



CLIMATE FICTION, AN EMERGING AND INFLUENTIAL GENRE OF 21ST CENTURY: A STUDY



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ABSTRACT

Climate change is a topic that continues to attract global attention in light of the increasing natural disasters, including floods and extreme weather events. Since the turn of the millennium, the world has witnessed an increase in works of climate fiction from both artistic and scholarly worlds. This development has played a considerable role in situating climate fiction as an avenue for orienting society to the ramifications of interfering with the integrity of the natural world. This study aims to investigate the demographic profile of the consumers of climate fiction and how their interaction with the genre affects their perspectives on the environment. The study uses Amazon's Mechanical Turk (AMT) to recruit a sample of readers of climate fiction to help achieve this objective. The findings indicate that the primary readers of climate fiction are young people with liberal views and a strong concern for the environment. Another finding is that reading climate fiction influences pro-environment attitudes, behaviours, and perceptions.

KEY WORDS: climate change, climate fiction, ecocritics, climate future, environmental integrity

Introduction

The climate change discourse captures the global preoccupation with the integrity of the natural environment and how interfering with it creates adverse consequences, including natural calamities like floods and extreme weather. A significant and peculiar development of this discourse is climate fiction, a genre of literature and film of the 21st century. This genre has significant eco-political influence as it enables the imagining of potential climate disasters in the future and the appropriateness of urgent interventions in the present. Climate fiction can potentially influence people's beliefs and behaviours relating to the natural environment. Despite this potential influence, there is limited understanding of the primary consumers of climate fiction and the extent

of its impact on populations. This study seeks to bridge this gap by investigating the demographic profile of the consumers of climate fiction and the degree to which their interaction with the genre affects their perspectives about the environment.

Literature Review

As climate change takes centre stage in global policy conversations, the international community has increased its focus on environmental integrity. Survey findings in the United States indicate that 68 per cent of those surveyed believe pollution from human activities is to blame for increases in Earth's temperatures over the last century (Saad, 2017, para. 10). A peculiar development of the world's preoccupation with climate change is climate fiction, a significant trend in 21st Century's English-language publishing and

filmmaking. According to McKibben (2005), a legitimate concern by environmentalists and cultural critics at the turn of the millennium was why the artistic and scholarly worlds were aloof about climate change (para. 1). Apparently, there were no articles, books, or films reflecting the global focus on climate change. However, a decade into the new millennium, the list of artistic and literary works on climate change reflected the significance of climate change as a topic of international discourse. Indeed, most climate fiction novels depict a catastrophic climate future that arouses anxiety. McKibben (2005) argued that citizens and policymakers would not act until they felt fear (para. 2). Coincidentally, most climate fiction that imagines potential climate futures today arouses fear in readers because of the vivid depiction of human suffering. Undoubtedly, the adverse manifestations of climate change have played a significant role in the development of climate fiction.

Therefore, a notable theme of the 21st century is ecocritics, which identifies, analyses, and discusses climate fiction as a strategy for combatting the climate crisis. The central assumption driving climate fiction is that climate change is not an outcome of personal lifestyle choices or specific policies but the values and worldviews instilled and legitimised by dominant cultural narratives (Schneider-Mayerson, 2020, p. 337). In this respect, the genre is a significant avenue for helping humanity recognise and understand its catastrophic trajectory after decades, even centuries, of interfering with the integrity of the natural world. *The Water Knife* by Paolo Bacigalupi is among American literary climate fiction works that give a cautionary tale of a catastrophic future. The novel depicts the American Southwest in the future, where climate change created permanent drought and led to individual states fighting over access to the dwindling Colorado River. Bacigalupi (2015) refers to the crisis with the words, "This was the true apocalypse..." (p. 120). In this respect, the novel

dramatises the consequences of failing to stop the present interference with environmental integrity. As such, climate fiction inspires pro-environment attitudes, behaviours, politics, and policies in contemporary society.

Climate advocates have employed different tactics to foster awareness and urgency in the global response to climate change. Cole (2022) argues that political inaction in response to the climate crisis represents a failure of imagination because, whereas the risks of climate change are understood, society seems to grasp them intellectually rather than affectively (p. 135). In other words, responses to climate change are conceived but never felt. According to Lundholm (2019), gaining knowledge about climate change affects emotions like hope and increases interest in environmental issues (p. 1430-1431). In short, reading climate fiction motivates pro-environment attitudes, behaviour, and perceptions. According to Von Mossner (2017), vivid speculations of a devastated world in the future can impact how individuals consider developments in the present that could lead to such outcomes (p. 559). Indeed, various climate fictions have this kind of influence on individuals. For example, Bertagna's trilogy inspires this kind of reflection, where the preface to *Exodus* invites readers to imagine a world after global flooding, emphasising the "fragile moment" (Leavenworth & Manni, 2021, p. 728). The 'fragile moment' represents the present. Therefore, the novel inspires the reader to be responsible and effect change through pro-environment behaviour. Milkoriet (2016) notes that while climate fiction may not change readers' minds on climate science or policy, it helps to shape collective imaginations of undesirable futures (p. 177). In sum, the purpose of climate fiction is to depict environmental disasters resulting from years of human interference with environmental integrity. Therefore, reading climate fiction novels is expected to inspire pro-environment attitudes, behaviours, and perceptions.

Theoretical Framework

A theory that contextualises ecocriticism is the reader-response theory, which suggests the aspect of interaction between individuals and content through reading in the context of literature or viewing in the context of film. This theory developed as a school of criticism in the second half of the 20th century, with its leading proponents being Stanley Fish and Wolfgang Iser. These critics argued that readers construct the meaning of a text (Davis & Womack, 2018, p. 76). From this background, the reader-response theory has shaped the current discourse on climate change through the climate fiction lens. Another theory that shapes climate fiction is construal level theory, whose central assumption is that psychological distance influences how people represent mental objects and the information they consider important in making decisions and judgments (Brügger et al., 2016, p. 126). The four dimensions of psychological distance are temporal, representing immediate versus distant; spatial, representing near versus far; social, representing familiar versus unfamiliar; and hypothetical, representing likely versus unlikely. Spence et al. (2012) argue that low-level understanding, meaning detailed and specific communication, of the consequences of climate change motivates a higher engagement with climate change mitigation (p. 960). In other words, when people consume detailed and specific information about the adverse effects of climate change, they are likely to adopt positive environmental attitudes, behaviours, and perceptions. In this regard, climate fiction falls under the low-level construal category because it meets this criterion.

Readership of Climate Fiction

Finding out who reads climate fiction is a consequential undertaking that helps understand the relevance of the climate change discourse. Typically, literary criticism implies some average readers interpret content from a scholarly perspective. However, empirical research shows that readers often experience literature differently, primarily because of demographic factors like age, gender, and race and socioeconomic factors like

education and socioeconomic class (Griswold, 2000, p. 8; Radway, 2009, p. 26). From this perspective, there are different levels of understanding of climate fiction across populations. Other factors that shape people's experience with literature are familiarity with specific narrative forms and life experiences that resonate with a significant theme or create a strong identification with the protagonist (Gerrig, 2011, p. 89). In this respect, education and social environments interact to influence people's perspectives on specific texts or genres. Schneider-Mayerson (2019) notes that ecological identities, political beliefs, and strong attitudes affect people's literature experience (p. 112). In sum, multiple factors shape how people interact or understand literature. Murugavel (2020) notes that the emergence of novels that aim at the younger generation is one of the latest developments in climate novels (p. 5). The scholars use *The Carbon Diaries* by Saci Lloyd purposed for teenagers as an example. Since the young people represent the future of a nation and the world, it makes sense to target them in climate fiction. In sum, it is crucial to understand the primary consumers of climate fiction and their demographic, political, or social-cultural characteristics.

Impact of Reading Climate Fiction

In the context of climate change discourse, climate fiction is significant for various reasons. Since ecocriticism represents the discourse centred on climate change, it is a proper lens for investigating how the world has and is responding to climate fiction. Ecocritic Antonia Mehnert (2016) suggests climate fiction provides insight into the ethical and social ramifications of interfering with the integrity of the natural environment (p. 4). In this respect, it is a cultural-political avenue and an innovative approach to enriching the global climate change discourse. Siperstein (2016) argues that while ecocritics' interest in climate fiction is manifold, the genre's instrumental value is a significant motivator (p. 132). This value represents the eco-political influence of climate change. In 2013, climatologist Judith Curry stated that while

scientists have sought to educate the world about the various aspects of climate change, fiction has remained largely untapped as a communication avenue (Evancie, 2013, para. 10). The risk of fiction is that it generates and propagates propaganda on many issues. In response to this risk, Garrard (2013) notes that climate fiction is not an initiative of the Intergovernmental Panel on Climate Change and, therefore, can function as an avenue for environmental persuasion (p. 176). In sum, climate fiction has widened and deepened the discourse on climate change by focusing artists and scholars on its potential eco-political influence. Therefore, it is critical to understand the people consuming this genre and how ecocriticism influences their attitudes, behaviours, and perceptions relating to the environment.

Methodology

The study's participants were readers of climate fiction recruited through the online crowdsourcing service Amazon's Mechanical Turk (AMT). Kees et al. (2017) confirm this tool to be representative as able to produce high-quality data and as representative as other standard sampling methods used in social research (p. 142). The inclusion criterion was having read at least one work of climate fiction in Table 1. To ensure that the respondents met this criterion, each respondent had to use their own words to describe the plot of the novel they had identified. The choice of novels was based on the fact that they are ecocritics' most popular form of literature (Silber & Triplett, 2015, p. 18). The researcher used portions of respondents' descriptions to conduct a search on the Internet to ensure the respondents did not copy and paste their descriptions from online sources. Those identified to have done so (plagiarised their response) were excluded from the study. The final sample of 40 respondents had to answer several demographic and open-ended questions.

Table 1: A List of Climate Fiction Novels

Work of Fiction (including author and date of publication)	Temporal Setting(s)
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A Friend of the Earth (Boyle, 2000)	Past/Near Future
<i>Flight Behaviour</i> (Kingsolver, 2012)	Present
The Carbon Diaries: 2015 (Lloyd, 2009)	Near Future
<i>The Healer</i> (Tuomainen, 2013)	Near Future
Julian Comstock: A Story of 22nd-Century America (Wilson, 2009)	Distant Future
<i>Far North</i> (Theroux, 2009)	Distant Future
<i>The Water Knife</i> (Bacigalupi, 2015)	Near Future
The Ice People (Gee, 1998)	Distant Future
<i>The Windup Girl</i> (Bacigalupi, 2009)	Distant Future
Forty Signs of Rain (Robinson, 2004)	Present
<i>Solar</i> (McEwan, 2010)	Present
Back to the Garden (Hume, 2013)	Distant Future
<i>Ultimatum</i> (Glass, 2009)	Near Future
<i>Heavy Weather</i> (Sterling, 1994)	Near Future
<i>From Here</i> (Kramb, 2012)	Near Future
<i>Not Dark Yet</i> (Ellingsen, 2015)	Near Future
The Collapse of Western Civilisation: A View from the Future (Oreskes and Conway, 2014)	Distant Future

Findings

The present study aimed to investigate the demographic profile of the consumers of climate fiction and how their interaction with the genre affects their perspectives on the environment. One finding is that consumers of climate fiction are young, more liberal, and overly concerned about the adverse effects of interfering with environmental integrity than non-consumers. It is reasonable to conclude that these characteristics suggest that ecocriticism has fundamentally shaped climate change discourse by making people more aware of the adverse effects of climate change through publications and filmmaking. Further, the study

found that roughly 37.7 per cent of readers of climate change were aged 18 to 34. This age bracket represents young people open to more liberal views of humanity and society and their interactions. One can conclude that environmental conversation is a liberal view of the historical human behaviour of interfering with environmental integrity for various purposes, including industrialisation.

The study also established the significance of reading climate fiction. One finding was that reading climate fiction had small but significant positive effects on beliefs and attitudes about global warming. Further, most readers viewed climate fiction novels as a tool that inspires them to imagine potential climate futures. For example, one reader of *The Collapse of Western Civilisation* by Naomi Oreskes and Erik M. Conway said the novel inspired them to think about what the planet could become. The novel depicts the collapse of Western civilisation due to climatic apocalypse. Another reader of *Flight Behaviour* by Barbara Kingsolver said the novel helped them to imagine a possible future where some species are extinct, thus arousing environmental concerns. A reader of Matthew Glass's *Ultimatum* said the experience brought climate change into focus as a real-life scenario resulting from human ignorance. The novel is a diplomatic thriller that depicts negotiations between China and the United States in the early 2030s influenced by the explosive climate. One respondent said they had read *A Friend of the Earth* by T. C. Boyle many years past but could recall its plot in great detail. They said the novel was an eye-opener that made them realise the severity and intensity of climate change. The novel depicts the protagonist, Ty Tierwater, as an active radical environmentalist who suffers the severity of climate apocalypse both in the present and future. Similarly, a reader of *The Carbon Diaries: 2015* by Saci Lloyd noted that the depiction of weird weather and amplified natural disasters enabled them to visualise the ramifications of climate change on humans. The novel is about a young adult who battles the social and cultural consequences of climate change in a

near-future England defined by strict carbon rationing and political instability.

Discussion

The objective of the present study was to investigate the demographic profile of the consumers of climate fiction and the degree to which their interaction with the genre affects their perspectives about the environment. The study embraced climate fiction in all its forms, including realist literature, young adult fiction, noir, thriller, satire, post-apocalyptic fiction, science fiction, and speculative fiction. Generally, climate fictions are set in the recent past, the present, the near future, or the distant future and offer conflicting perspectives about the causes and consequences of climate change. One finding of the present study is that readers of climate fiction are young people who embrace liberal views and show a great concern for environmental integrity. This finding aligns with the opinions of Griswold (2000) and Radway (2009) about demographic factors playing a central role in the readership of climate fiction. Generally, young people immerse themselves in fiction to absorb new concepts and develop ideas about themselves and their world. Therefore, reading climate fiction significantly enables young people to embrace and exhibit liberal ideals about the environment, particularly pro-environment attitudes, behaviours, and perceptions. Since young people account for a significant proportion of America's national population, the current study's finding aligns with Saad's (201&) finding that most Americans are concerned about climate change. Ultimately, this concern is exhibited through pro-environment behaviour. Indeed, from the perspective of Mehnert (2016), reading climate fiction inspires one to consider the ramifications of interfering with the integrity of the natural environment.

Another finding of the present study is that reading climate fiction influences positive attitudes and beliefs about global warming. This finding concurs with Siperstein's (2016) argument that climate fiction has instrumental value because it motivates pro-environment behaviour. It also agrees

with Garrard (2013), who views the genre as an avenue for environmental persuasion. Another finding of the present study is that reading climate fiction novels inspires the imagination of potential climate futures. This finding aligns with the central assumption of the reader-response theory that reading influences action or behaviour. It also agrees with Spence et al. (2012), who found that learning about climate change's consequences motivates individuals to pursue climate change mitigation vigorously. The finding also confirms Von Mossner's (2017) assertion that having a vivid idea about a possible catastrophic climate future can motivate individuals to evaluate present behaviours that could lead to such outcomes. Further, it agrees with Lundholm (2019), who notes that learning about climate change arouses positive emotions like hope and increases people's interest in environmental issues. In sum, the present study confirms that reading climate fiction orients individuals to understand the consequences of interfering with the integrity of the natural world. With this understanding, individuals will likely adopt pro-environment attitudes, behaviours, and perceptions.

One effect of reading climate fiction is the visualisation of an apocalyptic climate future, as evidenced by the reader of *The Carbon Diaries: 2015*, who visualised the ramifications of climate change on humans. In this respect, the present study aligns with Spence et al.'s (2012) notion of psychological distance in the consumption of climate fiction. From viewing climate change as abstract and vague, readers of climate fiction eventually view it as a real threat due to more concrete and vivid depictions.

Conclusion

The present study is vital to the global climate change discourse because it establishes the significance of climate fiction as an avenue for influencing pro-environment attitudes, behaviours, and perceptions. The study has established that the principal readers of climate fiction are young people with liberal views and a great interest in

environmental integrity. Further, the study has established that reading climate fiction increases an understanding of the potential ramifications of interfering with environmental integrity. These findings imply that the young generation is likely to reverse the culture of environmental destruction that has created the current climate crisis because of interacting with climate fiction. Therefore, society must encourage and promote artists and scholars to invest heavily in climate fiction by reading climate fiction novels and watching climate fiction films. Ultimately, interactions with climate fiction will influence pro-environment perspectives, not only among young people but across populations, and mitigate against possible climate apocalypses in the future.

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