CLIMATE APOCALYPSE! A reflection on the end-times of my Laidlaw Research Project

Written by Ellen Duggan and submitted as a reflective report, as a part of the Laidlaw Undergraduate Research and Scholarship Program at Trinity College Dublin.

Project overview:

'[T]o make sense of our lives from where we are, as it were, in the middle,' wrote Frank Kermode in the millenial epilogue to his 1966 book The Sense of an Ending*, 'we need fictions of beginnings and fictions of ends, fictions which unite beginning and end and endow the interval between them with meaning.' As highlighted by Kermode and other scholars, storytelling has always been used to mark our place in the grand scheme of time, often to impose order on the messiness of history. A perceived end, and literary interrogation of what this end means, provides us a narrative that can help us make sense of what can otherwise appear to be meaningless. This research project closely examines the reception of six examples of apocalyptic and post-apocalyptic fiction, dating from 1963 onwards:* Cat's Cradle, Mad Max 2, Nausicaä of the Valley of the Wind, Parable of the Sower, Left Behind: A Novel of the Earth's Last Days *and* The Last of Us*. The reception of each of these works by scholars and reviewers (and, where possible, the reading public) at the time of publication and the interpretation of their apocalyptic themes in relation to contemporary concerns (such natural disaster and the threat of nuclear war) were analysed. Present-day reception of these works by scholars, reviewers and readers in relation to the climate crisis was examined, specifically detailed reviews left by consumers of these works on the platforms Goodreads, Reddit and Letterboxd. For the purpose of this project, a survey was created and dispersed; its findings are integrated into the project.*

A recent article from the Independent has the headline, 'Apocalypse now? Why tech billionaires are suddenly hoarding doomsday mega-bunkers: 'Don't take the stripper poles out'. *Right,* I thought to myself, clicking the link, *need to take a look at this.* 'The world's elite are convinced 'The Event' is coming,' reads the byline, 'Holly Baxter meets the builders to whom they entrust their greatest fears ... and desires.' The article is an excellent insight into the paranoia of the rich and into their obsession with being the 'winners' of the apocalypse, but it was nothing I didn't already know. Having spent the summer researching apocalyptic and post-apocalyptic fiction, I've come to recognise that the apocalyptic tendencies of billionaires has less to do with humanity's need to write a conclusion to the story than with greed and selfishness. They aren't preparing for a judgment day so much as they are for a collapse of civilisation, a collapse engineered by the profit-motivated logic of capitalism and imperialism, a collapse where the poor they have exploited remain locked out.

Then again, maybe there's more to it than that–the word apocalypse comes from the Ancient Greek *ἀποκάλυψις*: to disclose, to uncover, to reveal. Our understanding of apocalypse today is informed by a tradition of revelatory literature that stems from the Hebrew Bible and New Testament, the Book of Revelation being perhaps the most notorious example of this. John J. Collins and Adela Yarbro Collins have proposed a definition of apocalypse as:

> 'a genre of revelatory literature with a narrative framework, in which a revelation is mediated by an otherworldly being to a human recipient, disclosing a transcendent reality which is both temporal, in that it envisages eschatological salvation, and spatial, insofar as it involves another, supernatural world; such a work is intended to interpret present, earthly circumstances in light of the supernatural world and of the future, and the behaviour of the audience by means of divine authority.'[1]

[1] Collins, A. Y. 1986. "Introduction." *Semeia* 36: 3-12. p. 7

A surface-level analysis of this definition might tell you that:

- Apocalypse tells a story
- Apocalypse is a form of divine revelation, with a message being revealed to a human being
- This message is the means by which this person will achieve salvation
- Salvation requires the destruction of a world so that another, supernatural world might provide a site of salvation
- Everything has been leading up to the apocalypse. This was the point to everything, all along.
- There is a definite right and wrong in this situation, a right and wrong as judged by a divine authority. Those who are saved are the ones who are right.

There's a lot more to apocalypse than this, as you might imagine. You don't become a millenia-old genre without being a bit complicated. But I think this captures the gist of why the billionaire class are a little bit obsessed with apocalypse. Our understanding of the end of the world is tainted by the cultural memory of apocalypse's roots; by apocalyptic logic, the survivors of the apocalypse are not only blameless for the world's destruction, but have been saved because they are righteous.

Which is where I started my research project this summer. *CLIMATE APOCALYPSE!* It was important to me that this was in all-caps, and that on the research poster it would be written in the Impact font. *Engaging with the climate-crisis through apocalyptic and post-apocalyptic fiction.* I have been a climate-worrier, as much as a climate-warrior, for almost as long as I've had some degree of sentience. I have done everything they tell you to do when you start talking about climate change. I have turned the lights off. I have cycled to school. I have gone zero-waste. I got single-use water bottles briefly banned from my secondary school (I wasn't very popular). And guess what? NONE OF IT STOPS THE ANXIETY, because none of these actions has *any* adequate impact on what is actually causing the climate

crisis–capitalism. Climate anxiety is astonishingly rational. “I want you to act as if our house is on fire,” Greta Thunberg said, “because it is.”[2] My house is on fire. I have nothing that could save me, not even a reusable water bottle. Oil and petroleum companies, billionaires, world leaders, have the chance to extinguish the fire and let my house, mostly-intact, stay standing. They’re not going to do it because it might hurt profits. And besides, it’s not *their* house. They have that doomsday mega-bunker anyway.

It is hard not to revert to talking about the end of the world when it feels like your world is, intentionally, being ended.

But perhaps I’ll return to my earlier remark, that about our need to write an end to the story. ‘[T]o make sense of our lives from where we are, as it were, in the middle,’ wrote Frank Kermode in the millennial epilogue to his 1966 book *The Sense of an Ending,* ‘we need fictions of beginnings and fictions of ends, fictions which unite beginning and end and endow the interval between them with meaning.’[3] As highlighted by Kermode and other writers and scholars, storytelling has always been used to mark our place in the grand scheme of time, often to impose order on the messiness of history. A perceived end, and literary interrogation of what this end means, provides narrative structure that can help us make sense of what can otherwise appear to be meaningless. Connor Pitetti writes that, ‘such narratives thus evoke ideas of a coherent process of historical development in which traumatic upheavals trigger transitions between distinct world-systems.’[4] How might I, through analysis of engagement with narrative fiction that depicts climate breakdown, interrogate apocalyptic and post-apocalyptic fiction’s capacity to allow consumers to negotiate the trauma of the terrible inevitability of a warming planet, at a time which people feel impotent and powerless to effect change or preventative measures?

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[2] World Economic Forum, 2019. 2019. “Greta Thunberg: Our House Is on Fire! World Economic Forum 2019.” YouTube video. https://www.youtube.com/watch?v=M7dVF9xylaw.

[3] Kermode, Frank. 2000. *The Sense of an Ending: Studies in the Theory of Fiction*. New York: Oxford University Press

[4] Pitetti, Connor. 2017. “Uses of the End of the World: Apocalypse and Postapocalypse as Narrative Modes.” *Science Fiction Studies* 44 (3): 437-54.

My project originally proposed to closely examine the themes and reception of eight examples of apocalyptic and post-apocalyptic fiction. I quickly dropped two of these, Mary Shelley's novel *The Last Man* (with which she invented *another* genre, the English-language secular apocalypse novel) and E.M. Forster's short story 'The Machine Stops'. I decided against analysing these mostly because so few people had read them–there was not the same wealth of reader responses–but also because the rest of the novels dated from after the invention of the atom bomb, a device which, very suddenly, made human extinction all too possible. This concern was reflected in our culture–according to a 2014 study, approximately 80% of fictional apocalyptic media that have appeared from the late 19th century date after 1970.[5] Another example, *Mad Max,* was swapped out for its sequel on grounds of relevance. What remained of my list were chosen for the world-threatening concerns they spoke to. The Atomic Age, the oil crisis, disease, the Rapture… the list of reasons our world (or our world as we know it) might come to an end goes on and on. The works I ended up with were:

- *Cat's Cradle,* Kurt Vonnegut, 1963 (novel)
- *Mad Max 2,* George Miller, 1981 (film)
- *Nausicaä of the Valley of the Wind,* Hayao Miyazaki, 1984 (animated film)
- *Parable of the Sower,* Octavia Butler, 1993 (novel)
- *Left Behind: A Novel of the Earth's Last Days,* Tim LaHaye & Jerry B. Jenkins, 1995 (novel)
- *The Last of Us,* Naughty Dog, 2013 (video game series)

With the exception of *Nausicaä*, these are all English-language works and as a result my research was mostly confined to the Anglosphere. I analysed the reception of each of these works by scholars and reviewers (and, where possible, the reading public) at the time of publication and the interpretation of their apocalyptic themes in relation to contemporary concerns (such natural disaster and the threat of nuclear war). I also examined present-day reception of these works by scholars, reviewers

[5] DiTommaso, Lorenzo. 2014. "Apocalypticism and Popular Culture." In *The Oxford Handbook of Apocalyptic Literature*, edited by John J. Collins, 473-509. New York: Oxford University Press.

and readers in relation to the climate crisis, specifically detailed reviews left by consumers of these works on the platforms Goodreads, Reddit and Letterboxd.

For the purposes of this research project, a survey was designed and distributed across social media and to climate reading groups. The survey gathered both quantitative and qualitative responses from participants who had engaged with these works, investigating how they related the apocalyptic scenarios to climate breakdown and as to how 'realistic' they considered the work's apocalyptic scenario, as well as to how they personally related to the work's apocalyptic scenario. Of the 114 respondents, 52 had engaged with at least one of the works. The vast majority of respondents were Irish and between ages 18-24. Certainly, of all the aspects of the work I undertook for this project, I found the survey the most difficult. Despite the data it yielded (the qualitative responses were particularly valuable), I regretted its centrality to my initial research proposal. I did not have the means to disperse the survey sufficiently widely, nor was I as capable as I would have liked to be at handling data. These issues have galvanised me into taking data-handling skills seriously, and I plan to work on it throughout the rest of my time in college so that I may be a more effective researcher.

Beyond looking into the works themselves, I did quite a lot of background reading into climate change communication, the apocalypse, and where these topics intersect, in order that I might better demonstrate to my audience the nuances of the apocalyptic worldview. The following is information I chose to display on my research poster.

Climate Endgame:

- 'Climate endgame' is a term used to denote a scenario where climate breakdown results in global civilisational collapse and eventual human extinction.
- Catastrophic climate change scenarios are a 'dangerously underexplored topic,' with the vast majority of research focusing on the impacts of a rise in temperature of between 1.5°C and 2°C.[6]

[6] Kemp, Luke, et al. 2022. "Climate Endgame: Exploring catastrophic climate change scenarios." *Proceedings of the National Academy of Sciences of the United States of America* 119 (34).

- Research suggests the current trajectory of anthropogenic GHG emissions will result in a temperature rise between 2.1°C and 3.9°C by 2100., without considering worst-case scenarios.[7]
- A 2018 empirical study suggests that climate fiction (literature dealing with climate change, considered a trans-generic category of fiction) lead readers to associate climate change with intensely negative emotions, an affective response potentially counterproductive to efforts at environmental engagement or persuasion.[8]

Apocalyptic Narrative

- Secular apocalyptic interpretations of climate catastrophe tend to be underscored by the non-secular roots of apocalypticism. Characterisations and coverage of the climate crisis often rely on tropes and conventions associated with apocalyptic literature—for instance a report exploring catastrophic climate change scenarios refers to the '"four horsemen" of climate change end game.'[9]
- There exists ongoing research investigating the use of apocalyptic vocabulary in the context of climate change on social media.[10]
- It has been proposed by Frances Flannery that 'the pre-cognitive container of "apocalypse" brings along a well-entrenched referential system from the long history of Jewish and Christian apocalypticism that moves audiences to collect passivity'.[11]

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[7] Liu, P.R., and A.E. Raftery. 2021. "Country-based rate of emissions reductions should increase by 80% beyond nationally determined contributions to meet the 2 °C target." *Communications Earth & Environment* 2.

[8]Schneider-Mayerson, Matthew. 2018. "The Influence of Climate Fiction: An Empirical Survey of Readers." *Environmental Humanities* 10 (2): 473-500.

[9] (Kemp et al, 2022)

[10] Vander Stichele, Caroline. [Unpublished] 'Apocalypse and Climate Change: Impact of Religious Vocabularies in the Netherlands'

[11]Flannery, Frances. 2024. "Why We Must Stop Saying "Climate Apocalypse": Symbols, Religious Social Memory, and Effective Climate Action." *Zygon: Journal of Religion and Science* 59 (1).

- A 2021 survey of climate anxiety in 10,000 young people, between the ages of 16-25, in ten countries, found 55.7% believe that 'Humanity is doomed'.[12]
- Timothy Morton has coined the term 'hyperobject' to describe items, like styrofoam, which are 'massively distributed in time and space relative to humans'. The concept offers a means of exploring human paralysis while facing the scale of our man-made apocalypse.[13]
- Lorenzo DiTommaso describes the primary social function of apocalyptic speculation as to 'to maintain, reinforce, and validate group identity, typically in the face of threats, internal or external.'[14]
- Dereck Dashke argues that classical apocalyptic texts effectively function in a way that produces traumatic signification as characterised by Jeffrey C. Alexander, by 'specific genres and narratives that aim to produce imaginative identification and emotional catharsis' in the aesthetic realm.[15]

This background presents a literature which proposes the capacity of apocalyptic and post-apocalyptic fiction to help us navigate our fears about climate change. The climate crisis is effectively a non-localised alteration of the world that is so incremental and yet so drastic, that many of us find it impossible to conceive of what it might mean for us outside of graphs and statistics. It is an intangible horror, one which we feel disempowered to confront (a disempowerment that is, if we remember my earlier ramblings, intentional). Storytelling and apocalyptic framing might help those of us who are currently unaffected by the climate crisis better process its enormity, better process the house that is on fire. So now, you might ask, what did my research find? What did I conclude?

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[12] Hickman, Caroline, et al. 2021. "Climate anxiety in children and young people and their beliefs about government responses to climate change: a global survey." *The Lancet. Planetary health* 5 (12).

[13] Morton, Timothy. 2013. *Hyperobjects: Philosophy and Ecology After the End of the World*. University of Minnesota Press.

[14] DiTommaso, Lorenzo. 2020. "Apocalypticism in the Contemporary World." In *The Cambridge Companion to Apocalyptic Literature*, edited by Colin McAllister, 316-41. Cambridge: Cambridge University Press.

[15] Dascke, Derek. 2014. "Apocalypse and Trauma." In *The Oxford Handbook of Apocalyptic Literature*, edited by John J. Collins, 457-72. New York: Oxford University Press. Alexander, Jeffrey C. 2004. "Toward a Theory of Cultural Trauma." In *Cultural Trauma and Collective Identity*, 1-30. Berkeley: University of California Press.

For a start, different works (naturally) drew different responses from consumers, responses that depended on a variety of complex factors such as the narration style, what was perceived as the 'message' of the story, the medium, and other works the consumers had engaged with. My forays into Reddit, Goodreads and Letterboxd proved more fruitful than my attempts at a survey. Here, there were publicly available opinions and reviews from people who wanted to engage in dialogue about the themes of these works; analysis such posts helped to paint a picture of what response the works tended to provoke in consumers. For my research poster, I summarised it this briefly, as follows:

Cat's Cradle:

- Despite the text explicitly depicting a mass extinction event caused by climate change, many readers and critics considered this aspect secondary to what they saw as a fable of human hubris, ignorance and selfishness.
- Vonnegut described the novel as 'about an old-fashioned scientist who isn't interested in people'[16]; a review of the novel by NYT in 1963 describes it as 'an irreverent and often highly entertaining fantasy concerning the playful irresponsibility of nuclear scientists.'[17]

Mad Max 2:

- Miller has stated, regarding the resource wars depicted in the film, that 'the normal fabric of society can start to disintegrate when you remove something that is as essential as gas. [...] we simply postulated the kind of events that would result from removing one of the fossil fuels from the Earth.'[18]

[16] Vonnegut, Kurt. 1974. "Address to the American Physical Society, New York City, February 5, 1969." In *Wampeters, Foma & Granfalloons*. N.p.: Delacorte Press.

[17] Southern, Terry. 1963. "After the Bomb, Dad Came Up With Ice." *The New York Times*, June 3, 1963.

[18] Peary, Danny. 1984. "Directing Mad Max and The Road Warrior: An Interview with George Miller." In *Omni's Screen Flights/Screen Fantasies: the future according to science fiction cinema*, edited by Danny Peary, 279-86.

- Viewers largely referenced the film's survivalist themes. Some voiced concerns that similar struggles for resources would emerge as a result of climate breakdown.

Nausicaä of the Valley of the Wind:

- Miyazaki has stated that 'a major theme of this work is the manner in which people engage with the nature surrounding them and upon which they are dependent.'[19]
- Viewers recognised and engaged with the story's overt ecological and anti-war themes, and linked the film's story to the world around them, expressing dismay at the possibility that warfare might result in a similar (though less fantastical) world.

Parable of the Sower:

- Butler considered climate change a 'character' in the novel due to its role; readers.[20] Many readers and critics have since hailed her as 'prophetic'.
- Many readers engaged with the plausibility of Butler's depiction of societal breakdown, as well as the novel's emphasis on survivalism and embracing new ways of life when the old are no longer viable.

Left Behind:

- I did not encounter any reviews of or receptions to this novel wherein the reader connected the narrative to the climate crisis.
- The novel depicts freak climate events, but only in the context of those prophesied in Revelation.

[19] Miyazaki, Hayao. 2014. *Starting Point: 1979-1996*. Translated by Beth Cary and Frederik L. Schodt. N.p.: VIZ Media LLC.

[20] Dash, Julie. 2016. "Julie Dash Interviews Octavia Butler (1995)." Vimeo. vimeo.com/163190768.

The Last of Us:

- Reviews of the HBO adaptation were quick to characterise the series as a metaphor for climate change. The series adds a scene which suggests the mutated *Cordyceps* infection was a result of rising temperatures—various media outlets, in the wake of the adaptation, published articles that explained the viability of such a pandemic.
- Players and critics largely noted the extraordinary beauty of the game's graphics, depicting a post-human, thriving natural world.

But my *real* conclusion is that, in order to do this topic justice (and I would like to), I will have to go on. My work here is not complete, and a two-thousand word reflective report (a count that I have gone over–oops!), while providing ample opportunity for reflecting on my research journey, could not possibly demonstrate the richness and variety of responses to these works that I have spent the summer collecting.

So I guess, what I'm concluding is, you haven't seen the last of me. Watch this space…

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