

“We’re Using Up the Earth. It’s Almost Gone”

Apocalyptic fiction, environmental awareness, and critique of anthropocentric and capitalist society in Margaret Atwood’s *MaddAddam* trilogy

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Abstract

This thesis explores Margaret Atwood's novels *Oryx and Crake* (2003), *The Year of the Flood* (2009), and *MaddAddam* (2013), and their criticism of anthropocentric and capitalist society. The novels depict a world where the planet has reached its limits due to humanity's overpopulation, greed, and exploitation of nature. This thesis analyzes the books with an ecocritical lens and views Atwood's representation of the environment in her apocalyptic narrative. Through a close reading of the trilogy, the analysis considers the novels' apocalyptic characteristics in a world where a virus has annihilated the human population, and genetically engineered creatures are left in its wake to live in harmony with nature. Through these creatures' traits and the depictions of humanity before the apocalypse, Atwood shows how human interference with nature has led to the destruction of numerous plant and animal species, as well as ourselves. However, Atwood offers some hope through the creation of 'the perfect humans' and the portrayal of a flourishing nature in the post-apocalyptic landscape.

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1 Introduction and Background

The correlation between environmental degradation, technology, and human interference is a prominent point for discussion in contemporary literature, history, and science. The impact humans have on the environment, and especially the consequences of this, have become popular topics in modern writing. Many writers, particularly with a focus on post-apocalyptic narration, have explored these issues, and Margaret Atwood is one of them. Atwood delves into the themes of global warming and bioethics in her trilogy, *MaddAddam*. The novels portray an ill-fated society set in a near future, where scientists use nature as their playground, private corporations control the world, and the human race has split into what Atwood refers to as the opposing camps of technocracy and anarchy (*In Other Worlds* 91). As she regards her books as “things that could happen” (*In Other Worlds* 6), the setting and characters give reflections on our contemporary society and themes of our world’s end, anthropocentrism, and environmental awareness.

Atwood’s trilogy consists of her 2003 novel, *Oryx and Crake*, continuing with *The Year of the Flood* from 2009, and concluding with *MaddAddam* in 2013. Her fiction is well-known amongst critics, and writers like J. Brooks Bouson and Ursula K. Le Guin have reviewed the novels’ exploration of the environmental and technological themes. (Bouson, “A ‘joke-filled romp’”; Le Guin, “The Year”). This thesis, however, will also address the novels’ apocalyptic depictions. In a world with highly advanced biotechnology, filled with environmental disasters, Atwood portrays a future that leads to the annihilation of the human race. The novels place the readers in a post-apocalyptic landscape, and the books’ narrators present stories of how life was before the end of humans.

Atwood’s descriptions of life before and after this apocalyptic event offer contemplations on the issues of bioethics and anthropocentrism, as well as how corporate greed and human consumerism contribute to humanity’s downfall. In the trilogy, self-centeredness and overpopulation, together with the misuse of technology, have led to environmental disasters. These issues are primarily the motivation behind one of the characters’ plan of human extinction. The various discussion points in Atwood’s trilogy reflect on concerns in the modern world. Atwood’s novels are good examples of science fiction in the apocalyptic tone: they extrapolate from our present moment and present us with a vision of the future that is frightening to behold.

Throughout her *MaddAddam* trilogy, Atwood criticizes and blames humanity's anthropocentric and capitalist worldview for the destruction of the planet and uses its apocalyptic narrative as a cautionary tale of humanity's treatment of nature. Her novels examine the social and political consequences of technology and our handling of nature by portraying a near-future world where the human race is exterminated. Some critics may understand this examination, and Atwood's outlook, as apocalyptic, which, according to Ursula K. Heise, has lost its power as social criticism ("What's the Matter"). However, while the human race is close to extinction in her novels, Atwood gives the readers some hope, and even Atwood herself does not accept that her work is apocalyptic in tone. This critical tension between author and reader infiltrates a reading of the trilogy because, on the one hand, the apocalyptic event emphasizes the severity of human behavior on the planet. On the other hand, Atwood's portrayal of nature and the corporations' exploitations serves as a critique in itself.

The key to resolving this conflict lies in understanding how Atwood's representation and treatment of nature, as well as how the setting, i.e., the post-apocalyptic landscape, matters to Atwood's social critique. By investigating this, we come to understand how the trilogy presents a more subtle and nuanced outlook on the allegiance between nature, culture, and politics than a simple binary might initially provide. Therefore, in order to further the argument that the novels' apocalyptic narrative works as a warning for how humanity is to blame for environmental destruction, the thesis will engage in an ecocritical reading of the *MaddAddam* trilogy and investigate the following research questions:

- 1) How does knowledge of the impact of the Anthropocene era on the Earth affect interpretations of the novels' plot, characters, and themes?
- 2) What is the social and historical context for apocalyptic fiction, and how do the *MaddAddam* novels innovate within this genre?
- 3) How is 'deep ecology' represented in the novels, and why is this idea significant?
- 4) Why is it substantial that Atwood retains a sense of hopefulness against the apocalyptic setting and impact of the Anthropocene era she imagines in the series?

To this end, the thesis will first explain key terms such as the Anthropocene and apocalypse, as this gives a foundation before the analysis of how Atwood's novels fit into this narrative and explore these themes. It will also define and develop its overall critical lens of ecocriticism, as this will analyze the books as a commentary on humanity's treatment of the

environment and view the books' connection with cultural beliefs and political viewpoints. Following these definitions, the analysis will, therefore, try to unravel how the novels build their critique of the anthropocentric society, placing attention on certain central themes such as human interference and exploitation, the consequences of environmental destruction, and hope against despair.

Before proceeding with a closer look at Atwood's novels and the critical terms, it is beneficial to view the context for some of the concerns brought up in the trilogy as the background for these issues gives a better understanding of their relevance concerning present-day literature and politics. Humanity's exploitation and degradation of natural environments have had devastating consequences. From the Industrial Revolution in the 18th century until today, new technologies and inventions have increased the greenhouse gas emissions while improved agriculture and sanitation accelerate the population growth ("The Discovery"). Atmospheric emissions are one of the biggest reasons for human-induced climate change, which is altering the world's ecosystems. Moreover, they are also creating extreme weather events that have become more commonplace, from hailstorms to heatwaves to tropical cyclones ("The Discovery").

Additionally, human overpopulation and poor waste management have furthered the climate change crisis as the planet is not able to sustain these forces (Anderson 252). The worries of the future of the planet had a significant influence on Atwood's writing of the trilogy. She states that her motivation for *Oryx and Crake* was "worries about the effects of climate change" (*In Other Worlds* 94). The novels, thus, explores how bad it potentially can become if humanity's treatment of the planet continues in the direction it is currently heading.

Recent developments in technology and bioengineering have raised more questions on humanity's influence on the planet. The human species has unintentionally destroyed nature and moved the Earth system into the new geological epoch of the Anthropocene, a suggested new period to describe humanity's activity and impact on the planet (Bonneuil and Fressoz 11). Climate change politics are more prominent now than ever with the knowledge of how humans are responsible for a lot of these issues. Scientists and activists brought concerns regarding the planet's future to the forefront in the aftermath of the Second World War, which propelled environmentalism into an eminent movement (Robertson, "World War II").

More notably, people began to question what the world could come to when we were able to manipulate nature to the point of destruction (Edgerton 28). The potential for ruination humanity now possessed became more evident and feared after the nuclear bombings. Similar

worries inspired Atwood's literature. She writes that what drives her storytelling impulse is mostly represented by the question: "How badly have we messed up the planet?" (*In Other Worlds* 94). The *MaddAddam* books are some of the many contemporary novels that conjure apocalyptic scenarios based on the concerns of humanity's influence on planet Earth.

The worry of where science and technology are taking us, in conjunction with humanity's irresponsible use of it, is one of the main issues Atwood's trilogy examines. Bill Joy, a computer scientist, who in the year 2000 wrote a notorious essay called "Why the Future Doesn't Need Us", challenges the 'create first, think later' method applied to modern science. He claims in his text: "Failing to understand the consequences of our inventions while we are in the rapture of discovery and innovation seems to be a common fault of scientists and technologists" ("Why the Future"). This skepticism, or fear, of modern science, called technophobia (Dinello 2), has increased since the drastic evolution of weaponry and gene manipulation. Many people fear that technology could one day be the end of humanity and our planet. Atwood delves into these worries in her novels with her portrayal of a corporation-controlled world filled with unethical scientists. However, she articulates that "hate not bombs, destroy the cities" (Atwood, "Interview"). Thus, she establishes that technology in itself should not be feared, but the knowledge in the wrong hands.

Atwood further explains that what encouraged her writing was not only the research she did on climate change and biotechnology, but also questions of "can we dig ourselves out?" (*In Other Worlds* 94). These types of questions create the basis of her trilogy: questions regarding human destruction of the planet and whether or not it is too late to change. Debates on our planet's future are eminent in current political topics, as well as contemporary writing. In *Writing with Intent* from 2005, Atwood notes that human civilization is about to exhaust the planet: "the rules of biology are as inexorable as those of physics: run out of food and water and you die ... no animal can exhaust its resource base and hope to survive" (285). Humanity is on a path of self-destruction and needs to change. In *MaddAddam*, the change did not come soon enough, which generated the apocalypse and humanity's conclusion. However, Atwood still leaves the readers with a bit of hope for the future in her melancholic and somber post-apocalyptic world.

Although Atwood herself is not enthusiastic about placing her novels in the apocalyptic genre (*In Other Worlds* 93), there are many factors of her trilogy that fit this categorization. Furthermore, Atwood's trilogy is also a contribution to the list of dystopian fiction, according to some critics (Roberts "Book Review"; Walter, "Pigeons"). However,

Atwood declares that all her novels are “ustopian”. With this expression, she signifies that elements of both utopia and dystopia are present (*In Other Worlds* 86). Utopia is considered a good, near perfect, place, whereas its counterpart, dystopia, covers the negative sides of society and often portrays a worst imaginable scenario (Booker and Thomas 65). Atwood argues that her books are both utopian and dystopian because “each contains a latent version of the other” (*In Other Worlds* 66). Therefore, readers might perceive her trilogy as a dystopia at first glance, but she has left a hidden utopia in the grim post-apocalyptic landscape. Heise argues that if dystopia is a degraded society, then post-apocalyptic fiction is essentially synonymous with dystopian fiction (Hicks 7). Dystopian, apocalyptic narratives can hence explore the worst outcomes of our global warming crisis. Atwood does this and still brings a hopeful element to her stories.

The various topics Atwood explores in her novels, such as environmental degradation, technological advances, and bioethics, have been examined and criticized by numerous scientists, activists, and writers. With an ecocritical perspective, the reading of the novels shows a connection between these issues. Axel Goodbody defines Atwood’s trilogy as a book where global warming is just one of several ways in which human actions are irreparably changing the natural environment. Humanity is also changing the environment through reckless science and experimentation (Goodbody and Johns-Putra 2). The novels explore the apocalyptic theme as a global pandemic induces the annihilation of humanity, and in its wake, are genetically engineered creatures constructed to save the planet and live in harmony with nature. Through the creation of the Crakers, ‘the perfect humans’, Atwood expresses humanity’s vices and our downfall. The trilogy recognizes the ecological disruption caused by human action and condemns the exploitation of nature by the corporate, consumerist-driven society, bringing up themes of the Anthropocene.

1.1 Significant Terms

Since this thesis is examining Atwood’s novels apocalyptic narrative and criticism of the anthropocentric and capitalist beliefs through an ecocritical perspective, it is necessary to review and define the terms before analyzing the novels. These descriptions provide a deeper understanding of how the novels are interpreted and will be an aid in answering parts of the research questions.

1.1.1 The Anthropocene

The Anthropocene and anthropocentrism are essential terms for this thesis. The word anthropocentrism describes humans as the most significant entity in the universe and regards nature in terms of its value to humans (“anthropocentrism”). This description is fitting for many of the leading corporations in Atwood’s novels. Moreover, it is partly contributing to the environmental destruction that is taking place in the trilogy. With humans’ domination over nature, the new suggested geological epoch, the Anthropocene, is also called “the age of man” (Bonneuil and Fressoz 13).

Humanity’s relationship with nature changed in connection with the Scientific Revolution of the 16th and 17th centuries. The era arose a new view of science; nature went from being respected and praised to be regarded as a machine. This recent information obtained during the Scientific Revolution put strains on old thinking and ideologies (Brush et al., “Scientific Revolution”). Because of this new outlook, a patriarchal view on nature emerged. Francis Bacon, credited as the developer of the scientific method, believed nature had to be “hounded in her wanderings” and “bound into service” (qtd. in Capra and Mattei 61). Nature was to be put into constraint and tortured for her secrets. Bacon viewed nature as a female whose secrets he could abuse out of her (Capra and Mattei 61). Thus, Bacon’s scientific work represents the influence of patriarchal viewpoints on scientific thoughts that have led to a culture exploiting nature for its own needs. The *MaddAddam* series reflect on these thoughts through the scientists in the corporations and the Church of PetrOleum.

This growing sense of nature as a resource for exploitation and profit also comes out of an emerging capitalist-patriarchal worldview. The capitalist society’s privatization uses technology as a means of control and manipulation. Human demands and desires have increasingly been given more worth than all else. Earth’s needs and the importance of protecting our planet has been stripped away in favor of humanity’s greed and cravings. Humankind is given intrinsic value through anthropocentrism (Loomis et al., “Is Human Greed”). With this mindset, humans reduce the world to only having instrumental value. In other words, it is purely regarded as necessary to what it provides or does for us. Caroline Loomis et al. argue that because of this viewpoint, the environment “becomes a malleable plaything” (“Is Human Greed”) where humans can derive anything we want, with consideration for our needs and without concern of the consequences to our planet.

These beliefs mimic the worldview of Atwood's leading corporations. This perspective and the capitalist society's greed contribute to the extinction of many species and a planet nearing the end of its limits. Various scientists argue that the Earth has entered a new geological epoch, the Anthropocene, that describes humans' interference with the planet for the last couple hundred years. Human overpopulation, consumerism, and the growth of technology have arguably pushed the planet into this new era. Christophe Bonneuil and Jean-Baptiste Fressoz call the modern age as "the sign of our power, but also of our impotence" (11). It shows the power humans have as we control nature, but also our weakness as this control can lead to our extinction. The high level of carbon dioxide has made the Earth's atmosphere suffer to the point where the world has become warmer, and there is a higher risk of extreme weather catastrophes, higher sea-levels, and a climate out of control (Bonneuil and Fressoz 11). These changes lead to numerous endangered species, the damaging of agriculture, and loss of biodiversity (Morton 2).

The label Anthropocene was proposed by Paul J. Crutzen in the early 2000s to explain that what has happened to the planet is not just an environmental crisis but a geological revolution. The human species "unconsciously destroyed nature to the point of hijacking the Earth system into a new geological epoch" (Bonneuil and Fressoz 11-12). The future of our world is in our hands, and, as Buffon stated in 1778, "the entire face of the Earth today bears the imprint of human power" (qtd. in Bonneuil and Fressoz 16-17), and this power has only increased with the years. The greenhouse gas emission that started in the Industrial Revolution has led humanity into this geological epoch where the destructions to the environment are so severe that scientists assume that at the current rate, "20 per cent of the planet's species will have disappeared by 2030" (Bonneuil and Fressoz 19). Human activity is responsible for this and, therefore, change is necessary to help the planet and life on it.

This inappropriate use of science is brought up in Atwood's storytelling, as well as how greed and unclear moral values in capitalist societies are the leading cause of environmental destruction. The *MaddAddam* world consists of scientific corporations that take advantage of the inhabitants and damage the environment in the process. As Maxwell J. Mehlman suggests, "exploitation goes hand in hand with corporate greed" (25). Science and biotechnology are engineered for profit rather than for the good of the people. Concerns about how the various corporation in her novels exploit both nature and humans for their benefit are investigated further in Atwood's trilogy. The stories portray a future where capitalism's destruction of natural resources and the use of greenhouse gas-emitting fuels to meet the

material demands of a growing human population will generate ecological disasters and societal collapse – eventually leading to a planet inhabitable for humans. Humanity’s faults and vices are essentially what drives the scientist, Crake, to end humanity as the apocalypse begins.

1.1.2 Apocalypse

This thesis argues that Atwood’s apocalyptic narrative is a tool for criticism. The terms Anthropocene and apocalypse are essential in connection with each other as Atwood depicts the end of humanity, which essentially represents the ending of the Anthropocene and humanity’s domination. The apocalyptic event is mainly caused by ‘the age of man’ and with the context of apocalyptic fiction, how Atwood’s trilogy innovates within this genre is made clearer.

The word apocalypse is mostly associated with the so-called End of Times. Whereas the term initially originated from mythology about our end, the name is mostly associated with the more contemporary narratives. The term has become more than a story of the end times but also “a vehicle of social criticism” (Rosen xii). Apocalypse comes from the Greek word, apokalypsis, meaning “uncovering” or “unveiling”, relating to how, on the Last Judgment, God determines the fate of all souls. This judgment is an essential factor in the original myth and, therefore, has become a crucial instrument in the criticism of behavior in newer apocalyptic stories (Rosen xiii). Atwood’s novels thus give a critique of the corporate-controlled society and our treatment of climate change.

The Cambridge Dictionary gives two definitions of the word apocalypse. One relates to the biblical story of “total destruction and end of the world”, and the other definition reads: “a very serious event resulting in great destruction and change” (“apocalypse”). The latter description relates more to newer apocalyptic literature, which often focuses on life after the moment of cataclysm. James Berger argues this as well, as he explains how nearly all apocalyptic texts have an end that is never really the end: “something remains *after the end*” (Berger 5, emphasis in original). The narrator of J. K. Rowling’s *Harry Potter and the Deathly Hallows* from 2007 also notices this when he asks: “The world had ended, but why had the battle not ceased?” (Rowling 513). There always seems to be enough life left to start a new beginning, but the new beginning does not result in a new, perfected world as the original

myth suggests. There is still a battle to be fought, which brings up the themes of post-apocalyptic narratives.

In contemporary post-apocalyptic fiction, the world after the catastrophe seems to revolve around the remaining humans' fight for survival. Maria Manuel Lisboa observes that "what tends to follow imagined apocalypse is essentially the past repeated" (Lisboa 63) and, therefore, not the promise of reward. On the other hand, Janet Fiskio suggests that "the collapse of civilization following the apocalypse allows for the rebirth of society as a utopian community" (Fiskio 14). Recent apocalyptic fiction, however, focuses on the survivors and their post-apocalyptic world, which seems to represent more hell than heaven. Atwood offers an element of hope in her narrative. The apocalypse is hence never a total destruction, but a destruction on a vast scale. In Atwood's novels, what is destroyed is the human population; however, Fiskio's hope for a utopian society is still present through the peaceful Crakers.

The apocalyptic theme became popular in science fiction writing after the atomic bombings and the Cold War nuclear tensions of the second half of the 20th century (Booker and Thomas 53). According to Susan Sontag, science fiction films of the 1950s popularized the apocalyptic genre. She notes that they "are typically about disasters wrought by the irresponsible use of science" (Booker and Thomas 53), which also inspired Atwood's writing. As the atomic bombs caused the anxiety of a potential end to grow more intense, two other events likewise inspired apocalyptic storytelling and increased the apocalyptic fears. The first was the threat of global pandemic with the HIV/AIDS epidemic of the 1980s and, in more recent years, the swine flu pandemic of 2009. The second event is the global climate change that has led to ecological destruction worldwide. The impending disaster of global warming and pandemic viruses have had a prevalent influence on apocalyptic writing because of their fearful nature and the uncertainty about the survival of the planet and our future on it (Rosen xix). Atwood explores both of these themes in the *MaddAddam* trilogy.

Post-apocalyptic fiction has, therefore, become a way of social critique and commentary (Booker and Thomas 55). As the original myth passes judgment on all souls, the contemporary apocalypse does the same through social criticism (Rosen xii). Berger describes that apocalyptic and post-apocalyptic fiction give critique by portraying a world filled with "moral rotteness and technological, political, and economic chaos" (7), where only a purifying cataclysm can make a new world stripped of the old world's infections. This post-apocalyptic world always consists of people from the past that can tell the story of society before and explain what went wrong, thereby their stories function as a cautionary tale (Rosen

xv). This is also true for Atwood's books as the group of survivors tell stories of life before and show the previous world's mistakes.

The *MaddAddam* trilogy shows both the world before the cataclysm and after. Atwood imagines how the planet looks like without humans. Lawrence Buell argues that the "apocalypse is the single most powerful master metaphor that the contemporary environmental imagination has at its disposal" (285). Many influential books use the apocalyptic narrative as a form of activism (Garrard 93). Greg Garrard points out that in several of these narratives, the disaster is unpreventable. However, he believes that the meaning behind post-apocalyptic literature is not the impending doom, but the belief that it is not too late if they take action to change now. Garrard states that "only if we imagine that the planet has a future, after all, are we likely to take responsibility for it" (107). Therefore, Atwood offers some sense of hope, although the post-apocalyptic landscape is without humans.

The apocalypse as a genre has, as Josef Broeck suggests, gone from its historical and biblical roots to a genre without "common agreement on the form, content, or function of apocalyptic thinking and writing" (Broeck 94). Apocalypse has become a description of catastrophe or disaster. Modern apocalyptic narratives, according to Heather J. Hicks, do have several comparable characteristics, however. Together with a worn-out group of survivors, the post-apocalyptic planet often contains defunct technologies, desperate scavenging, and extreme violence, sometimes represented by cannibalism and a mob of outlaws (Hicks 5). Atwood's books follow these traits as well. These post-apocalyptic texts show that what many fears the most is, what Hicks calls, global ruin: "the fear of the *loss* of global perspective" (7, emphasis in original). As technology no longer works, the characters in these narratives are unaware and uncertain whether there are other survivors. Thus, this lack of information creates a feeling of loneliness and uneasiness as they wonder if the rest of the world suffers as they do.

Atwood's *MaddAddam* trilogy is considered post-apocalyptic by many reviewers and writers (Booker and Thomas 61; Heise, "What's the Matter"; Hicks 27). Hicks names the trilogy "Mother of All Apocalypses" (27). The novels fit into many of the characteristics of apocalyptic fiction discussed above. However, as previously mentioned, Atwood argues against this view. In her book, *In Other Worlds*, initially published in 2011 before the last part of the trilogy, Atwood acknowledges that her novels often are described as apocalyptic. Still, she disagrees with this statement and explains that "in a true apocalypse everything on Earth

is destroyed, whereas in these two books the only element of what's annihilated is the human race, or most of it" (93). Thus, Atwood argues that in order to categorize books as apocalyptic fiction, there needs to be another entity affected other than the human species.

Moreover, Dana Phillips suggests that the novels "may be characterized less as an apocalypse and more as an implosion" (Goodbody and Johns-Putra 50) and hence agree with Atwood's claim. Atwood and Phillips, therefore, dispute the novels' descriptions as apocalyptic. Atwood has instead referred to *Oryx and Crake* as "an adventure romance" (*In Other Worlds* 517). Booker and Thomas, on the other hand, mention that post-apocalyptic narratives often contain an element of heroic adventure (61). There are, thus, apocalyptic aspects found in her novels, which contribute to Atwood's criticism of social and political conventions.

Apocalyptic fiction serves as a tool for social criticism, but it can also work as a cautionary tale warning the readers of what could happen if we do not change our ways. Kristi Yeung argues that "apocalypse takes advantage of the predominant cultural fear of the time" (Yeung and Zhang, "The Neverending"). This concept allows us, as Fredric Jameson argues, to reflect on the realities of our age and critique the present-day struggles (286). However, Heise argues that the post-apocalyptic genre has become so recognizable that it has lost its effects to warn or guide readers into action. Although the genre functions as a cautionary tale and social critique, Heise suggests that the texts have lost their political power because of their popularity and have, thus, become routine. She explains that the post-apocalyptic wastelands have become "too reassuringly familiar". Because of this, the narrative has lost its power to warn against certain tendencies in the real world. She believes the apocalyptic scenarios have been recycled too much in the past and criticizes *MaddAddam*, amongst others, as novels that "fall flat" because their futuristic vision only reconfirms viewpoints that already are well-established in the present (Heise, "What's the Matter").

In the post-apocalyptic world Atwood describes, the so-called 'age of man' is no longer visible. Atwood's post-apocalypse portrays a world stripped of human dominance, and nature can flourish without humanity's influence. Atwood's descriptions before and after the calamitous event show the different portrayal of nature. An ecocritical perspective provides the opportunity to analyze the interaction between nature and these cultural beliefs.

1.1.3 Ecocriticism

Ecocriticism is an interdisciplinary study between literature, culture, and the environment and regards how literary texts portray the global climate change crisis and the treatment of nature (“ecocriticism”). Through this definition, this thesis will explore Atwood’s representation of nature and its correlation with culture and anthropocentric perspectives. Cheryll Glotfelty is the first Professor of Literature and Environment. In her book, *The Ecocriticism Reader*, her definition of the term gives a broad playing field for literary scholars as her description reads: “the study of the relationship between literature and the physical environment” (xviii). This extensive explanation of ecocriticism makes the field “suggestive and open”, which is what Glotfelty believes it ought to be (xxii). Ecocriticism takes an earth-centered approach to literature, focusing not only on nature, but other topics such as animals, cities, and technology as well (Glotfelty xxiii).

Ecocriticism is a relatively new critical approach to literature as it did not become a practice in academics until the early 1990s (Glotfelty xviii). Ecocritical thinking was, however, brought to life much earlier by the environmental movement of the 1960s and 70s. Nevertheless, the approach did not become a literary study until a few decades later. The environmental movement, who inspired much of the ecocritical thinking, came in focus with the publication of *Silent Spring* in 1962 by Rachel Carson. She expressed concerns regarding humans’ impact on biodiversity, stating in her book:

The most alarming of all man’s assaults upon the environment is the contamination of air, earth, river, and sea with dangerous and even lethal materials. This pollution is for the most part irrecoverable; the chain of evil it initiates not only in the world that must support life but in living tissues is for the most part irreversible. In this now universal contamination of the environment, chemicals are the sinister and little-recognized partners of radiation in changing the very nature of the world – the very nature of its life. (Carson 6)

Carson’s book brought concerns about the environment to the forefront, which later fused ecocriticism into a literary criticism. Ecocriticism wants readers to explore the world around them and their role in it, assessing how we interact with the environment, both natural and humanmade.

Ecocriticism wants to examine connections between nature and culture by looking at how the environmental crisis influences contemporary literature. Heise defines ecocriticism as

a “triple allegiance to the scientific study of nature, scholarly analysis of cultural representations, and the political struggle for more sustainable ways of inhabiting the natural world” (Heise 505). Ecocriticism views how human culture affects the physical world. The suggested new epoch, the Anthropocene, substantiates humanity’s impact on the environment. Furthermore, the ecocritical framework examines how humans are affected by the planet in return, as well as our place in the ecosphere. With the awareness that human actions affect Earth’s life and that the planet is close to its limits, many writers have, in recent years, begun writing about the consequences of a global catastrophe destroying life on Earth.

Deep ecology is a relevant environmental philosophy regarding Atwood’s novels as post-apocalyptic. In her trilogy, the scientist Crake annihilates the human race due to their greed and overpopulation. As Carson’s *Silent Spring* inspired the environmental movement, the book likewise influenced the concept of deep ecology (Garrard 22). The term deep ecology, first introduced by the Norwegian philosopher Arne Næss, argues that for the Earth to flourish, there is a need for a long-term population reduction all over the world. The human population exceeds the environment’s sustainability, and thus, increasing the result of the climate’s alterations. Therefore, one of the key points of deep ecology is that “the flourishing of human life and culture is compatible with a substantially smaller human population” (Garrard 24). Deep ecologists thus argue for a long-term population reduction around the world. They additionally believe that for nonhuman life, like animals and plant species, to thrive, a smaller human population is required. George Sessions states that deep ecologists wish to encourage an egalitarian attitude towards all members of the ecosphere. This group represents entities such as rivers and landscapes, as well as plant and animal species (Sessions 270). Therefore, the deep ecologists have an ecocentric value-system (Garrard 24).

Næss’ philosophy, as well as the more radical movements, such as the Voluntary Human Extinction Movement and Earth First!, focus on the shift from human-centered to a nature-centered system of values (Garrard 24). They want to distinguish themselves from environmentalism with one of the deep ecology key points, which reads: “The well-being and flourishing of human and nonhuman life on Earth have value in themselves” (Sessions 68). They argue that environmentalists take an instrumental approach to nature, only fighting for the preservation of nature’s resources for the sake of humans (Garrard 24). Humans have been separated from nature since the Scientific Revolution with Western philosophy and culture as the cause of the climate change crisis. However, people criticize this ecocentric belief system for being misanthropic. Earth First! member Christopher Manes’ inhumane and ill-informed

statements about population issues have especially been critiqued (Garrard 25). He states that society should welcome AIDS for its contribution to population reduction (Garrard 112-3). In *MaddAddam*, Crake has relating viewpoints to Manes; however, his beliefs are more extreme as he creates a disease in order to reduce and end the human population.

Since environmental destruction is the reason behind the pandemic that ends humanity in Atwood's books, ecocriticism is an appropriate literary tool to read her novels. Ecocritics want to look at the representation of nature and how the environmental crisis has seeped into the writer's work. In her books, Atwood has pushed humanity to annihilation to save the planet. Ecocritics ask the readers to consider the roles the physical setting play in the literary work and how the author has represented nature (Glotfelty xix). This thesis mostly focuses on Heise's definition of ecocriticism, and will thus analyze the trilogy with the correlation between nature, culture, and politics. Additionally, it will likewise concentrate on deep ecologists' beliefs of humans' role in this world against the anthropocentric worldview. Therefore, through the analysis of these novels, the attention will be on Atwood's representation and treatment of nature, as well as how the setting, the post-apocalyptic landscape, matters to Atwood's social critique.

2 Analysis

The analysis will look at the novels with an ecocritical perspective and focus on Atwood's representation of nature and how she explores humanity's interference with the environment. The analysis will regard the novels as apocalyptic and examine how Atwood's fiction works as a cautionary tale and social critique. The study is divided into three sections. The first is "Human Interference and Exploitation", which takes on anthropocentric and capitalist viewpoints and human manipulation of nature. The second section is "The Consequences" and focuses on the portrayal of nature and human-induced climate change in the pre-pandemic world, which essentially causes the apocalypse. The third part, "The Hope and Despair", will delve into the post-apocalyptic world and how the extermination of humanity has affected the world and its remaining inhabitants. The analysis will go into a close reading of the novels with a focus on the environment and destructions following a capitalist society's exploitations. The significance of the report is the focus on humanity's involvement in the environmental crisis and the consequences our domination has caused.

2.1 Human Interference and Exploitation

In *Oryx and Crake*, Atwood places the readers in a future with a last man on Earth narrative through the character Snowman. Snowman believes to be the only person alive after his friend, Crake, put a lethal virus into a globally distributed pill, which annihilated the human race. In its place, he created his vision of the 'perfect human' in the Paradise Project. These humanoid creatures, referred to as the Crakers by Snowman, wander around naked, eat grass, copulate every third year, and dies at age 30 without any pain or distress. Atwood does not reveal how Snowman came to live with these strange creatures until the end of the book. The novel switches between the present-day Snowman living in this post-apocalyptic world, where he watches over the Crakers and tell them stories of before, the so-called 'chaos', and the past tense world where Snowman, then named Jimmy, grew up in a corporate-controlled society. This section will focus on the abuse of nature by humans and the characters' anthropocentric beliefs about life.

Humanity's exploitation of nature is noticeable in *Oryx and Crake* through the society's most powerful corporations; the corporations that control the world are the scientific compounds. The scientists in these corporations use nature and animals as they please without

questioning the ethics behind it. Joy argues that the scientists' failure to make scientific discovery without considering ethical issues constitutes a gross abuse of power (Joy, "Why the Future"). The scientists in Atwood's technocratic world experiment with nature just for their amusement. This experimentation is especially prominent with the creation of new animal hybrids, such as snat, the snake and the rat, rakunk, the raccoon and the skunk, and wolvog, the wolf and the dog. These animals are something the scientists experiment with for fun, as an "after-hours hobby" (*Oryx* 57). Applying the 'create first, think later' criticism by Joy, the scientists in the novels use nature for their benefit, without consideration for the consequences their experimentation might cause.

The scientists describe that the "create-an-animal" activity "made you feel like God" (*Oryx* 57). In our society, people raise concerns about human meddling with the natural world. In his book, Drees brings up the worries our culture has about the extent of our technological activities, voicing how many criticizes how "we are 'playing God'" (Drees 17). Humanity's power is evident as they create beings that previously were not part of the natural world. These statements of humans tampering with nature show the anthropocentric attitudes in Atwood's society. Drees wonders if scientists are too narrow-minded and concentrated on their inventions, similar to children playing with their toys (Drees 9). Atwood illustrates scientists whose reckless experimentation contributes to the alteration of the environments. They are mainly interested in nature as a resource for their own needs and desires.

Atwood depicts these concerns and questions of "how far is too far" through Jimmy's mother. Jimmy's father was a genographer who worked with creatures called 'pigoons'. The goal of this project was to grow human tissue organs in a pig host, and Jimmy's father worked on "perfecting a pigoon that could grow five or six kidneys at a time" (*Oryx* 25). These pigoons would keep on living and grow more organs, rather than being destroyed when reaped of its extra kidneys. The organs in the pigoons were used from cells from human donors. However, whether these donors were willing or not could be questioned when Jimmy's mother learns that they had successfully grown human neocortex tissue inside a pigoon:

That's all we need ... more people with the brains of pigs ... you've thought up yet another way to rip off a bunch of desperate people ... It's wrong, the whole organization is wrong, it's a moral cesspool and you know it ... What you're doing – this big brain thing. You're interfering with the building blocks of life. It's immoral. It's ... sacrilegious. (*Oryx* 64)

Jimmy's mother believes that the creation of the pigoons is needless and immoral. Additionally, they are exploiting people that are desperate enough in order to make money. The corporations are developing something useful for humans but at the expense of other beings. Human greed has become more important than the protection of nature and humanity; the corporation has no moral value. Loomis et al. argue that with nature as their plaything, humanity can use it without concern for everyone and everything else (Loomis et al., "Is Human Greed"). This is what the leading corporations do in Atwood's trilogy. In order to reach our desires, humans are, in the process, making humans and the environment suffer.

Moreover, Jimmy has similar worries as his mother when he witnesses the ChickieNobs at the compound where Crake works. Jimmy describes the ChickieNobs as chicken breasts on legs without any head and with a high growth rate. After seeing the ChickieNobs and wolvogs at the compound, Jimmy ponders: "Why is it he feels some line has been crossed, some boundary transgressed? How much is too much, how far is too far?" (*Oryx* 242). He questions the ethics behind bioengineering and the manipulation of nature and animals. He reflects his mother's views that humanity is interfering with the components of life and intervening with the natural world. Jimmy grew up inside the compounds and experienced bioengineering through his father's work. However, with the ChickieNobs, he feels that humanity has gone a step too far.

Furthermore, through bioengineering, the corporations also exploit humans, similar as they did with the pigoons. The scientists at HelthWyzer put "hostile bioforms into their vitamin pill" (*Oryx* 247). They are creating diseases, but they are the only ones who have the treatment. As Crake tells Jimmy: "Ideally – that is, for maximum profit – the patient should either get well or die just before all of his or her money runs out" (*Oryx* 248). The workers at HelthWyzer are creating unnatural diseases to make a profit. Thus, they are not only abusing nature but humans as well. In his essay on modern technologies, Joy delves into the issues regarding the development of biological weapons, stating that the knowledge to create these terrible weapons could easily "fall into the hands of rouge nations" (Joy, "Why the Future"). In Atwood's universe, many of the scientists insert these biological weapons in their pills to deliberately cause diseases and death. Crake does the same, only on a much larger scale, with the BlyssPluss Pill that kills humanity. As Crake states: "The best diseases, from a business point of view ... would be those that cause lingering illnesses" (*Oryx* 248). These statements show the fear of humans' ability of destruction as a reality.

In *The Year of the Flood*, the readers learn that Toby's mother was a victim of HelthWyzer's scheme mentioned in *Oryx and Crake*; Toby's mother took HelthWyzer supplements daily. However, she got sick with a strange illness. The corporation arranged for specialized care, with their own doctors. They still charged for the treatment, and her mother eventually died, leaving the family with a substantial medical bill (*The Year* 31). In Atwood's world, the people in charge lack moral values and take advantage of people for their money. The corporations in Atwood's books capitalize on people's health, "using them as free lab animals, then collecting on the treatments for those very same illnesses" (*The Year* 291). In their belief, money and experimentation are more important than people. Atwood portrays a society where knowledge fell into the wrong hands. The scientists in the corporation are destroying the natural world as well as human lives.

Furthermore, human overpopulation is an issue in the trilogy. At the Paradise Project, Crake works on immortality. Humanity was desperate to find a way to live forever. The aspiration for immortality is what Crake refers to as the "human condition" (*Oryx* 344). Thousands of millionaires had gone as far as to freeze their heads "awaiting resurrection" (*Oryx* 264). Although the planet suffers from human overpopulation, people still want to find ways to stop their inevitable expiration date, thus, placing their own needs above the well-being of the planet. In our society, there are many supporters of advanced technology that dream of eternal life. According to John Harris, "the Holy Grail of enhancement is immortality" (qtd. in Mehlmann 19). However, Crake views the concept of immortality a little different: "Immortality is a concept. If you take 'mortality' as being, not death, but the foreknowledge of it and the fear of it, then 'immortality' is the absence of such fear" (*Oryx* 356). Thus, in his creation of 'immortality', he makes creatures that are unaware of the fear of death as he programs them to die at age thirty with no sickness or anxieties of old age.

The greed, indifference, and the anthropocentric views shown in *Oryx and Crake* through the corporation and scientists contrast the viewpoint presented in Atwood's second installment of the trilogy, *The Year of the Flood*. The book follows a parallel timeline to *Oryx and Crake*. However, the story accompanies two girls, Toby and Ren, living in the pleeblands outside of the compounds where Jimmy and Crake live. Hence, the readers get a glimpse into the other side of the divided world. The novel is like *Oryx and Crake* because it jumps between their past lives and the present-day post-apocalypse. In this book, readers learn that Jimmy was not the last man on Earth, as was implied at the end of the first novel. Toby and Ren find themselves not affected by the pandemic, as they were both isolated when the virus

broke out. As the girls reflect on their past, the readers learn that they were both part of the eco-religious group, God's Gardeners. In between each section of the novel, sermons told by the group's leader, Adam One, is presented; in these sermons, he preaches of humans' interference with nature and destruction of the planet, and the coming 'Waterless Flood' that is going to be the end of humanity.

God's Gardeners' members, Toby and Ren, perceive nature from a different angle than the corporations witnessed in the first novel. In the sermons from the Gardeners' leader, Adam One, he often mentions human greed and our contribution to the destruction of the planet. Adam One and the Gardeners are convinced of an impending disaster, "a massive die-off of the human race" due to "overpopulation and wickedness" (*The Year* 56). However, they believe they are going to survive the flood as they are "a plural Noah" (*The Year* 110). Adam One preaches that if everyone were to follow the Gardener way of life, vegetarianism, and avoidance of technology, they would all be witnesses of a significant change to the planet. However, the Gardeners believed that if humanity continued to follow the direction they were currently on, they would soon find themselves at the road's end.

The God's Gardeners expect the Waterless Flood would come to save the planet: "All the real Gardeners believed the human race was overdue for a population crash. It would happen anyway, and maybe sooner was better" (*MaddAddam* 403). These thoughts mirror that of Crake described in the first installment. He, too, argued that the human population was too large for the planet to sustain. Paul R. Ehrlich's *The Population Bomb* from 1968, which incited a fear of overpopulation, predicted a famine due to humanity's population growth. In the *MaddAddam* series, overpopulation, however, did not lead to famine but the extinction of numerous animals and the destruction of the planet. The planet could not sustain all of its occupants. The Gardeners were already awaiting the doom of the human race.

In one of their hymns, they sing: "For Man has broke the Fellowship / With murder, lust, and greed" (*The Year* 16). The companionship between humans and God's other creatures has been destroyed due to man's fall and domination of nature. This brings forward the ideas of Anthropocene, 'the age of man', which contributed to the demolition of the planet and life on it. Adam One's screed is classically anthropocentric. In one of his sermons to the Gardeners about the Fall of Man, he preaches:

In our efforts to rise above ourselves we have indeed fallen far, and are falling farther still; for, like the Creation, the Fall, too, is ongoing. Ours is a fall into greed: why do we think that everything on Earth belongs to us ... God's commandment to "replenish

the Earth” did not mean we should fill it to overflowing with ourselves, thus wiping out everything else. (*The Year* 63)

The Gardeners believe that humans have caused their own downfall. In the pursuit of immortality, they have become greedy and is killing all life on Earth. Humans regard themselves as above all else. Adam One, however, considers humans on the same level as other animals and nature itself, sharing similar viewpoints as deep ecologists. Humanity abused nature, making themselves into gods, as seen in *Oryx and Crake*. In this egocentric way of thinking, humans place themselves above other animals, plants, as well as entire ecosystems. Atwood’s trilogy illustrates that these viewpoints have caused people and the planet suffering.

Moreover, Adam One continues to describe the Fall of Man in one of his other sermons spoken to the Gardeners:

The Fall of Man was multidimensional. The ancestral primates fell out of the trees; then they fell from vegetarianism into meat-eating. Then they fell from instinct into reason, and thus into technology; from simple signals into complex grammar, and thus into humanity; from firelessness into fire, and thence into weaponry; and from seasonal mating into an incessant sexual twitching ... The Fall was ongoing, but its trajectory led ever downward. Sucked into the well of knowledge, you could only plummet, learning more and more, but not getting any happier. (*The Year* 224)

Adam One suggests that our knowledge is what makes us continue to fall. The French philosopher Jacques Derrida observes that Prometheus stealing the fire for humans signifies the first step towards technology, which separated us from the animals (Derrida 389) and led to our downfall. Adam One likewise states this when he says: “from firelessness to fire, and thence into weaponry”. Moreover, Drees agrees with this statement saying that “fire [is] tied up with the emergence of our own species” (Drees 13), which has become one controlled by greed and lust, according to the Gardeners. Adam One argues that our intelligence has made us value ourselves as superior, and, in the process, harmed other species as well as ourselves.

In the last installment of the trilogy, *MaddAddam*, Atwood reunites the readers with the anthropocentric themes of the first book. The Church of PetrOleum pictures humans as higher beings and praises the oil and other toxins. The novel is a continuation of the two previous books and narrated by Toby in the post-apocalyptic world. Through the stories she tells the Crakers, the readers get more glimpses of the past world and the Gardener Zeb’s life

and his brother Adam One, as well as the beginning of the groups MaddAddam and God's Gardeners.

The stories of Zeb introduce the Church of PetrOluem, where his and Adam's father was the minister. This religious cult is the polar opposite of the God's Gardeners. Instead of the Gardeners' belief that everything on Earth has the same value, the members of the PetrOleum Church believed that God made the animals for the sole pleasures and use of man and "you could therefore exterminate them at whim" (*MaddAddam* 238). Thus, they have an anthropocentric viewpoint placing humanity above everything else. Moreover, they would thank God for "blessing the world with fumes and toxins" (*MaddAddam* 137). They believe that gasoline was a gift to humankind and that nothing is more valuable than the oil. Their father, the Rev, preaches that the oil must not be hidden underneath rocks "for to do so is to flout the Word" (*MaddAddam* 138). Rev's beliefs are a part of the society that is fueling the opposition to global warming.

Furthermore, the Rev and his Church were, as Zeb describes them, "death on ecofreaks" (*MaddAddam* 223). The Church of PetrOleum is anthropocentrism embodied. Through the Rev's church, Atwood shows the opposition to climate change and critiques society's beliefs that oil is a human right. The church has commercial stickers that, amongst others, stated: "Solar Panels Are Satan's Work" and "Serial Killers Believe in Global Warming" (*MaddAddam* 145). The statements show that there were people from the pre-apocalyptic world that believed the changes in the climate and the extreme weather they experienced were natural causes and that human-made climate change was a hoax. They preached and thanked the oil and considered renewable energy sources as the devil's work. Atwood contrasts the egocentric beliefs of the God's Gardeners and shows the ideologies of the opposite side as they interpret the word of God to rank human as the superior being.

Ecocriticism wants us to see humankind as deeply embedded in nature and as a part of the natural world. The definition of nature, however, does not include human interactions and inventions ("nature"). Instead of being a part of nature, humans in the modern world see themselves as subjects who use natural environments as objects for their ends, as resources for their gain. Nature has become a victim, as became standard after the Scientific Revolution; nature is a way to further the human agenda. Atwood's fiction shows that not only does this mistreatment of nature lead to the exploitation of humans as well, but it is also destroying then natural environment. The anthropocentric and capitalist-controlled world has led to human overpopulation. Together with our greed, these concerns contribute to the climate change

crisis. Atwood portrays the treatment of nature as one of misuse, which has generated various negative consequences.

2.2 The Consequences

This part of the analysis will focus on the consequences of the exploitation and anthropocentrism viewed in the previous section. In the world before the end of humanity, there are considerable changes to the environmental and numerous extreme weather events. Although it is not explicitly discussed much, but a constant factor in the background, the climate changes have reached new limits in the novel. The destruction of the planet is the reason that Crake kills the human race. Therefore, this division will first focus on the descriptions of environmental degradation through an ecocritical perspective, and then, the pandemic that places these novels in the apocalyptic genre.

2.2.1 Environmental Destruction

When Jimmy was younger, the depictions of a destroyed planet are prominent. Additionally, numerous animals were already extinct or on the brink of extinction. Through stories from Jimmy's mother, the readers get a glimpse into how things used to be and thus how far environmental degradation has come. Jimmy's mother frequently reminds him of how it was better before: "his mother rambled ... about how everything was being ruined and would never be the same" (*Oryx* 71). Furthermore, his mother mentions how many eastern coastal cities got washed away when the sea-level rose so quickly, how her grandfather's grapefruit orchard that had dried up when the rain had stopped coming, how Lake Okeechobee had shrunk to a puddle, and how the Everglades had burned for three weeks straight (*Oryx* 71). These extreme weather cases have much in common with some of the weather we experience in our world today. The climate has become worse than on our planet, which shows that in Atwood's world, they did not get control over the global warming crisis. These depictions, therefore, serves as a warning for what potentially could happen to the Earth.

Furthermore, the throwbacks into Jimmy's past give us a look into how the world was before it all ended. In this version of the world, there are many descriptions of a planet that has already reached its limits. On his walk back to the compound, Snowman remembers the

song they played every Christmas “long after the last time it snowed” (*Oryx* 263). Through this sentence, the readers learn that there is no more snow, which presumably is due to climate changes. When Snowman ponders over the month, he reveals more of these weather changes: “the month could have been October, or November; the leaves still turned colour then, and they were orange and red” (*Oryx* 17-18). This quote implies that the leaves no longer change color and is another evidence of the changing climate.

This idea is further confirmed when Jimmy defines the season as “one of those months that used to be called autumn” (*Oryx* 81). The description indicates that the fall season no longer exists. Additionally, other periods of the year have changed as June had become the wet season: “you couldn’t have held an outdoor event then, what with the thunderstorms” (*Oryx* 203). Jimmy’s memories of the pre-pandemic world show a planet where the climate change crisis has come further than in our own. As Atwood illustrates a narrative in a near-future world, this could potentially be where we will eventually end up, underlining Atwood’s statement that her stories “really could happen” (*In Other Worlds* 6).

Additionally, Atwood depicts other changes in the climate when Jimmy ponders whether people believed bacon was from real pigs or the pigeons:

Still, as time went on and the coastal aquifers turned salty and the northern permafrost melted and the vast tundra bubbled with methane, and the drought in the midcontinental plains regions went on and on, and the Asian steppes turned to sand dunes, and meat became harder to come by, some people had their doubts. (*Oryx* 27)

Jimmy mentions extreme weather changes, droughts, sand dunes, and melted permafrost, for instance, as well as the struggle to produce real meat. In the pre-apocalyptic world, several species were on the brink of extinction, and the climate had suffered much due to human interference and overpopulation. He recalls watching the news, seeing “more plagues, more famines ... more droughts” (*Oryx* 298), and destructions of entire ecosystems leading to the extinction of various species. In the second book, Toby remembers how distasteful it was “dressing up as bears and tigers and lions and the other endangered species she could hear being slaughtered on the floor below” (*The Year* 38). Animal species were going extinct, but still being killed. Toby’s memories portray the anthropocentric beliefs that give man the rights to treat other animals as they see fit.

Some of Jimmy’s acquaintances believe that soon, in the coming years, “the air and light would be artificial” with “the ozone and oxygen layers of Planet Earth having been

totally destroyed” (*Oryx* 285). The planet’s condition before the pandemic is already close to its end. Thus, Atwood’s portrayal of a world in danger signifies the struggles of our planet and where it might end up because of greenhouse gas emissions and humanity’s anthropocentric worldview. As ecocritics are interested in how the environmental concerns has influenced the writers work, there are obvious connections with the global warming crisis in the modern world and Atwood’s depictions of the environment disasters in her writing.

In *The Year of the Flood*, Atwood provides the readers with more information about the MaddAddam group that names the trilogy. The readers learn that MaddAddam is a bioform resistance group that created “microbes that ate the asphalt” and “mice that attacked cars” (*The Year* 399). The MaddAddamites worked against the scientists in the corporations, and instead of destroying nature, they tried to destroy human inventions that were harmful to the planet. Zeb, one of the Gardeners and also part of MaddAddam, believed that “if you could destroy the infrastructure ... then the planet could repair itself. Before it was too late and everything went extinct” (*The Year* 399). Many people had already realized where the planet was heading; they wanted to save it, as well as humans’ future on it. The MaddAddamites show that they can use science in a more positive way. However, with people engrossed in greed and other vices, Atwood shows the difficulty of this.

In *MaddAddam*, there is not much description of the environment before the apocalypse. The focus is mostly on Zeb’s life and how he came to join MaddAddam and the God’s Gardeners. Nevertheless, Atwood still explains the pre-pandemic society as a material world. With most of humanity gone, the technologies and inventions from the past have lost most of its value. Toby views it as: “there were too many people and not enough stuff” (*MaddAddam* 45), but now it has become the other way around. Toby’s thoughts portray the world before the apocalypse as one where overpopulation and extreme weather cases were already an issue.

Through one of Zeb’s stories from his childhood, the readers experience some of the scenery as he and Adam rides past the pleeblands: “piles of gigantic truck tires, heaps of gravel, pyramids discarded ceramic toilets” and “mountains of garbage with dozens of people picking through it” (*MaddAddam* 155). These descriptions of the landscape with “kids standing on the shacks of roofs, on the pile of garbage, on the piles of tires, waving flags made of colourful plastic bags” (*MaddAddam* 155) show a consumerist-driven world, and Atwood brings up the issues of waste management. Thus, Atwood’s portrayal of a society engrossed in their own desires has contributed to a world close to its end.

Moreover, Toby tells the Crakers a story about ‘the chaos’, the world before the pandemic killed humanity. Through her narration, she explains why Crake wanted to get rid of humans:

The people in the chaos cannot learn. They cannot understand what they are doing to the sea and the sky and the plants and the animals. They cannot understand that they are killing them, and that they will end by killing themselves. And there are so many of them, and each one of them is doing part of the killing, whether they know it or not. And when you tell them to stop, they don’t hear you. So there is only one thing left to do. Either most of them must be cleared away while there is still an earth, with trees and flowers and birds and fish and so on, or all must die when there are none of those things left, then there will be nothing at all. Not even any people. (*MaddAddam* 353-4).

This story about the people from ‘the chaos’ indicates our society’s treatment of the planet is why humanity ended. Through Toby’s storytelling, we get a story within a story. As Atwood’s novels are essential to raise awareness of humanity’s treatment of nature, Toby’s story explains in simplified words what and where the human race went wrong, summarizing the previous books’ descriptions of a self-centered species taking part in the world’s demolition.

2.2.2 The Apocalypse

The thesis previously discussed the context and characteristics of apocalyptic fiction. This section will look at the elements of Atwood’s novels that make them post-apocalyptic. The environmental destruction caused by humans is the reason Crake decides to destroy humanity. The apocalyptic event in the *MaddAddam* series is, therefore, the extinction of the human race, and most of the trilogy’s storyline takes place in a post-apocalyptic landscape.

Crake believes that for the Earth to survive, there needs to be a drastic reduction in the human population. Crake explains the issue to Jimmy: “Overpopulation, leading – as we’ve seen in spades – to environmental degradation and poor nutrition” (*Oryx* 345). Crake’s understanding mirrors the beliefs of deep ecologists, arguing that humans are mostly to blame for environmental disasters and that in order to end these devastations, there is a need for a population reduction. His views are similar to the founder of the Voluntary Human Extinction Movement, or VHEMT, Les Knight. They support a full stop in reproduction to gradually end

the human race (Knight, "I Campaign"). However, Crake pushes Knight and deep ecologists' beliefs to the extreme when he decides to kill all of humanity and instead replace it with the bioengineered Crakers.

In the memories of the past, the readers follow Jimmy, locked inside the RejoovenEsense Compound, when the virus breaks out. He watches the news coverage of the virus, seeing street preachers "ranting about the Apocalypse". However, "they seemed disappointed" (*Oryx* 397). The trumpets and angels they were waiting for did not seem to arrive. What they experienced was not the original myth of the apocalypse, but instead, it was approaching a total disaster. The world assembled epidemic managers, field clinics, isolation tents, "then whole cities quarantined". However, "these efforts soon broke down as the doctors and nurses caught the thing themselves (*Oryx* 399). Then the countries closed their borders, all while Jimmy was safely locked inside the compound, watching as "site after site, channel after channel went dead" (*Oryx* 401). The apocalyptic fear of the end was becoming a reality, and Atwood illustrates the moment of cataclysm. The depictions of the expansion of the contagion are not too dissimilar from pandemics in the real world. She portrays the worry about our future on Earth when Jimmy witnesses humanity's final moments: "the end of a species was taking place before his very eyes ... joining the polar bears, the beluga whale, the onager, the burrowing owl" (*Oryx* 401). Thus, adding humans to the list of extinct species.

In the second installment, Toby and Ren also watch the pandemic spread and the start of the apocalypse. However, they have different experiences than Jimmy when the apocalypse hit because Jimmy was safely inside the RejoovenEsense Compound, aware of what Crake had done. The rest of the world did not receive this information. However, Toby and Ren had lived with the Gardeners and were waiting for a similar occurrence to happen. They considered the virus as the Waterless Flood the Gardeners had been waiting for:

This was the Waterless Flood the Gardeners so often had warned about. It had all the signs: it travelled through the air as if on wings, it burned through cities like fire, spreading germ-ridden mobs, terror, and butchery. The lights were going out everywhere, the news was sporadic: systems were failing as their keepers died. It looked like total breakdown. (*The Year* 24)

In most apocalyptic narratives, there is an outside force destroying both the planet and life on it. However, in Atwood's story, the destroyer is a virus killing from within, and it only affects humans. All around the world, people were getting the disease and dropping dead, raising fear and panic. Atwood illustrates the end of an era.

Moreover, Ren likewise watched the world collapse on the news as what was named the JUVE virus was spreading around the globe: “The plague was spreading, and there was rioting and looting and killing going on ... And a few days after that, there wasn’t any more news (*The Year* 337). The lack of communication creates fear and uncertainty of not knowing what is going on. During the virus outbreak, Ren was isolated in a room with no possibility of getting out or contact others. These descriptions create a fear of the unknown.

In post-apocalyptic fiction, the focus is on the world after the cataclysm. Atwood’s novel starts with Snowman’s life after the global catastrophe. As apocalyptic narratives often illustrate the possibility of starting anew, *Oryx and Crake* depicts life after the end as one of loneliness and without much hope. Although an apocalyptic tale aims to reassure the reader that dreams of a better future are not lost, Atwood’s fiction seems to convey the opposite. With environmental destruction and the annihilation of humanity, the novel reveals a rather pessimistic world at first glance. However, with the final two books of the series, Atwood brings more optimism than the first novel provides.

The first book begins, in the post-apocalyptic present, with Snowman as he wakes up to the sound of “the distant ocean grinding against the ersatz reefs of rusted car parts and jumbled bricks and assorted rubble” (*Oryx* 3). Thus, describing destroyed parts of human activity as becoming a part of nature. Snowman then proceeds to look at his watch. However, what before might have given him meaning, now shows him a blank face: “zero hour” (3). ‘Zero hour’ is a phrase with several meanings. Phillips defines ‘zero hour’ as a phrase used to mark the end of history, as the case of the doomsday clock (Goodbody and Johns-Putra 50). Although the readers are not yet aware of what has happened for Snowman to panic over a blank-faced watch, ‘the end of history’ is a fitting term for what the readers later will learn. The phrase could also signify the end of man because of the annihilation of humanity. Thus, it describes the conclusion of the Anthropocene and the start of a new epoch, where human dominance is gone.

Moreover, this absence of official time terrifies Snowman as he realizes that “nobody nowhere knows what time it is” (*Oryx* 3). He is afraid of how it marks the end of time, the end of everything he once knew. As the watch shows him a blank face, there are similarly many “blank spaces in his stub of a brain where memory used to be” (*Oryx* 5). He often finds himself unable to remember the rest of the sentences and grasp the meaning of words of what was before (*Oryx* 5). The human race has died out, and with it, its history as Snowman, presumably the last person on Earth, slowly loses his memories. Yeung and Zhang discuss the

fear of our end that humans possess. However, they argue that we console ourselves with fantasies of being remembered and leaving a legacy (“The Neverending”). In Atwood’s books, the human race has ceased to exist, and Snowman is forgetting the past and memories of before. Hence, the human story will vanish, which creates a more devastating post-apocalyptic landscape where both humans and our story is disappearing.

These thoughts going through Snowman’s mind are typical for apocalyptic fiction, as Hicks described “yearning of lost civilization” (Hicks 6) to be a common characteristic. Snowman feels alone and hopeless for the future; he continually thinks of the past, what is gone, and what he no longer can do. Wishing for beer, Snowman finds himself regretting remembering these pleasures from his pre-apocalypse life: “He shouldn’t have brought that up. He shouldn’t torture himself” (*Oryx* 50). In the post-apocalypse, human inventions and technologies from the past are suddenly gone. The survivors need to find other ways to live than before. Snowman is slowly wasting away as he does not know how to take care of himself in a world without the technologies he grew up with inside the compounds. He asks himself: “What are all those things he once thought he knew, and where have they gone?” (*Oryx* 175). According to Drees, “technology has made us human” (13), and when this is lost, we lose some of ourselves with it. Therefore, Snowman arguably portrays a symbol for humanity. As the last person left on Earth, as far as he knows, Snowman represents what might be humanity’s destiny with technology shaping us and how it now no longer holds any value or meaning.

Furthermore, Snowman finds it difficult to imagine a future and what it will bring him. He longs for the past, but it is slowly slipping from his mind: “He doesn’t know which is worse, a past he can’t regain or present that will destroy him if he looks at it too clearly. Then there’s the future. Sheer vertigo” (*Oryx* 173). His life in the post-apocalyptic world has turned into a fight for his survival, nothing more. Hicks states that common apocalyptic traits are loneliness and mourning of the past (6). Toby, like Snowman, tries not to think about the past; however, she cannot see the future either: “the past is a closed door, and she can’t see any future” (*The Year* 114). She feels hopeless about the past, the present, and the future.

As Hicks defines the baseline for apocalyptic fiction to be the loss of a global perspective, Snowman wonders if there are still other survivors: “Suppose he is not the last of his kind. Suppose there are others” (*Oryx* 260). However, all communication is gone. This new world is the definition of dystopia for Snowman. Similar to Snowman, Toby feels like she is the last one left on the planet in this post-apocalyptic world. She witnessed the end of

humanity. However, she carries more hope than Snowman: “There must be someone else left ... There must be others” (*The Year* 6). Toby finds it challenging to understand that she could be the only one left. However, without communication, the characters are left unaware of how the rest of the world fares. They wonder if people around the globe share the same experiences and pain as they do. When the technologies no longer work, humanity loses its global perspective and its connection with other people. The characters in Atwood’s trilogy have lost this outlook and thus feels lonely and hopeless.

More thoughts go through Toby’s head in *The Year of the Flood*. She ponders over how, before the pandemic, people knew that something was wrong and feared that something would happen. However, people pretended that everything was okay because the fear of the end was not bearable:

I knew there were things wrong in the world, they were referred to, I’d seen them in the onscreen news. But the wrong were wrong somewhere else. By the time she’s reached college, the wrongness had moved closer. She remembers the oppressive sensation like waiting all the time for a heavy stone footfall, then the knock at the door. Everybody knew. Nobody admitted to knowing. If other people began to discuss it, you tuned them out, because what they were saying was both so obvious and so unthinkable. *We’re using up the Earth. It’s almost gone.* (284-5, emphasis in original)

The environmental destruction was already happening. However, as it did not affect the people directly, people tended not to care. The Mediterranean had turned into a desert, the Amazon river had dried up, the ocean temperature rose, and entire ecosystems were slaughtered (*The Year* 109). Nevertheless, people ignored these problems. The thoughts of Toby reflect our contemporary society, where climate change issues are either neglected or not taken seriously enough. Adam One ponders about humans’ domination and destruction of nature and asks: “why would God give us another Earth when we have mistreated this one so badly?” (*The Year* 508). Humanity carelessly demolished their world, as well as many creatures in it. Adam One’s question reflects the truths about our planet, there is only one Earth, so human needs to treat it justly.

The apocalyptic narrative is a popular topic in both contemporary novels and movies. Heise argues that the apocalyptic narrative has lost its power because of its overused themes. In *MaddAddam*, Toby remembers how they often watched shows about “what the world would be like after human control of it ended” (44). However, these shows only worked as a form of entertainment and did not warn or guide the people watching into action. Toby sees

these mistakes now when it is already too late and is reminded of the “earnest experts lecturing about all the wrong turns taken by the human race. We didn’t take it seriously enough” (*MaddAddam* 44). These thoughts mirror our society, and how there are many warnings from both experts and fictional narratives about the destruction of the planet and our near end. Nevertheless, the reactions are not severe enough and not fast enough to help change the path we are on.

Therefore, the environmental degradation caused by human greed and overpopulation was the reason Crake annihilated humanity through the JUVE virus. Post-apocalyptic narratives often describe how there is still a battle to be fought. In Atwood’s novels, there is a fight for survival amongst the remaining humans. However, for the animals, plants, and other species, their hardest fight has ceased now that humanity is gone. Their biggest destructor has vanquished, allowing them to grow and flourish. Although the survivors perceive the post-apocalyptic world as dark and depressing, Atwood ‘ustopias’ contain elements of hope against the despair.

2.3 The Hope and Despair

The post-apocalyptic world, where most of the human race has vanished, still shows hope for a better world, depending from what angle the readers perceive it. Although most of humanity is gone, nature and the planet are now flourishing and living well. The future does not, however, look bright for humanity. The small group of survivors is struggling in this new world. The Crakers, made to replace humans, diverge too much from many human traits, which the remaining humans have difficulties with. This part of the analysis regards the hope for a better world in the post-apocalyptic planet and the despair of humanity’s future.

With an ecocritical outlook on the descriptions of the environment in the post-apocalyptic present, nature’s power is evident. The natural world is consuming the human-made objects in the urban areas that are now wrecked and ruined. In *Oryx and Crake*, Snowman witnesses the remains of human construction as he wanders through the pleeblands. Snowman sees wrecked solarcars, “some piled up in multi-vehicle crashes, some burnt, some standing intact as if temporarily parked” (259). The illustrations represent the fall of humanity and their conclusion. The buildings that once held roof gardens, are now “top heavy with overgrown shrubbery” (109). He regards the vines that are growing everywhere, “draping the windowsill, climbing in through the broken windows and up the bars and grillwork” (260).

After the virus killed everyone, vines and weeds consume the remnants of human life and, therefore, reverse the role between man and nature. Man's domination over nature is now gone, and slowly, human creations are destroyed and replaced by it. Snowman understands this as he wanders through the debris of humanity with "the botany ... thrusting itself through every crack" and he realizes that "it won't be long before all visible traces of human habitation will be gone" (*Oryx* 260). These portrayals emphasize the Earth's flourishing without humans, and ends the Anthropocene epoch.

In *The Year of the Flood*, the descriptions of the post-apocalyptic world, as Toby and Ren wander through the pleeblands after the virus outbreak, show similar ideas of a thriving world as *Oryx and Crake*. The novel opens with Toby, locked inside the AnooYoo spa, looking out from the rooftop of a building to see "abandoned towers in the distance", which she compares to "coral of an ancient reef – bleached and colourless, devoid of life" (3). The buildings are now empty and, similar to the coral reefs, they no longer contain any life. Toby compares the construction to colorless coral reefs as they, too, have lost their inhabitants. However, there is still a difference, where Toby is, there is still life, just not human life. The birds still chirp, "their voices are clear and sharp, nails on glass: there is no longer any sound of traffic to drown them out" (*The Year* 3). As the world no longer includes the human race, other species can live more freely. They can chirp and sing, and human activity is not wrecking their embellishment. These changes connect with the thoughts of the Gardeners, and the deep ecologists' beliefs.

Additionally, Toby views the remnants of life before as she stands on the rooftop and watches the abandoned streets of the pleeblands. She describes a minivan crashed into a tree, how the lawns have grown up, and the tall weeds (*The Year* 3-4). These descriptions help us imagine how the world looks like now, with known objects from the past. The portrayal contrasts the car, a human invention that has crashed and is destroyed, with nature's grass and weeds that are growing and thriving. Moreover, Ren similarly watches commodities from before the flood as she walks through the pleeblands: "There was a lot of trash cluttering the streets – burnt things, broken things" (*The Year* 404). She sees things from the past, now demolished and no longer in use; she compares it with a dollhouse turned upside down and broken (404). However, it was not the burned buildings and turned over cars that bothered Ren the most, it was the small, ordinary things, "the hats ... the shoes ... the kids' toys" (*The Year* 405). These imageries represent a world that no longer exists, which strengthens the feeling of sadness of a lost species.

In the concluding novel of the series, Atwood brings the characters from the first two installments together. In *MaddAddam*, the storytelling mostly surrounds the post-apocalyptic present. At the Cobb house where the survivors reside, Toby thinks of how normalities of the past look different now:

All patios must be derelict now, the swimming pools cracked and empty or clogged with weeds, the broken kitchen windows invaded by probing green snoutlets of vines. Inside the houses, nests in the corners made from chewed-up carpets, wriggling and squeaking with hairless baby rats. Termites mining through the rafters. Bats hawking for moths in the stairwells. (*MaddAddam* 43)

These descriptions of the post-apocalyptic world, seen in all three of the books, show how human creations no longer have any power. It is taken over by nature, its plants, and animals. With human interference gone, nature is now flourishing as the deep ecologists believe would happen with a population reduction. These depictions also show the readers the difference between this new world and our own. Without humans keeping animals and plant life from growing, our world, the anthropological world, vanishes. In the world before the disaster, Adam One lectured to the Gardeners: “Once the tree roots get in ... no human-built structure stands a chance” (*MaddAddam* 43). The natural world is forceful and will easily wipe away the human foundations when we are not there to stop its natural course.

However, for Snowman, the growth of other plant and animal species is not necessarily a positive thing. He only sees “the evidence of destruction and death” (*Oryx* 410). His world, and what he knows, have all been destroyed or no longer hold any value:

Strange to think of the endless labour, the digging, the hammering, the carving, the lifting, the drilling, day by day, year by year, century by century; and now the endless crumbling that must be going on everywhere. (*Oryx* 50)

He finds it hard to see this as a positive outcome when everything he once knew is slowly decaying. Although nature is blooming, Snowman experiences the crumbling of man’s establishments as difficult. In *The Year of the Flood*, while they wander through the remnants of human life, they see arrays of rag and bone. One of the Gardeners refers to them as “ex-people” (404), essentially stating that the remains they are walking through are part of the ex-world, the last pieces of the age of man. They are now living in a completely different world where human inventions and gadgets have little meaning or necessity.

Nevertheless, Atwood leaves the readers with some hope for the future through the Children of Crake. In Crake's master plan to destroy humanity in order to save the planet, he creates the 'perfect humans' to reinstate the race that ruined the Earth. The Crakers have various characteristics to replace the vices of humans. Crake wanted to get rid of "the features responsible for the world's current illnesses" (*Oryx* 358). Thus, eliminating the features of racism, hierarchy, and territoriality. The Children of Crake only eat leaves and grass, which make food always available (*Oryx* 38). In Crake's eradication, he removes many of the aspects of humanity through his development of perfection:

There would be no family trees, no marriages, and no divorces. They were perfectly adjusted to their habitat, so they would never have to create houses, or tools or weapons, or, for that matter, clothing. They would have no need to invent any harmful symbolisms, such as kingdoms, icons, gods, or money. (*Oryx* 359)

In Crake's belief, these attributes are the causes of the humans' downfall and the demolition of the planet. With advanced biotechnology, Crake can compose these new, pure beings to live in harmony with nature. The Crakers peaceful essence contrast humanity's harmful attributes and, therefore, they represent what humans lack and hence portray the 'anti-human'. Crake created them as a replacement of humanity, as a new, perfected human species. This idea moves the world from the Anthropocene and into a new epoch, which represents a more balanced connection between the planet and its inhabitants.

Additionally, Crake gave other qualities to the Crakers. Sexuality was no longer a worry as the women come into heat once every three years. As the human race frequently copulated, which led to overpopulation, Crake "had worked out the numbers" (*Oryx* 193) and decreed that that once every three years was enough. There would be four men to one woman in heat to keep a sustainable population growth. Unrequited love would, therefore, no longer be an issue. Jimmy, however, does not see the positive aspect of this design: "In your plan we'd just be a bunch of hormone robots ... There'd be no free choice" (*Oryx* 196). Thus, what many consider human, such as the ability to have opinions and act freely, is stripped away in Crake's creation. He built the Crakers without human meaning and knowledge of elements from the human world in the past. Still, Atwood created them as a representation of the utopian hope for the planet's future.

Crake's version of a perfect human is vegetarian, as the Crakers only eat grass, they will not slaughter animals or exhaust the planet's resources. They have a small vocabulary, wander around naked, and they are rid of many human characteristics, such as symbolic

thinking. He, therefore, believed weapons and war could never occur. Crake wanted to eliminate the “external causes of death” (*Oryx* 345). These causes have many similarities to Adam One’s preaching about the Fall of Man. Whereas humans abused nature for their benefits, the Crakers live in unison with nature. The Crakers symbolize the harmonious relationship between the environment and the human species.

Furthermore, the post-apocalyptic world shows the human past slowly disappearing. Words had always been important to Snowman when he was Jimmy. He was interested in unusual words or words no longer in use. He believed that when a “civilization is dust and ashes ... art is all that’s left over. Images, words, music ... human meaning ... is defined by them” (*Oryx* 197). However, he now finds this knowledge from the past, the human meaning, slipping from his mind:

From nowhere, a word appears: Mesozoic. He can see the word, he can hear the word, but he can’t reach the word. He can’t attach anything to it. This is happening too much lately, this dissolution of meaning, the entries on his cherished wordlists drifting off into space. (*Oryx* 43)

As the world he knew crumbles around him, and the people who knew of this world are gone, Snowman slowly finds the knowledge from the past perish. The words no longer carry any meaning because no one is there to understand them or remember them. This loss of meaning connects to not only words but all ideas, phrases, and objects from before the virus. What was once important to the human race is no longer of value. Humans are gone, and with it, their technology, languages, and symbolic meanings.

Additionally, human inventions and ideas do not mean anything to anyone other than Snowman. Therefore, he struggles to explain or discuss things from before the apocalypse with the Crakers as they do not have any awareness of the past, which makes human meaning challenging to express for Snowman. Moreover, simple words that are common knowledge for humans are now impossible and frustrating to explain. Snowman also ponders over this when he tries to explain what toast is: “*Toast is when you take a piece of bread – What is bread? Bread is when you take some flour – What is flour?*” (*Oryx* 112, emphasis in original). He feels hopeless with himself and the world Crake has left him in. Toby and Ren experience the same issues with giving straightforward explanations to the Crakers: “*What is trouble? ... What is a scar, Oh Toby? What is writing, Oh Toby? Oh Toby, I don’t understand*” (*The Year* 25, 112, emphasis in original). Toby has difficulties trying to explain simple words to the Crakers. The simplicity of the Children of Crake makes them farther away from humanity.

Nevertheless, Snowman still imagines writing down his experiences, comparing himself to a castaway writing down what they went through so people can later read their story and know what happened to them. He quickly dismisses the idea when he remembers that he is all alone:

But even a castaway assumes a future reader, someone who'll come along later and find his boner and his ledger, and learn his fate. Snowman can make no such assumptions: he'll have no future reader, because the Crakers can't read. Any reader he can possibly imagine is in the past. (*Oryx* 45-6)

Snowman is utterly by himself. The fear of the end is what has brought the apocalyptic narrative to the forefront. The idea of being remembered is challenging for Snowman as the only ones left on Earth are the Crakers, who cannot read or understand the world of the past. Snowman “feels the need to hear a human voice” (*Oryx* 11). The readers feel the anguish and desperation of Snowman as he is slowly wasting away, losing the familiarity of the past, and with him what we believe to be the last of humanity. The fear of loneliness is very much present in Atwood's writing. She shows a hopeless future for humanity, which accentuates the necessity for humanity to change before it potentially becomes too late as in the novels.

The last novel teaches the readers more about the MaddAddam group and the connection with God's Gardeners. In the Cobb house, the surviving MaddAddamites discuss the Paradise Project they were a part of together with Crake. However, they did not know of Crake's master plan to let the Crakers be the only ‘humans’ left on the planet. One of the MaddAddamites who worked on the project describes the process: “I tried to make them less boring, but Crake wanted no aggression, no jokes even. They're walking potatoes” (*MaddAddam* 29). By trying to perfect humanity, Crake removed what makes humans human. However, the last book shows the Crakers acquiring attributes he initially wanted to remove.

As Snowman becomes ill in the final book, Toby takes over his job as a storyteller and narrates the accounts of Crake, *Oryx*, Snowman, and Zeb. These tales of the past, ‘the chaos’, remains a big focus in the last novel, as it turns into a ritual where Toby has to eat a fish, wear Snowman's red baseball cap, and listen to Crake through a watch before she can tell them the stories. They have created some godlike figure in Crake, which Toby notices as well: “Just tell them it's a Crake thing” (*MaddAddam* 18) as that usually pleases them and satisfies their inquiries. The Crakers are becoming more alike humans; thus, the question arises if the Children of Crake will serve as the utopian hope for the planet after all. The Crakers are “doing several things we didn't anticipate during the construction phase” (*MaddAddam* 331),

one of the MaddAddamites says. The Crakers are doing more than intended by Crake, and humans' other, more damaging, characteristics humans could, therefore, come forward.

Moreover, Toby teaches one of the Craker children, Blackbeard, how to read and write. However, when she realizes that he picked this up pretty fast, she asks herself:

Now what have I done? They're so quick these children? What comes next? Rules, dogmas, laws? The Testament of Crake? How soon before there are ancient texts they feel they have to obey but have forgotten how to interpret? Have I ruined them?"

(MaddAddam 250)

She wonders if the little hope that the Crakers carried is ruined by the group of survivors teaching them human thinking. At the end of the book, Blackbeard takes over as the narrator. He tells the last part of the story as Snowman, Toby, and Zeb are gone. Blackbeard has written down the stories of the last surviving humans, as well as the tale of Oryx and Crake. The Crakers have, therefore, both created godlike figures in Oryx and Crake and written down their stories like a testament. Similarly, Blackbeard continues the ritual of the red hat and the watch as he listens to the words of Crake. Therefore, the uncertainty of the future is still present as the anxiety of whether the Crakers will obtain more of the qualities of humanity that Crake wanted to eliminate, essentially will create a new cycle of greed and exploitation.

Atwood's depictions of the blossoming natural world and the Crakers represent the hope for the future. However, although nature and animals are prospering, the environment still experiences extreme weather events. Even with human involvement gone, there is still proof of the impact humans had on the environment. Snowman still encounters extreme weather and describes the afternoon storm as an ordinary, daily occurrence: "He awakes to thunder and sudden wind ... Sometimes there are hailstorms as big as golf balls" (*Oryx* 49). These weather changes show that human greenhouse gas emissions still influence the planet's climate. Some scientists argue that even if all greenhouse gas emissions were to stop immediately, global warming would continue for thousands of years ("The Discovery"). Thus, the depictions show that human technology and interference have permanently damaged the planet. Atwood, arguably, wants the readers to understand the significance our influence has on future generations.

Oryx and Crake ends when Snowman finds out he is not, after all, the last man alive as he spots two men and a woman down by the beach. The final paragraph of the book brings the readers back to the beginning of the novel as it states: "From habit he lifts his watch; it shows

him its blank face. Zero hour, Snowman thinks. Time to go” (*Oryx* 433). Atwood brings back the ‘zero hour’ phrase that at the beginning of the novel fits the description of “the end of history”. However, as Snowman now has figured out he is not the only one left, he must choose between approaching the other humans or to stay away as they might want to harm him. Merriam Webster defines ‘zero hour’ as “a time when a vital decision or decisive change must be made” (“zero hour”). Snowman has to choose between his two options. However, the phrase could also refer to our contemporary society. Time is running out regarding climate change. The phrase could, therefore, be a reminder to the readers to take action and change to save the planet and our future on it.

3 Discussion

The analysis explored the novels' portrayal of human interference and exploitation, and how the age of man has caused environmental destruction and climate changes. Human greed and overpopulation have partly made the planet inhabitable for many species, as well as humans. Therefore, Crake decides to end humanity through a global pandemic, and only a few humans are to be found in the post-apocalyptic scenery together with the so-called 'perfect humans', the Crakers. Although the first part of the *MaddAddam* trilogy was published almost twenty years ago, the themes introduced in the novels are certainly still relevant today. The stories' exploration of the climate change effects shows where the world might end up if Earth's limits get pushed too far. With the fear of the world's potential end and our future lives on it, climate change debates have become prominent now more than ever. Through Crake's masterplan of human demolition, the books likewise investigate the fear of a global pandemic. Therefore, it is difficult not to see the similarities with the ongoing epidemic in our society when the Covid-19 virus is spreading worldwide.

As I am writing this thesis, Covid-19, or the Coronavirus, is rapidly infecting people around the globe. Slowly, throughout my writing process, Covid-19 went from a virus emerging in China to a global pandemic with millions of infected across the world (The Visual Journalism Team, "Coronavirus"). In Atwood's story, the JUVE virus kills most of the human race, and although her plague is human-made and designed for destruction, there are resemblances between the story and our world's experiences. The majority of the books' inhabitants are not aware of Crake's scheme, and the reactions to the epidemic explained in the books correlate with those in our society. As Jimmy watches cities quarantine, countries closing their borders, and hospitals setting up field clinics, it is frightening to observe the comparable responses in our world. The Coronavirus has led to governments worldwide halting flights, cities and entire countries closing their borders, and people being encouraged to stay home and keep a distance from each other (The Visual Data Journalism Team, "Coronavirus").

Although the pandemic and the climate change crisis are separate issues, there are still comparable aspects. Helen Regan of the CNN news team argues that "both are global crises that threaten the lives of millions of people" ("The World"). The fight against global warming is a slow process; however, with the pandemic, the world suddenly came to a halt. Like Covid-19, global warming is a global health issue with air pollution killing over four million

people every year, according to the World Health Organization (“Air Pollution”). The Coronavirus’s sudden and drastic interruption in our everyday lives has shown air pollution and greenhouse gas emission decreasing. The pandemic has produced the most significant decrease in emission from the 20th century until today. However, the strategies in place to contain the virus will not remain for long; the closedown of countries is not a sustainable option (Lombrana and Warren, “A Pandemic”). Nevertheless, this reduction in greenhouse gas emissions proves that the changes needed to save our planet might be possible to a lesser degree. The pandemic shows that humans are the virus to the planet.

Atwood’s trilogy discusses essential and relevant topics of today’s society: the climate change crisis and pandemics, which both have created apocalyptic fear and a growing awareness of the planet’s uncertain future. Whether an environmental disaster causes the end, a nuclear war or a pandemic, humanity’s fear of the end of our race has made apocalyptic fiction a popular means for exploring such concerns. Atwood brings various of these issues to the forefront, as seen with the setting’s environmental disasters and the unethical scientific corporations controlling the world.

Atwood wants to explore the consequences of these actions and how bad it potentially can become. In her book *Writing with Intent*, she explains she bases her motivation for storytelling on the questions: “*What if we continue on the road we’re already on? How slippery is the slope? What are our saving graces? Who’s got the will to stop us?*” (286, emphasis in original). The ‘slippery slope’ she mentions is the path we are currently on as humankind takes advantage of the environment around us and disrupt the ecological balance of the planet in the process. The novels explore this path and the devastations it constructs as the analysis examined.

The first part of the analysis viewed human interference and exploitation through the capitalist society’s irresponsible use of science, as well as the beliefs of the Church of PetrOleum. With the knowledge of the Anthropocene era, the world before the plague consisted of people who considered man the superior entity. The capitalist society in control is one built on greed and abuse of power with the scientists’ experimentation with animals and the diseases placed into their vitamin pills. With Heise’s definition of ecocriticism, i.e., the correlation between nature, culture, and politics, the depictions of nature destroyed by human actions are more apparent. The capitalist corporations in control promote a culture built on materialism and consumerism. Atwood’s illustrations of the corporations’ self-centered side reveal capitalism’s greed and unjust behavior.

The knowledge of the Anthropocene impacts the interpretation when reading these novels. The age of man contains abuse of the environment and power, human greed, and self-indulgent behavior. The anthropocentric beliefs that construct this epoch have, in the novels, together with unclear moral values, created groups highly concerned with power, such as the Rev's church and the leading corporations. These people's actions are fueling the climate change crisis and destroying the environment through both global warming and their experimentation with nature. The cataclysmic event in the novels shows an end to related thinking and actions, and instead initiate a world akin to the Gardeners' viewpoints.

Although the biggest problem with the scientists in the novels is not their anthropocentrism as much as it is their greed and indifference, their beliefs on human superiority strengthen their justification of their actions. However, the books also detail a contrasting perspective through the God's Gardeners. With the awareness of deep ecology and anthropocentrism, the trilogy more obviously portrays the two opposing camps. Adam One and the Gardeners wanted to treat all entities equally. They noticed that the corporations' actions were leading the world towards the end and were thus awaiting the Waterless Flood. They knew an end to humanity must come. As Adam One mentions the ongoing Fall of Man, the group believed there would come a time where humanity had gone too far. In the novels, this day eventually comes.

The second part of the analysis delves into the consequences of these actions. The depictions of nature before the pandemic illustrates a world with extreme weather events and a place where the climate has drastically changed. However, the depictions of the extreme weather events they also experience in the post-apocalyptic world, show that even without human activity and our emissions, the Earth's climate has not improved. As Carlo Buontempo acknowledges: "even if we were to significantly reduce or stop our emissions today, you would still see the increase in temperatures expected for the next 20 years almost unaffected" (Lombrana and Warren, "A Pandemic"). Therefore, the Anthropocene era has interchangeably altered the planet's climate. The environmental disasters and humanity's behavior in the post-pandemic world are Crake's reasoning for the induced apocalypse.

As the original myth of the apocalypse is grounded in hope for a better future, the contemporary stories have become "a reflection of fears and disillusionment about the present" (Rosen xiv). The *MaddAddam* trilogy likewise expresses present-day concerns. The Last Judgment, in which God passes judgment upon all souls (Rosen xiii) are comparable to modern apocalyptic tales as these too place judgment on people. In Atwood's trilogy, the

entirety of the human race is arguably the ones criticized and punished for their greed, demolition of various species, and overall treatment of the planet. Through the stories' narrative, Atwood criticizes the capitalist, selfish ways of man, and the cataclysm brings the age of man to an end. The demolition clears the Earth of its virus that is humanity and can potentially begin a new world stripped of the infections from the past.

Atwood's novels incorporate many characteristics of a post-apocalyptic narrative, regardless of Atwood's own belief about her novels' apocalyptic status. Atwood reasons her reluctance to this categorization with the argument that a proper apocalypse destroys everything on the planet, whereas *MaddAddam* only illustrates the end of humanity. Then, questions arise on whether the trilogy's title as apocalyptic fiction matters to the critique she provides. Although only the human race is negatively affected by the cataclysmic event, human structures are also decaying in the post-human world, which essentially generates a ruin of more than just humanity. Additionally, it brings up themes of bioethics and the fear of biological warfare as the pandemic is initiated by Crake's pills. The apocalyptic event truly accentuates the importance of humans' involvement with nature through Atwood's storytelling. Therefore, the post-apocalyptic landscape brings an important factor to Atwood's social critique: the flourishing of nature.

As this thesis argues that the trilogy's innovation with the apocalyptic narrative works as a cautionary tale about where we might end up, the knowledge of the Anthropocene allows the readers to reflect on the concerns regarding our capitalist and consumerist society. Nevertheless, the trilogy could just be another form of entertainment, as Heise argues, is apocalyptic and dystopian fiction's pitfall ("What's the Matter"). Toby reflects Heise's thought when she remembers how apocalyptic fiction and tales of our end only worked as a form of amusement and not a guide to action. The people in the novels did not take stories of humanity's limited time on Earth seriously.

On the other side, Buell believes the apocalyptic narrative is the most compelling metaphor for the environment's future (Buell 285), and Atwood displays a future that indeed shows our planet's doomed destiny if humans continue their destructive path. The question, then, is whether apocalyptic fiction, such as *MaddAddam*, actually serves as a warning or is just a distraction from daily worries. Nevertheless, with the knowledge that human activity is both the problem and the solution to the uncertainty of our world's survival, Atwood's depictions of a flourishing planet show us that the world has a future. Garrard's statement on apocalyptic narratives mentions the significance of keeping a sense of hopefulness for the

planet, or the catastrophe will seem useless (Garrard 107), and Atwood depicts the Earth thriving against all the odds.

Hence, Atwood keeps a sense of hope against the despair, as was the focus in the analysis' third part. At first glance, the post-apocalyptic world seems rather grim; however, there is still some hope present through the Crakers. Berger's claim that post-apocalyptic fiction always has a life after the end (Berger 5) opens for a discussion regarding the new world as a place for utopian hope or dystopian fear. On the one hand, the post-apocalyptic world is a place for a new, hopeful community to arise (Fiskio 14). Contrarily, Lisboa argues that life after the apocalypse is essentially the past repeated (Lisboa 63).

Through Atwood's depictions of the environment and the climate change crisis in the pre-virus world, she shows the readers the difference between the planet with and without human influence. Life before was an ecological nightmare. However, Atwood describes the environment after the catastrophe as one with blossoming plant life taking over human establishments. In the tales before the pandemic, humanity viewed themselves as higher beings, which caused the loss of biodiversity and extinction of animals. The annihilation of humanity, then, shows our material world destroyed by nature's force. Therefore, because Atwood's trilogy consists of portrayals of both life before and after the apocalypse, it shows the critical role human involvement has in the planet's demolition. Many environmentalists campaign for this flourishing of nature and other species. Næss and deep ecologists want a reduction in population, and they argue that this reduction would lead to a thriving world, which is what Atwood's trilogy shows.

Through an anthropocentric viewpoint, the wasteland left of humanity is a slightly dystopian picture. Snowman struggles in this changing world. However, if regarded with a more egocentric viewpoint, like deep ecologists or the Gardeners, then there are positive aspects to humanity's end. As Atwood expresses: "To move us toward the improved world – the utopia we're promised – dystopia must first hold sway" (*In Other Worlds* 148-9). The descriptions of nature after the pandemic shows a world where nature can flourish, and animals can live freely. However, the promised utopia might be without humans. Therefore, the world after the disaster is a slightly dystopian image for Snowman and humanity.

Atwood created the Children of Crake as a hope for the future in this new world. Crake developed these creatures without the specific human characteristics he believed was the cause of the world's illness. However, the presence of humans can change this promising new society. In the last novel, one of the Crakers, Blackbeard, learns how to read and write.

Blackbeard writes down the story of their origin and the story of Crake and Oryx, as well as Toby, Zeb, and Snowman. Therefore, the little group of surviving humans have potentially become a threat to the peaceful Crakers. Atwood asks the reader of *In Other Worlds*:

Do the surviving human beings in *Oryx and Crake* and *The Year of the Flood* represent a dystopic threat to the tiny utopia of genetically modified, peaceful, and sexually harmonious New Humans that is set to replace them? (93)

The features, such as symbolic thinking that Crake wanted to eliminate from the Crakers, seem to appear, nevertheless. They have created godlike figures in their stories of Crake and Oryx, which, according to Crake's beliefs, is one of the reasons for humans' downfall. He believed the development of gods would lead to the creation of sin and the afterlife, which then would turn into slavery and war. Heise similarly agrees with this, stating that it is doubtful that "the end promises any world better than the one whose demise the trilogy has staged" (Heise, "What the Matter"). Then, Lisboa's claim that post-apocalyptic life is the past repeated substantiates this.

The Crakers, although created to represent the 'anti-human', are, as Phillips suggests, "technology embodied" (Goodbody and Johns-Putra 53). The Crakers are supposed to be the utopian hope for our planet. However, humans created them and, therefore, cannot fully be devoid of human influence. Crake developed the opposition to humanity: beings that would live in peace with nature. However, human technology is what made the Crakers. Although they represent the 'anti-human', they are, in the end, the only thing left of humanity. In our world, there is, as Drees describes, hardly a place that is not touched by human influence in some way (Drees 41). Crake wanted to rid the world of humanity's destructive behavior and intervention with nature. However, as Atwood depicts in the last novel, the Crakers obtain demeanors and information Crake had not accounted for, thus, gaining features more similar to those of humans. As Atwood writes: "we should probably not try to make things perfect, especially not ourselves, for that path leads to mass graves" (*In Other Worlds* 95).

The new world might constitute a new cycle of humanity. If perceived from an anthropocentric viewpoint, the idea that the human thoughts and opinions are returning through the Crakers could be regarded as positive. However, observed through an ecocritical outlook, the new features the Crakers have obtained, represents an end to the little hope they provided. Thus, the books' ending leaves the readers unsure of how the future of the planet might be.

Nature and technology often serve as oppositions; however, Atwood's novels intrinsically connect them, as seen through this thesis. Although Atwood's story is fictional, it has much resemblance to the real world today. Atwood's futuristic world, thus, in many ways mirrors our own. Atwood has this to say about fiction and the human imagination:

As William Blake noted long ago, the human imagination drives the world. At first it drove only the human world, which was once very small in comparison with the huge and powerful natural world around it. Now we have our hand upon the throttle and our eye upon the rail, and we think we're in control of everything; but it's still the human imagination, in all its diversity, that propels the train. Literature is an uttering, or outering, of the human imagination. It puts the shadowy forms of thought and feeling – heaven, hell, monsters, angels, and all – out into the light, where we can take a good look at them and perhaps come to a better understanding of who we are and what we want, and what our limits may be. Understanding the imagination is no longer a pastime or even a duty but necessity, because increasingly, if we can imagine something, we'll be able to do it. (“In Context” 517).

Our imagination has now become a reality. With our advanced technology, much of what was once dreams, humans can now accomplish. Some of the technology that Atwood describes in her novels are now, ten, fifteen years later, possible for humans to do. Humanity is soon able to achieve whatever we put our minds to as our knowledge has become so vast. However, as Adam One believes, knowledge also leads to our downfall. Atwood further this thought in her short story about the end of the human species, where the ending reads: “Pray for us, who once, too, though we could fly” (*In Other Worlds* 230). In this story, humanity tried to fly too high, which ultimately led to their demolition. The *MaddAddam* trilogy likewise addresses this potential for destruction. Atwood warns the readers of the importance our actions hold. The trilogy expresses the significance of our treatment of the planet as our misuse and exploitation of nature could also induce our end.

4 Conclusion

In the *MaddAddam* trilogy, Atwood brings forward questions about humanity's role in the world, and how, with the climate change crisis, we must learn new ways in which to inhabit the planet. In *Oryx and Crake*, Atwood depicts a society full of vices, where the world's leading corporations use nature as their playground to exploit humans and make a profit. Humanity's knowledge has become so powerful that it can manipulate the world to the point of destruction. In the process of gaining more knowledge and experimentation, humans have destroyed the planet and other living species. In the first novel, Atwood shows this through the scientists' creation of hybrid animals and the diseases induced in the pills. This anthropocentric worldview, where humans regard themselves as the superior entity, is particularly prominent through the Church of PetrOleum in *MaddAddam*. This behavior is part of the culture that has led the Earth into the Anthropocene era.

On the opposite side of the leading corporations and the Church of PetrOleum is the eco-religious group, God's Gardeners. *The Year of the Flood* introduces the group as a contrasting perspective displaying life in the pleeblands outside of the scientist-controlled corporations. The Gardeners believe that all of nature has value and that our greed and exploitation cause humanity's downfall. The Gardeners have similar ideas as deep ecologists, as they, too, believe there is a need for a population reduction in order to let nature and its species flourish. Additionally, they believe that all living creatures have intrinsic value and go against the action of the corporations and the Rev's church, where nature is abused and used for their gains and desires.

The capitalist society's greed and exploitation of nature have led to environmental destruction. Humanity's anthropocentric values and wishes to live forever has created a population too large for the environment to sustain. With an ecocritical outlook on the correlation between culture, politics, and nature, the trilogy shows a world where our habits have demolished the Earth. These actions are the reason for Crake's elimination of the human population and the creation of the Crakers. On the post-apocalyptic planet, the surviving humans struggle in a world without human inventions. The Children of Crake, made to replace humanity and live in harmony with nature, are rid of humanity's sins. Through the portrayal of the Crakers, Atwood shows the negative sides of humans. However, with the surviving humans' influence on the Crakers, their role as a utopian hope might get destroyed. Instead, it creates a worry that the future will continue with the previous faults of humanity.

Through the *MaddAddam* trilogy, Atwood wants the readers to look at our treatment of the planet. She affirms that the worries of climate change and the survival of the planet inspired her writing process. The trilogy discusses through its apocalyptic narrative how humanity's anthropocentric thoughts and the capitalist society's greed have led to the suffering of the planet, as well as other species and ourselves. People are, therefore, questioning humans' power of destruction. We fear the fate of this planet, as many factors make our future uncertain, such as pandemics, human-made climate change, and misuse of technology. Atwood warns that if we do not change our mistreatment of the planet, the Earth's existence might be reaching its end. She wants the readers to be aware of the possible consequences if we do not treat nature and our home justly. "There is so much beautiful in the world if you look around" (*Oryx* 169), Oryx tells Jimmy in the first novel. Let us keep it that way.

Works Cited

- “Air Pollution.” *World Health Organization*, World Health Organization, 2020, www.who.int/health-topics/air-pollution#tab=tab_1. Accessed 24 Apr. 2020
- Anderson, Ronald E. *Alleviating World Suffering: the Challenge of Negative Quality of Life*. Springer, 2017.
- “anthropocentrism”. In *obo* in Ecology. 3 May. 2020.
<https://www.oxfordbibliographies.com/view/document/obo-9780199830060/obo-9780199830060-0073.xml>. Accessed 3 May 2020.
- “apocalypse.” *Cambridge Dictionary*.
<https://dictionary.cambridge.org/dictionary/english/apocalypse> Accessed 12 Mar. 2020.
- Atwood, Margaret. *In Other Worlds: SF and the Human Imagination*. Virago, 2014.
- . Interview. 2003, <http://www.randomhouse.com/features/atwood/interview.html>. Accessed 21 Jan. 2020.
- . *MaddAddam*. Virago, 2013.
- . *Oryx and Crake*. Virago, 2003.
- . “The Handmaid's Tale and Oryx and Crake ‘In Context.’” *PMLA*, vol. 119, no. 3, 2004, pp. 513–517. *JSTOR*, www.jstor.org/stable/25486066. Accessed 5 Mar. 2020.
- . *The Year of the Flood*. Virago, 2009.
- . *Writing With Intent*. New York: Carroll and Graf Publishers, 2005.
- Berger, James. *After the End: Representations of Post-Apocalypse*. University of Minnesota Press, 2005.
- Bonneuil, Christophe, and Jean-Baptiste Fressoz. *The Shock of the Anthropocene: the Earth, History, and Us*. Verso, 2017.

- Booker, M. Keith, and Anne-Marie Thomas. *The Science Fiction Handbook*. Wiley Blackwell, 2011.
- Bouson, J. Brooks. "A 'joke-filled romp' through end times: Radical environmentalism, deep ecology, and human extinction in Margaret Atwood's eco-apocalyptic trilogy". *The Journal of Commonwealth Literature*, vol. 5, 2016, Sage Publishing, pp. 241.357.
- Brush, Stephen G., et al. "Scientific Revolution." *Encyclopædia Britannica*, Encyclopædia Britannica, Inc., 26 Nov. 2019, www.britannica.com/science/Scientific-Revolution. Accessed. 18 Mar. 2020
- Buell, Lawrence. *The Environmental Imagination: Thoreau, Nature Writing, and the Formation of American Culture*. Belknap Press, 1996.
- Capra, Fridjof, and Ugo Mattei. *The Ecology of Law: Toward a Legal System in Tune with Nature and Community*. Vol. 1st ed, Berrett-Koehler Publishers, 2015. *EBSCOhost*, search.ebscohost.com/login.aspx?direct=true&db=e000xww&AN=995421&site=ehost-live. Accessed 2 Mar 2020
- Carson, Rachel. *Silent Spring*. Mariner Books, 2002.
- Derrida, Jacques, and David Wills, "The Animal That Therefore I Am (More to Follow)". *Critical Inquiry*, vol. 28, no. 2, 2002, pp. 369–418, www.jstor.org/stable/1344276. Accessed 2 Apr 2020.
- Dinello, Daniel. *Technophobia!: Science Fiction Visions of Posthuman Technology*. University of Texas Press, 2006.
- "The Discovery of Global Warming." *Global Warming Timeline*, Spencer Weart & American Institute of Physics, Jan. 2020, history.aip.org/climate/timeline.htm. Accessed 13 Mar. 2020.
- "ecocriticism". In *obo* in Literary and Critical Theory. <https://www.oxfordbibliographies.com/view/document/obo-9780190221911/obo-9780190221911-0014.xml>. Accessed 13 Mar. 2020.

- Edgerton, David. "In Praise of Luddism". *Nature*, vol. 471, no. 7336, 2011, pp. 27-9. *ProQuest*, <https://search.proquest.com/docview/856589296?accountid=45259>, doi: <http://dx.doi.org/10.1038/471027a>.
- Ehrlich, Paul R. *The Population Bomb*. Buccaneer Books, 1995.
- Fiskio, Janet. "Apocalypse and Ecotopia: Narratives in Global Climate Change Discourse." *Race, Gender & Class*, vol. 19, no. 1/2, 2012, pp. 12–36. *JSTOR*, www.jstor.org/stable/43496858. Accessed 16 Mar. 2020.
- Garrard, Greg. *Ecocriticism*. Routledge, 2012.
- Glotfelty, Cheryll. *The Ecocriticism Reader: Landmarks in Literary Ecology*. University of Georgia Press, 1996.
- Goodbody, Axel, and Adeline Johns-Putra, editors. *Cli-Fi: a Companion*. Peter Lang Ltd, 2019.
- Heise, Ursula K. "The Hitchhiker's Guide to Ecocriticism." *PMLA*, vol. 121, no. 2, 2006, pp. 503–516. *JSTOR*, www.jstor.org/stable/25486328. Accessed 22 Mar. 2020.
- Heise, Ursula K. "What's the Matter with Dystopia?" *Public Books*, 2 Jan. 2015, www.publicbooks.org/whats-the-matter-with-dystopia/. Accessed 13 Apr. 2020
- Hicks, Heather J. *Post-Apocalyptic Novel in the Twenty-First Century: Modernity Beyond Salvage*. Palgrave Macmillan, 2017.
- Jameson, Fredric. *Archaeologies of the Future: the Desire Called Utopia and Other Science Fictions*. Verso, 2007.
- Knight, Les. "I Campaign for the Extinction of the Human Race". *The Guardian*. 2020.
- Le Guin, Ursula K. "The Year of the Flood by Margaret Atwood | Book Review." *The Guardian*, Guardian News and Media, 28 Aug. 2009, www.theguardian.com/books/2009/aug/29/margaret-atwood-year-of-flood. Accessed 14 Feb. 2020.
- Lisboa, Maria Manuel. *The End of the World: Apocalypse and Its Aftermath in Western Culture*. Open Book Publishers, 2012.

- Lombrana, Laura Millan, and Hayley Warren. "A Pandemic That Cleared Skies and Halted Cities Isn't Slowing Global Warming." *Bloomberg.com*, Bloomberg, 8 May 2020, www.bloomberg.com/graphics/2020-how-coronavirus-impacts-climate-change/. Accessed 29 May 2020.
- Loomis, Caroline, et al. "Is Human Greed at the Core of Modern Day Environmental Issues?" *Environmental Science and Technology*, 11 Sept. 2016, eportfolios.macaulay.cuny.edu/est2016/2016/09/11/is-human-greed-at-the-core-of-modern-day-environmental-issues/. Accessed 22 Apr. 2020
- Mehlman, Maxwell J. *Transhumanist Dreams and Dystopian Nightmares: The Promise and Peril of Genetic Engineering*. Johns Hopkins University Press, 2012.
- Morton, Oliver. *The Planet Remade: How Geoengineering Could Change the World*. Princeton University Press, 2016.
- "nature". *Dictionary.com*. <https://www.dictionary.com/browse/nature>. Accessed 27 Apr. 2020
- Regan, Helen. "Coronavirus Is a Test Run for the Climate Crisis. Let's Not Waste It." *CNN*, Cable News Network, 27 Mar. 2020, edition.cnn.com/2020/03/18/world/coronavirus-and-climate-crisis-response-intl-hnk/index.html. Accessed 31 Mar 2020.
- Roberts, Michele. "Book Review: MaddAddam, By Margaret Atwood." *The Independent*, Independent Digital News and Media, 19 Aug. 2013, www.independent.co.uk/arts-entertainment/books/reviews/book-review-maddaddam-by-margaret-atwood-8771138.html.
- Robertson, Thomas B. "World War II and the Environment." *Origins*, The Ohio State University and Miami University Departments of History, 10 Dec. 2018, origins.osu.edu/connecting-history/nature-world-war-ii-operation-husky-environmentalism-defense-industry.
- Rosen, Elizabeth K. *Apocalyptic Transformation: Apocalypse and the Postmodern Imagination*. Lexington Books, 2008.
- Rowling, J. K. *Harry Potter and the Deathly Hallows*. Scholastic/Arthur A. Levine Books, 2007.

Sessions, George. *Deep Ecology for the Twenty-First Century*. Shambhala, 1995.

The Visual Data Journalism Team. "Coronavirus: A Visual Guide to the Pandemic." *BBC News*, BBC, 30 Mar. 2020, www.bbc.com/news/world-51235105. Accessed 30 May 2020.

Walter, Natasha. "Pigeons Might Fly." *The Guardian*, Guardian News and Media, 10 May 2003, www.theguardian.com/books/2003/may/10/bookerprize2003.bookerprize.

Yeung, Kristi, and Zinan Zhang. "The Neverending Apocalypse." *Princeton University*, The Trustees of Princeton University, 23 Jan. 2014, princetonbuffer.princeton.edu/2014/01/23/the-neverending-apocalypse/. Accessed 13 Mar. 2020.

"Zero hour." *Merriam-Webster.com Dictionary*, Merriam-Webster, <https://www.merriam-webster.com/dictionary/zero%20hour>. Accessed 15 Feb. 2020.