

From Science To Storytelling: The Evolution Of Cli-Fi In Addressing The Anthropocene

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Abstract:

Climate fiction encompasses climate science, fiction, and cultural perspectives on the Anthropocene. Using qualitative research methodology, this study begins with a history of the greenhouse effect and the Anthropocene. Then, it examines the proliferation, effect, and influence of Cli-Fi literature in the Anthropocene. Fiction can increase awareness and encourage action by conveying Anthropocene urgency and consequences. The paper investigates how Cli-Fi addresses environmental issues using Margaret Atwood's *MaddAddam* (2013) and Paolo Bacigalupi's *The Water Knife* (2010). Multiple narratives are needed to capture the Anthropocene's complexity and scope. Scholars such as Jo-Anne Muise Lawless and Brenda L. Murphy argues for a diverse and inclusive storytelling strategy that combines environmental justice and a transdisciplinary viewpoint. For reliable portrayals of humanity's history, present, and future climate relationships and impacts, the research suggests recognizing and accepting diverse narratives. Climate fiction has expanded beyond literature to embrace the visual arts, games, and activism and can affect cultural reactions to the Anthropocene.

Keywords: Anthropocene, Climate Science, Climate Fiction, global warming.

Introduction

"Scientists have studied," says Amy Brady, "our planet's natural greenhouse effect since at least the 1820s" (2017, n.p.). In 1896 itself, a Swedish scientist named Svante Arrhenius concluded that human activity, such as burning coal, added to the effect and further warmed the globe. As long as people have studied global warming, the Anthropocene has been divisive and controversial. Politicians and entrepreneurs are striving to understand how humans affect the climate and how to stop it. The Royal Society and the US National Academy of Sciences published an Anthropocene overview in 2014 that summarizes the science and gives recommendations. As per the writers' claim:

Human activities — especially the burning of fossil fuels since the start of the Industrial Revolution — have increased atmospheric CO₂ concentrations by approximately 40%, with more than half the increase occurring since 1970. Since 1900, the global average

surface temperature has increased by about 0.8-degree C (1.4 degrees F). This has been accompanied by warming of the ocean, an increase in sea level, a strong decline in Arctic Sea ice, and many other associated climate effects. (Royal Society and the US National Academy of Sciences, 2014)

The field of climate fiction, or "cli-fi" for short, has been expanding rapidly in recent years, with "a large number of books outside of environmental studies that frame discussions of Anthropocene and its consequences" (2016, n.p.) described by Fernandes in an article "The Subfield that is Changing Literary Studies" published in the Chronicle of Higher Education on March 21, 2016. According to journalist Dan Bloom, who first used the term "cli-fi" in 2008 and tracks cli-fi-related courses and resources, the number of North American university courses devoted to the topic jumped from a few to more than a hundred between 2013 and 2016, as pointed out by Fernandes. With an increasing number of people concerned about the effects of human activity on the planet and an increasing number of works of fiction speculating about the worst-case scenarios, it is no wonder that classes analysing these works of fiction through the lens of their depiction of the human-caused Anthropocene are in high demand. Like dystopian literature, of which much cli-fi is a subgenre, this type of literature "often depicts a grim future of a changed world, portraying how humanity must deal with years of environmental neglect," but it can also "provide a useful nudge" to action, according to Fernandes (2016, n.p.).

Dan Bloom, a freelance journalist residing in Taiwan, is considered the guardian saint of cli-fi, the man accountable for the genre's name, and an advisor to novelists seeking publication advice and direction. Bloom also claims to be a "cli-fi missionary," a cheerleader for novelists and screenwriters, a public relations expert with media connections, and a literary theorist (qtd. in Brady 2017, n.p.). For his research tool and online presence, Bloom tracks science fiction news coverage at "The Cli-Fi Report." Reading the Intergovernmental Panel on Climate Change (IPCC) report from 2006 allegedly inspired Bloom to start "thinking of ways to raise awareness of novels and movies about Anthropocene issues" and the word "cli-fi" came to him as a result (Brady 2017, n.p.). Following a 2013 program on National Public Radio featuring Bloom, writers Nathaniel Rich, and Barbara Kingsolver, the term "cli-fi" became widely used in academic and journalistic circles (Brady 2017, n.p.) because of Bloom's persistent media campaign.

The Anthropocene is causing more extreme weather, such as heatwaves, droughts, heavy rain, and snowfall, in addition to higher sea levels. A substantial portion of the overall amount of other greenhouse gasses released into the atmosphere due to human activities will determine the extent of the long-term Anthropocene, according to the authors (n.p.). Jo-Anne Muise Lawless and Brenda L. Murphy acknowledge in their essay "Anthropocene and the Stories We Tell" that "some storytellers, narratives, and facts carry greater significance and have more power than others" (Murphy, 2012, 198). A "Eurocentric, male-dominated accounting of historical facts" (201-2) has been the main narrative for English Canada, according to Murphy and Lawless, who are writing from a Canadian perspective. To combat the Anthropocene, their proposed solutions include

"transdisciplinary approaches, complemented by our lived realities, based in environmental justice, and centred on processes rather than outcomes" (196). Murphy and Lawless may be defining "stories" as narratives that are shared and discussed in relation to science, policy, and history, but their argument may also be framed as a call for Anthropocene novels to contribute to the development of workable solutions. While critical interpretations of science fiction often focus on the genre's aesthetic and literary qualities, they also frequently consider the genre's works as possible educational resources in the struggle against what is the most pressing social issue of our day. Books, as works of fiction, convey a certain reality; in books addressing the Anthropocene, this truth pertains to the potential consequences of our inaction on the matter and to the imagination of potential solutions. This fact becomes apparent when we identify with fictional characters who are coping with the possible destruction of our world because of our species. Engaging with the benevolent imagination in this way can, in many respects, serve as a stronger rational and moving motivator than numerous existing scientific narratives on the Anthropocene.

"It is not persuasive to cite studies written by environmental activists or published by left leaning presses" (2014, 150) when arguing with Anthropocene sceptics or apathy, according to Patrick D. Murphy in "Pessimism, Optimism, Human Inertia, and Anthropogenic Anthropocene." This is like how science can sometimes appear too cold and impersonal to elicit a moving reaction that might motivate action. Given that the Anthropocene is an example of what Rob Nixon terms "slow violence"—that which is "neither spectacular nor instantaneous, but rather incremental and accretive"—finding tales that will be noticed and drive a reaction is no easy feat (2011, 2). Military officials, energy corporations, and insurance companies, according to Murphy, have the strongest arguments to persuade the sceptics. For her part, Barbara Eckstein defines Anthropocene literature as "those that look at climate debt we have accrued in the Anthropocene and speculate on what future that foretells: climate fiction (cli-fi) or speculative fiction and film (science fiction and fantasy) or both." (2014, 252) in addition to publications that chronicle the events influencing up to and following colonization and the industrial revolution. One thing that is implied in the arguments made by the scholars mentioned earlier is that there are different narratives about the realities, dangers, and urgency of the Anthropocene. Some of these narratives, whether literary, corporate, or scientific, will be more widely accepted than others. However, it is important to learn and be familiar with all these narratives so that we can accurately portray our past, present, and future relationships, and influences on climate.

While writing about the genre of climate fiction in *Dissent* magazine, Tuhus-Dubrow claims that regardless of the fifty years of focus on the Anthropocene,

Novelists were slow to take up the subject of global warming. In 2005, Robert Macfarlane wrote an article in the *Guardian* lamenting the dearth of art addressing this issue. 'Where are the novels, plays, poems, songs, the libretti, of this massive contemporary anxiety? An imaginative repertoire is urgently needed by which the causes and consequences of the Anthropocene can be debated, sensed, and communicate (Tuhus-Dubrow, 59).

There has been a flood of Anthropocene-related writing since. Margaret Atwood's MaddAddam series includes *Oryx and Crake* (2004), *The Year of the Flood* (2010), and *MaddAddam* (2014). After environmental damage and human genetic engineering cause the "end" of the world, these works investigate the aftermath. *Flight Behavior* (2012) by Barbara Kingsolver joins the sci-fi canon. In the narrative, Monarch butterflies live in Tennessee rather than Mexico due to their migration patterns. *The Water Knife* (2015) by Paolo Bacigalupi depicts a dystopian future where the southwestern US is ravaged by severe drought; *The Stone Gods* (2007) by Jeanette Winterson explores ecologically damaged worlds that may be Earth at any time; and *Solar* (2010) by Ian McEwan, a satire of Anthropocene scepticism, scientific hubris, and human indifference. In Cormac McCarthy's novel *The Road* (2006), a father and son go to the seashore in a devastated world after an unknown event turns the planet grey and cold. Anthropocene is not expressly addressed, although it is often considered cli-fi.

While the books listed above are certainly prime examples of cli-fi, the list is certainly not exhaustive. In addition, the genre needs regular updates because the Anthropocene is currently a major issue. Kim Stanley Robinson's *New York 2140* (2017), like Nathaniel Rich's *Odds Against Tomorrow* (2013), is about surviving on Manhattan Island after major flooding due by increasing sea levels. The majority of cli-fi is written by Americans and people from United Kingdom. This is true even if the list of works eligible for inclusion is constantly growing. Atwood stands out among the examples given; although her MaddAddam series novels occur on the East Coast of the United States, she is a Canadian. Indian author Amitav Ghosh's novel *The Hungry Tide* (2004), set in the interstitial and rapidly disappearing Sundarbans in the Bay of Bengal, is arguably the only non-western work generally considered cli-fi, although American author Paolo Bacigalupi's *The Windup Girl* (2009) is set in Thailand and Finnish author Antti Tuomainen's *The Healer* (2011) is set in Helsinki. "Where is the Fiction about Anthropocene?" was an essay he wrote for *The Guardian* in 2016. While expressing his dismay at how "the mere mention of the subject [of Anthropocene] is often enough to relegate a novel or a short story to the genre of science fiction," Ghosh argues that Anthropocene deserves more serious literary treatment. The Anthropocene is like aliens or interplanetary travel in the literary imagination (2016, n.p.). As a genre, cli-fi tends to be more of a "first-world" phenomenon, probably because the West is historically more accountable for the climate-based consequences of industrialization.

"Climate Fiction" encapsulates a range of reactions to Anthropocene fictions, including works that depict the complex systems and scalar forces we face in the Anthropocene and research on how the Anthropocene affects everyday life, or what LeMenager terms "an assault on the everyday" (379). This issue also includes cultural work analyses and examples that consider this link in ways that novels cannot always achieve—in fragmented, incomplete, or focused intensities, for example—rather than in a totalizing or world-building manner. Many of the essays here deal with novels and literature in ways that will be important for CF research for a long time to come, but others keep expanding our definition of climate fiction to encompass not only books and

movies but also video games, board games, and even climate modelling. Poetry, visual art, performance, game design, dance, fiction, experimental film and video, and activism for climate justice are all topics that the fourteen invited dialogs among artists and art activists are delving into. Partially because the Anthropocene is one of the most urgent issues of our day, climate fiction necessitates a reaction from critics that goes beyond the academic canon.

This is according to Schneider-Mayerson's recent article titled "Anthropocene Fiction" which states that "in the very near future, almost all literature will become a form of what we now think of as Anthropocene fiction, defined broadly" (318). Already a precarious genre, cli-fi could become much more so as the Anthropocene takes centre stage in future fictional and imaginative works. Several articles in this collection make good use of the word "cli-fi" as an issue or question. The overarching concern, however, is not cli-fi per se, but rather the way climate fiction questions the interconnected past and present systems that contribute to a changing climate and the ways in which our own self-deceptions influence this reality. Thus, the artists and writers highlighted here emphasize how climate fiction could provide more than just a collection of formal or aesthetic attributes; they also highlight the relationality that will vitally and inexplicably shape the future of the Anthropocene and cultural productions of the topic.

To conclude, climate science, fiction, and cultural reactions to the Anthropocene are interconnected. It chronicles climate understanding and the rise of climate fiction. This study shows how Cli-Fi has become a vital tool for communicating the complexities, risks, and solutions of the Anthropocene by examining major writers and figures. The paper acknowledges scholars calling for transdisciplinary approaches and environmental justice and stresses the importance of multiple narratives and viewpoints in the Anthropocene. Climate fiction encompasses many forms of art outside writing, as this study acknowledges. This suggests that climate fiction, or Cli-Fi, may become part of the literary landscape as nations face the Anthropocene. This study adds to the debate about climate fiction by arguing that it is a cultural acknowledgment of the Anthropocene that can dramatically affect society. Climate fiction's complex character makes it a unique and essential instrument for global knowledge and action as climate challenges become more urgent. This study investigates the interaction of climate science, fiction, and cultural viewpoints on the Anthropocene, known as Climate Fiction or 'Cli-Fi.' Narratives can explain the gravity and potential implications of the Anthropocene, and fiction can inspire action. This study examines how Cli-Fi addresses environmental issues using Margaret Atwood's *MaddAddam* series and Paolo Bacigalupi's *The Water Knife*. The Anthropocene is global, requiring a variety of narratives to represent its complexity and breadth. This study also discusses scholars such as Jo-Anne Muise Lawless and Brenda L. Murphy argues for a diverse and inclusive storytelling style that combines environmental justice and transdisciplinary viewpoints. Understanding and accepting diverse narratives is essential for effectively portraying humanity's past, present, and future climate linkages, and impacts, according to the study. The research concludes that climate fiction is now seen as a cultural phenomenon that includes visual arts, games, activism, and

literature. It concludes that climate fiction can modify cultural reactions to the Anthropocene and that all literature may become climate fiction as the Anthropocene becomes a worldwide issue.

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