measuring instruments.” When scientists “hold back” explanation, as Dr. Byron attempts to do, others rush to fill the vacuum of explanation with simplistic narratives. This affirms Dellarobia’s sense that “someone had to explain things.”

Narrative, Posthumanism, and Entangled Agency

Contemporary ecocriticism, particularly through posthumanism and feminism, shows how the focus on environmental problems concentrates on questions of the environment and the nature of the human. This approach advocates for understanding the self as membranous or transcultural. The physical boundaries of the human are recognized as porous, as unseen toxins transgress the body and reveal an interconnected experience.

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The existence and experiences of the characters in *Flight Behavior* and the ecological phenomena depicted exemplify this posthuman perspective. The novel is set within a specific ecological system, once again centered on Monarch butterflies. This Monarch dilemma—whether a parasite is sapping their strength and preventing a long migration, and whether the warmer climate is giving parasites an advantage—is a biological story intricately woven with climate change. As Alaimo observes:

Posthumanist ecocriticism insists that humans are inextricably enmeshed in ecological and evolutionary processes, and that literature itself is one of the places where these entanglements are staged. Literary form has long centered the human subject, but a posthumanist sensibility disrupts this privilege, showing how nonhuman agencies—whether animals, climates, or technologies—shape narrative possibility and human identity alike (5). This perspective clarifies how *Flight Behavior* uses both form and content to challenge the anthropocentrism of literary genres like the novel, which often privileges human character and interiority.

Traditional narratives, particularly those centered on romance or heroism, prove inadequate in addressing complex ecological realities. For example, in Amitav Ghosh's *The Hungry Tide*, Dexler notes that the novel rejects the conventional romantic arc, in which a love triangle would produce a hero, in favor of articulating the urgency of a new social configuration resulting from environmental crises.

Similarly, the contemporary English novel often deals with the wisdom of uncertainty, avoiding conclusive messages and recognitions that are typically part of traditional narratives. Critics argue that conventional plot structures, which require solution and closure, seem absurdly evasive when applied to ecological questions. Novels like King's *Lovers*, while engaging with the fictional world, must ground their narratives in the complex reality of biotic consequences.

When traditional modes of storytelling fail, the focus must shift from what is represented to how it is represented. This approach allows novels set in urban environments or those lacking obvious environmental content to still yield ecocritical signals. The biological facts of Monarch migration and the impact of global warming necessitate a complex, systems-based view. This approach moves beyond simple anthropocentric

explanations. If a novel or influential writing is to be successful in articulating climate change, it must use strategies of mediation that are inherently impure.

This remaking of tradition, in which the nonhuman subject drives the inquiry, is essential for ecocriticism. It allows the novel to connect our lived experiences with the planetary scale of the crisis.

Conclusion

In conclusion, ecocriticism, through its concentrated efforts over the past two decades, has fundamentally changed literary scholarship by injecting ecological concern into critical inquiry. The movement's current trajectory emphasizes the necessity of historical and theoretical nuance. The fictional and biologically grounded account of the Monarch butterfly crisis in *Flight Behavior* and King's *Lovers* highlights the intersection of local environmental degradation and global atmospheric change.

The analysis of *Flight Behavior* through ecocritical lenses reveals the multi-hazardous challenges of environmental representation. These include public psychological resistance to acknowledging crises and the media's propensity for simplification or misinformation. Furthermore, the novel implicitly calls for a shift toward cultural and posthumanist critical approaches. The biological story of Monarch vulnerability demonstrates that the natural world is an active force.

This reinforces the point that agency must be recognized and articulated through new literacies and ethical practices. Ultimately, literary engagement with environmental disaster whether through scientific reporting, reportage, or complex fictional narratives can be approached as a critical practice that is diagnostic rather than strictly evaluative.

The crisis will continue to accelerate, and ecocritical practices must foster new connections. Naturally, new strategies of mediation will be introduced simultaneously, and political considerations will come into play. The ongoing task is to find forms of writing that address the cultural and ethical questions posed by the crisis, while remaining rigorously connected to environmental issues.

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