

# Climate Change and the Apocalyptic Narrative: A Critique.

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## 1. Abstract

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According to the Paris agreement, we must limit global warming to 2 degrees Celsius above pre-industrial levels if we wish to avoid dangerous climate change (UN, 2015). However, there is a substantial ‘action gap’ between what scientists and politicians say is necessary to mitigate climate change, and what is currently be done. This is largely due to the failure to articulate climate change in a captivating way. Climate change narratives play a key role in creating ‘buy-in’ for more ambitious climate policies. However, climate change narratives have also taken a decidedly apocalyptic turn in recent years, owing to the amplification of scientific voices by the media. We are often presented with ultimatums, from scientists, politicians and activists: take action now, or face impending catastrophe. However, is this truly an effective strategy for motivating the public to take action on climate change? This paper offers a unique criticism of such apocalyptic narratives and their usefulness for public engagement with climate change. It is argued here that the apocalyptic narrative is not an effective strategy for motivating the public to take action on climate change. Therefore, we must rethink how we narrate climate change and its solutions, if we wish to better engage audiences and successfully mitigate climate change.

## 2. Introduction

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*“If we don’t urgently change our way of life, we jeopardize life itself.”*

**UN Secretary General, 2019**

The words of the UN Secretary General at COP25 were certainly alarming; however, they are not unique. Scientists and politicians have become increasingly concerned about anthropogenic climate change, warning that we risk ‘runaway climate change’ if we allow anthropogenic warming to exceed 2 degrees Celsius above pre-industrial levels (Steffen et al. 2018). In 2018, the Intergovernmental Panel on Climate Change (IPCC) warned that we would have to cut 45% of greenhouse gas emissions by 2030 to reduce the risks of extreme drought, flooding and widespread ecosystem loss (IPCC, 2018). To successfully mitigate climate change would require unprecedented shifts in our energy and transport systems, and the reversal of current deforestation trends (IPCC, 2018).

Whilst the need to radically change our behaviour has become increasingly apparent, drastic action to mitigate climate change has not. Although most countries have a national policy in effect to reduce their greenhouse gas emissions, most of these policies are unlikely to result in international emissions targets being met (Roelfsema et al. 2014). For example, it has been estimated that current pledges to reduce CO<sub>2</sub> emissions will likely push global warming to at least 3 degrees Celsius above pre-industrial levels by 2100 (UN, 2019). Thus, there is a substantial discrepancy - known as the ‘action gap’ - between what scientists say is necessary to prevent catastrophic climate change, and what is currently being done (Bushell et al. 2015). The reasons for this ‘action gap’ are not scientific, technical or economic; in fact, one of the biggest contributors to the action gap is the failure to explain climate change and its solutions in a captivating way (Bushell et al. 2015), resulting in unsuccessful attempts to motivate and amass support from the public (Lowe et al. 2006).

However, climate change ‘narratives’ – stories that define the problem of climate change and offer solutions (Bushell, 2017) – may play a particularly important role in addressing this action gap. Research has illustrated that compelling stories are far more influential than abstract arguments or statistics (Taleb, 2008). A unified, collective narrative adds meaning to events and actions that may otherwise appear unconnected (Bushell et al. 2015). Thus, climate change narratives have a unique capacity to generate support and buy-in from the public and strengthen cooperative action to mitigate climate change (Riessman, 1993; Salmon, 2010). Undoubtedly, though, current climate change narratives are becoming increasingly apocalyptic. We are often given a choice by scientists, politicians and activists: to change our behaviour, or face impending catastrophe. In 2018, the United Nations gave us a 12-year deadline to ‘limit climate change catastrophe’, highlighting the current rhetoric of urgency and potential disaster.

Given that apocalyptic narratives have become increasingly popular, and the action gap persists, we must question whether the apocalyptic narrative is useful for motivating the public to act on climate change. Therefore, this paper offers a criticism of the so-called ‘apocalyptic narrative’ and its usefulness for public engagement with climate change. It will be argued that, although the apocalyptic narrative reflects well the gravity and severity of the potential outcomes of climate change, it fails to motivate the public to act on climate change. Hopefully, this criticism will help us to adopt climate change narratives which successfully generate buy-in from the public and strengthen cooperative action to mitigate climate change.

## 3. Background

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Before assessing the usefulness of the apocalyptic narrative for public engagement with climate change, it is important to clarify the issues and themes it addresses. This section covers the definition and meaning of the apocalyptic narrative, as well as its development in recent years. The word ‘apocalypse’ has diverse interpretations and contexts, with perspectives ranging from modern and scientific, to historical and religious. The popular apocalyptic narrative focuses narrowly on impending catastrophe, underpinned by scientific research. It has gained traction in recent years, largely due to the amplification of scientific voices by the media.

### 3.1. The Apocalyptic Narrative

#### 3.1.1 Definition and meaning

The term ‘apocalypse’ itself has diverse interpretations. Rooted in early Judaism, and later in Christianity and Islam, ‘apocalypse’, in its technical sense, refers to a *revelation* (Moo, 2015). A *revelation* challenges the ideology of empire, which John considers to be an oppressive political, religious and economic power (Moo, 2015). John reveals an image of a world in turmoil, rife with war and violence - a revelation of Rome’s failure to bring peace and order (Moo, 2015). John provides an alternative vision of a new, better world, with nature and culture renewed (Moo, 2015). Thus, the historical interpretation of ‘apocalypse’ allows us to envision the transition to an alternative, better world, with dominant systems uprooted, and oppressive powers crushed (Skimshire, 2010; Moo, 2015).

However, in its popular sense, an ‘apocalypse’ is not typically understood as a *revelation*, but as a sudden calamity, or ‘the end of the world as we know it’. The apocalyptic climate change narrative aligns itself with this ‘end of the world’ scenario (Bushell, 2017). It plays on the fear of exceeding the Earth’s natural limits, or so-called ‘tipping points’ (Box 1), positing that human activity risks a catastrophic climatic event in the future unless people change their behaviour (Bushell, 2017). For an extreme example, look no further than the title of David Wallace-Wells’ essay in the New York magazine: “The Uninhabitable Earth: Famine, economic collapse, a sun what cooks us” (Wallace-Wells, 2017). Although the apocalyptic climate change narrative usually follows the same basic plot of catastrophe, the treatment of time and agency can be quite variable. There are distinct differences in the certainty of endpoints across different narratives, with some narrators implying that ‘the end’ is happening now, and others suggesting that ‘the end’ will happen at some known or hypothetical point in time (Foust & Murphy, 2009).



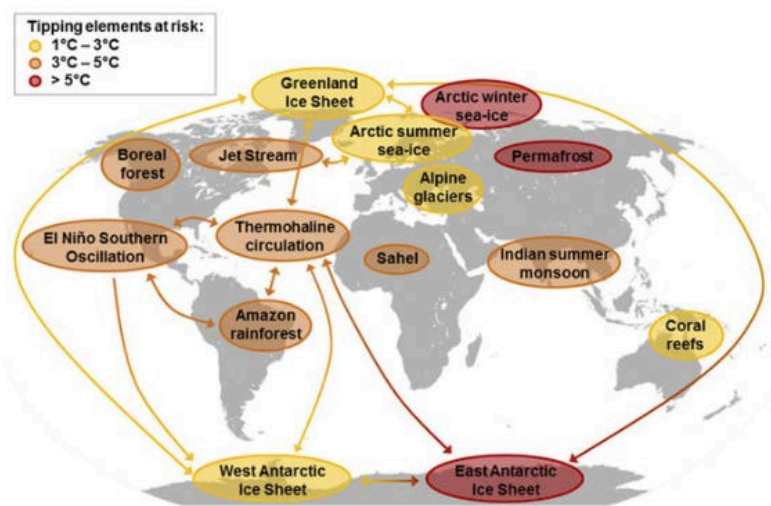
Figure 1 The apocalyptic narrative in action: New York is engulfed by a mega-ice storm after a failure to mitigate climate change. Source: 20th Century Fox.

**Box 1: Tipping points**

*“Imagine cutting down a tree. Initially, you chop and chop ... but not much seems to change. Then suddenly, one stroke of the hatchet frees the trunk from its base and the once distant leaves come crashing down.” – Casey Ivanovich, 2017.*

It’s a fitting metaphor for an increasingly recognised element of the climate change debate, ‘tipping points’. Tipping points, an idea introduced by the IPCC almost two decades ago, refer to a critical threshold at which a small perturbation can completely alter the long-term state of a system (Lenton et al. 2008). It is believed that passing tipping points would have large-scale, long-term impacts on human and ecological systems (Lenton et al. 2008). Tipping points have, historically, been subject to substantial scientific uncertainty. When the IPCC first introduced the idea of tipping points, ‘large-scale discontinuities’ in the climate system were considered only likely if global temperatures exceeded 5 °C above pre-industrial levels (Lenton et al. 2019). However, the most recent IPCC Special Reports (published in 2018 and 2019) suggest that tipping points could be exceeded even with only 1 to 2 °C of global warming (IPCC, 2018, 2019).

The large-scale components of the Earth System, known as ‘tipping elements’, may pass tipping points (Lenton et al. 2008). The global map below demonstrates our current understanding of the most important tipping elements in the Earth System. Those in yellow are in the lower-temperature cluster, meaning that only a 2°C rise in global temperature is required to activate their tipping elements; these include the Greenland Ice Sheet, Antarctic summer sea ice cover, alpine glaciers, coral reefs and the West Antarctic Ice Sheet. Other tipping elements, such as the melting of permafrost and the disintegration of the more stable East Antarctic Ice Sheet, have an estimated 5°C safety net before their tipping elements are activated. In a recent article in Nature, scientists referred to tipping cascades as ‘an existential threat to civilization’, arguing that ‘we are in a global emergency’ and need to ‘act now’ (Lenton et al. 2019).



**Figure 2.** Global map of potential tipping cascades. Steffen et al. (2018).

### 3.1.2. Recent developments

The issue of climate change has taken an increasingly apocalyptic turn in recent years. The IPCC, an intergovernmental body of the United Nations that evaluates climate science, has played a key role in this. The IPCC's reports are produced, in the first instance, to inform the world's policymakers. Two decades ago, the IPCC developed a set of scenarios to serve as the basis for projecting future climate change. At the time, the IPCC recognised that the development of a single 'best guess' scenario was 'neither desirable nor possible', as 'the future is inherently unpredictable' (IPCC, 2000). Thus, they did not identify any one scenario as more probable than another, and their projections covered a wide range of possible futures. In their fourth assessment report, the IPCC again acknowledged a wide range of potential outcomes; when it came to carbon dioxide emissions, the IPCC included both highly optimistic and pessimistic scenarios, with possible emissions in 2100 ranging from 10 billion tons of CO<sub>2</sub> to 250 billion tons of CO<sub>2</sub> (IPCC, 2007). Thus, climate change was not necessarily presented as apocalyptic; rather, it was recognised that climate change *could* be apocalyptic if we made decisions leading to bad outcomes. In their fifth assessment report, however, the IPCC took a different approach. Whilst the IPCC recognised that future greenhouse gas emissions were uncertain, the focus of the fifth assessment report was placed on a 'business-as-usual scenario' of more than 80 billion tons of CO<sub>2</sub> emissions in 2100 (IPCC, 2014).



**Figure 3. The Birmingham school strike for climate protest. Source: Birmingham Mail.**

The IPCC's decision to centre its fifth assessment report on the most extreme, 'business as usual' scenario was not without consequences. Since the report, thousands of academic studies on the future impacts of climate change followed the IPCC's lead, emphasising the 'business as usual' scenario (Pielke, 2019). In 2018, the fifth most talked-about of all journal papers, 'Trajectories of the Earth System in the Anthropocene', was published in Proceedings of the National Academy of Sciences ('PNAS'). Widely referred to as the

'Hothouse Earth' paper, the study suggested that self-reinforcing feedback loops could push the Earth's climate beyond a 'planetary threshold' which, if crossed, could 'lock in a continuing rapid pathway toward much hotter conditions'. These findings have subsequently been amplified by voices of the media, which have contributed to an increasingly apocalyptic view of climate change. The 'Hothouse Earth' paper was the subject of 460 news stories in 326 outlets, including The Guardian, BBC News and Sky News, and links to the paper were included in 5,392 tweets. During the same year, at the school strike for climate protests, apocalyptic visions were rife (Figure 3). Thus, the amplification of scientific voices by the media has contributed to an increasingly apocalyptic view of climate change.

## 4. Discussion

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Climate change narratives have taken an increasingly apocalyptic turn in recent years. This section offers a criticism of the apocalyptic narrative and its 'usefulness' for genuine public engagement with climate change. Whilst some believe the apocalyptic narrative is a powerful narrative that reflects the reality and gravity of the possible outcomes, others see it as a product of imagination that disengages the public, allows us to defer responsibility, fails to make climate change a priority for audiences, and increases denial.

### 4.1 Does the apocalyptic narrative promote public action on climate change?

It could be argued that the apocalyptic narrative is effective for motivating action because it truly reflects the potential severity of climate change. According to a group of scientists, the idea of tipping points in particular 'helps to define that we are in a climate emergency and strengthens this year's chorus of calls for urgent climate action' (Lenton et al. 2019). Although apocalyptic narratives have long been criticised for being based on little and conflicting evidence, the evidence for tipping points, in particular, has been mounting in recent years. For example, recent research analysed 30 types of regime shifts in climate and ecological systems (Rocha et al. 2018). The research showed that 45% of regime shift combinations demonstrated some form of plausible structural interdependence, suggesting that 'cascading effects' couple regime shifts in distant systems. Indeed, one study suggested that the melting of the Greenland Ice Sheet could have contributed to the 15% slowdown of the Atlantic Meridional Overturning Circulation (AMOC) since the mid-twentieth century (Caesar et al. 2018). Thus, given the increasing scientific support for the idea of regime shifts and 'tipping points', it could be argued that the apocalyptic narrative reflects well the gravity of the situation and the future that *could be* if we don't take action.

Although the apocalyptic narrative may well reflect the potential severity of the situation, it is important to ask ourselves: why, despite increasing warnings from scientists and politicians, are we not taking drastic action to mitigate climate change? Does the apocalyptic narrative fail to address the action gap? Although the apocalyptic narrative has undoubtedly increased people's concern for climate change (Leiserowitz, 2007), this does not mean that people will take action. The apocalyptic narrative may exacerbate the current action gap by reducing feelings of self-efficacy (Moo, 2015). Research has demonstrated that the apocalyptic narrative overwhelms audiences and, whilst it temporarily heightens people's concern for climate change, it leads to public disengagement in the long term (O'Niell & Nicholson-Cole, 2009; Moser & Dilling, 2003; Segnit & Ereaut, 2007). One report revealed that, although 62% of American respondents are 'somewhat worried' about global warming, only 6% say that humans can and will successfully reduce global warming (Leiserowitz et al. 2018). Thus, one can make a distinction between *concern* for climate change and *genuine action and motivation* to mitigate climate change.

For example, the apocalyptic portrayal of climate change in the Hollywood movie *The Day After Tomorrow* increased people's concern for climate change, but it did not necessarily lead them to take action. Released in May 2003, the film shows an abrupt transition of the Earth's climate system into a New Ice Age. The film centres on the story of a climate scientist who, whilst trying to save the world from catastrophic climate change, is also trying to rescue his son who is stranded in New York. The film gives a dramatic portrayal of New York being devastated by a giant tsunami and a mega-ice storm. Survey work from the USA, the UK, Germany and Japan, revealed that while some film viewers showed increased concern for and awareness of climate change, this did not lead to any genuine, long-term engagement or personal action (Hulme, 2010; Lowe et al. 2006). As articulated by a focus group participant, "I think that we can educate people but that doesn't necessarily mean that people will take responsibility" (Lowe et al. 2006). Thus, *The Day After Tomorrow* did not have the 'major influence on the behaviour of society' that the filmmakers had hoped for. Such an example illustrates that the apocalyptic narrative may be ineffective at motivating audiences to take action to mitigate climate change.



**Figure 4. A scene of flooding in *The Day After Tomorrow*. Source: 20th Century Fox.**

The 'apocalyptic' narrative may also fail to encourage action to mitigate climate change because it allows us to defer responsibility for climate change. Waiting for a definitive and final point of irreversible, 'runaway' climate change may bring two false and unhelpful conclusions. First, it allows us to assume that nothing bad will happen until we reach that tragic endpoint (Skimshire, 2010). Second, it may instil the belief that when we reach that point, nothing can be done to avert the catastrophe (Skimshire, 2010). Both of these conclusions make it much easier to defer responsibility and leave the issue in the hands of others. Furthermore, demands to "set aside our present life, even our present happiness, to peruse the menu of future exterminations", are rarely met with much enthusiasm (Berry, 2015, p. 174). By nature, people overwhelmingly prioritize events and issues that will affect them in the short term compared to those that will affect them in the long term (Laibson, 1997). For example, a study by Bord et al. (1998) illustrated that, although the majority of the public is concerned about climate change to some degree, they express greater concern for near-term issues, such as personal income and crime reduction. Therefore, the apocalyptic narrative makes it easier for people to defer responsibility for climate change, and also fails to make climate change a priority for audiences, who are more concerned about near-term issues.

Finally, the apocalyptic narrative may not only fail to motivate the public to take action on climate change, it may increase feelings of denial and further polarize audiences. Individuals are inherently sceptical when there is a lack of immediate and measurable consequences for their actions (Cline, 1992). After we are presented with an apocalyptic vision of the future, life seems to continue as normal, where signs of an impending apocalypse are rarely evident (Moo, 2015). The apocalyptic narrative may therefore invite sceptics - who continue to portray global warming as 'overblown' (Stevens, 1997) - to discredit climate scientists as alarmists (Leiserowitz, 2007). Furthermore, the apocalyptic narrative, like melodrama, tends to divide

audiences, between heroes and villains (Schwarze, 2006), and believers and non-believers (Brummett, 1991). Climate change is a complex issue that may not lend itself to such a divisive structure; as noted by Kinsella (2008, p.98), it does not have a single, clear “rhetorical devil that is powerful, ubiquitous, deceitful, and identifiable”. Thus, the apocalyptic narrative may polarize audiences and suffocate opportunities for collective, widespread action to mitigate climate change.

## 5. Conclusions

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The amplification of scientific voices by the media has contributed to an increasingly apocalyptic view of climate change in recent years. However, the apocalyptic narrative, particularly in its popular interpretation, is not an effective strategy for promoting genuine public engagement with climate change. Although the apocalyptic narrative reflects well the gravity and severity of the possible outcomes of climate change, it disengages audiences, allows us to defer responsibility, fails to make climate change a priority for audiences, and increases feelings of denial.

Is there a better way to narrate climate change? As stated by Moser and Dilling (2004), one of the biggest challenges in motivating the public to take action on climate change is the communication of urgency. We must avoid cataclysmic framing; but equally, we cannot present the issue as something which can be ignored. To achieve this balance, we must avoid the tendency to turn to apocalyptic discourse, whilst effectively promoting human agency. In light of the issues discussed, this paper proposes some solutions and more effective ways to frame climate change:

- (1) Present climate change as an *opportunity* to avoid bad outcomes, rather than an impending catastrophe. Whilst apocalyptic narratives and ultimatums tend to overwhelm and disengage audiences - resulting in increased concern but minimal action - narratives that present climate change as an opportunity may increase people’s feelings of self-efficacy and sense of responsibility.
- (2) Link concerns of climate change to discourses of near-term social and environmental issues. For example, articulate climate change as a chance to improve air quality, establish self-sufficient and reliable national food and energy systems and increase employment opportunities (such as in new energy and transport sectors). This may lead to wider engagement with climate change, as people tend to prioritize near-term issues over distant ones. This also increases collective capacity by encouraging people to work towards common goals such as health, security and prosperity.

We cannot ignore climate change. Scientists and politicians have made this clear. However, we must narrate climate change in a manner which leads to wider audience engagement and encourages people to act. Increasing people’s feelings of self-efficacy, sense of responsibility, appealing to their near-term needs and encouraging collective capacity should be a priority for addressing the current ‘action gap’. This would ultimately strengthen our collective efforts to mitigate climate change and its risks, helping us to establish a safe and prosperous world for all.



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