



Why We Must Stop Saying “Climate Apocalypse”: Symbols, Religious Social Memory, and Effective Climate Action

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The apocalyptic framework has become a handy metaphor for climate change because this story, better than most others, is able to express the scope and severity of the transformation most scientists believe is coming to humanity’s planetary and social systems. Since the first Earth Day in 1970 (Bailey 2000) and increasingly in journalistic media, nongovernmental organization circles, scientific literature, academia, eco-activism, and youth culture, climate change is referred to in world-ending terms that are explicitly apocalyptic. Those who use the phrase “climate apocalypse” mean to spur serious confrontation with the facts of climate change, resulting in climate activism, whether in the form of climate change mitigation or shoring up societal resiliency. However, stories not only describe reality, they help shape reality, and “climate apocalypse” has the unintended effect of creating passivity, fear, paralysis, and naïve hope in its audience.



Drawing on insights from Sherry B. Ortner on key symbols; Charles Peirce on icons, indexes, and symbols; and social memory theorists such as Barry Schwartz, this study suggests that the symbolic story of climate apocalypse brings with it a well-entrenched referential system of symbolic associations from the long history of Jewish and Christian apocalypticism that shapes and influences human actions, creating a passive response in its audience, exactly the opposite of what the phrase “climate apocalypse” is meant to inspire. There is a rapidly closing window in which to act to avoid the worst impacts of climate change. Choosing the right rhetorical framing of the climate crisis is critical if the goal is to mobilize action and avoid unintentionally creating climate anxiety or false expectations, such as the idea that savior figures of any kind will provide easy climate solutions. Instead, it is time for thoughtful communication about the difficult realities that climate change will bring and the global public education necessary for a vast and rapid civilizational shift if the climate crisis is to be confronted resiliently and equitably.¹

State of Climate Change

With the rise of the industrial age, the Earth entered a new geologic era that scientists call the Anthropocene, meaning that human activity has become the primary driver shaping planetary conditions. Reliance on fossil fuels led to the development of certain industrial societies, but it also raised global atmospheric carbon dioxide levels from 280 parts per million, where it had remained for 6,000 years, to over 420 parts per million, levels last seen on Earth four million years ago in the Pliocene Era, when global average temperatures were 3°C (5.4°F) warmer and sea levels were 30–40 meters higher than they are today. In the Pliocene, atmospheric CO₂ had accumulated from geologic processes unfolding over thousands of years, whereas in the Anthropocene, human activity has created this concentration of atmospheric CO₂ in just 150 years or so, ten times faster than has occurred after any ice age in geologic history—and emissions are accumulating at an increasing rate (IPCC 2023).

As a result, global average surface temperature rise has already increased 2.0°C since 1880 (Lindsey and Dahlmann 2024), with an overall global average temperature rise of about 1.2°C (about 2.2°F) over the pre-industrial period (1.5°C in August 2023). The last nine years from 2014 to 2023 were the hottest in recorded history,² with July 2023 being the hottest month ever recorded in human history, registering a 1.5°C (2.7°F) global average temperature rise above pre-industrial temperatures (Van Campenhout 2023). Temperature records will continue to be smashed as humans continue to emit greenhouse gases at an increasing rate,³ causing further temperature rise. Even if humans were to cease all emissions now, a lag between concentrations of CO₂ and temperature increase means that the global average temperature would still rise for decades or longer. Thus, while there is still some imprecision in our climate modeling,

at humanity's current rates of emissions, we may be on track for Pliocene-like conditions of a global average temperature rise of 2.7–4.0°C (4.9–7.2°F) by the end of the century (IPCC 2022; Spratt 2019).

As a species, humans have not only demonstrated a remarkable ability to change our environment and habitats, we have also created technology that has allowed us to enter extreme environments as varied as the ocean floor, the summit of Mount Everest, Antarctica, and the lunar surface—at least for a few people, for short durations of time and at great expense. Thus, it is sometimes easy to forget that humans are animals who depend on specific environmental conditions in our habitats to thrive and survive. Beyond certain heat-stress limits, the so-called “wet-bulb temperature” of heat combined with humidity, human bodies cannot function well or even at all, since beyond this limit we cannot sweat enough to regulate our core temperatures (Vecellio et al. 2022). The heat limit for human survivability is thus dependent on humidity, and in some regions, this threshold may be far lower than previously thought, with one recent study putting it as low as 31.5°C (88.7°F) under certain air conditions, even for young, healthy adults (Vecellio et al. 2022). Given that temperature rise is greatest at the sparsely populated polar regions and the densely populated equator, the regions of human civilization most vulnerable to climate impacts include many nations of the global south, the economic designation for less-developed nations where the majority of the world's children reside. In its latest report, the Intergovernmental Panel on Climate Change (IPCC) concludes that half of the world, 3.3 to 3.6 billion people, currently live in contexts that will be “highly vulnerable” to negative impacts of climate change by mid-century (IPCC 2023), with some regions becoming uninhabitable by humans due to heat and humidity exceeding survivable wet-bulb temperature thresholds. In addition, one million other species are at risk of total extinction due to climate threats (IPCC 2023).

Avoiding these alarming scenarios requires vast and rapid civilizational-level transformations to curb greenhouse gas emissions and also produce carbon capture techniques. The IPCC's sixth climate assessment from 2023 (IPCC 2023), an international consortium of nearly 300 scientists in sixty-seven countries collating the results of 34,000 scientific reports, recently explained that in order to avoid a disastrous global average rise in temperature of 2.0°C⁴ and stay at a less threatening rise of 1.5°C (2.7°F), carbon emissions need to peak in 2023 and global fossil fuel emissions must be cut by almost half by 2030 to reach net-zero global greenhouse gas emissions by 2050 (IPCC 2022). Some scientists caution against overstressing these precise thresholds, arguing that since the existing climate models are still unable to predict with absolute certainty the acceptable threshold of global average temperature rise, any alternate scenarios that unfold might inadvertently spur climate change denialism.⁵ Yet, while scientists may disagree on the exact amount of time humans have left to avert climate catastrophe, it is clear that the last nine years from 2014 to 2023 were the

hottest in recorded history and that even if all emissions were to cease now, the accumulation of greenhouse gases will take time to dissipate and global average temperatures will continue to rise for many decades. Even worse, greenhouse gas emissions are still rising, as has the average global rise in temperature since the beginning of the industrial age, which passed the 2.0°C mark for the first time in recorded history on Friday, November 17, 2022 (Dance 2023). Given that the world's national carbon pledges in 2022 would actually result in a 10.6 percent increase in global greenhouse gas emissions by 2030, it is clear that the current processes of international climate negotiations and policy changes are unlikely to result in dramatic decreases in global greenhouse gas emissions anytime soon (*UN News* 2022).

Curbing carbon emissions now is particularly crucial given that at least six climate tipping points are at risk of being activated, which by definition are changes to large biophysical systems that will negatively impact Earth's entire climate system in unstoppable, unpredictable ways that are sometimes abrupt and often irreversible. Already, four climate tipping points are possible, but some scientists believe that at the 1.5°C threshold, four or five tipping points become likely, including the melting of the Greenland and West Antarctic ice sheets, which together would result in an eventual ten meters of sea-level rise, the abrupt melting of the Arctic permafrost, the death of almost all coral reefs (the basis of much of the ocean food chain), and the collapse of the Atlantic Meridional Overturning Current (AMOC) (Rockström 2023; McKay et al. 2022).⁶ One new study suggests that the collapse of the AMOC could occur as early as 2025 and most likely in 2057 (Ditlevsen and Ditlevsen 2023), causing the extinction or displacement of vast numbers of ocean species, creating ocean dead zones, and changing air temperature and weather patterns in unpredictable ways, including altering the monsoon systems (IPCC 2022, 1216; McKay et al. 2022). Moreover, around the 2.0°C global warming threshold, which Earth is slated to cross between 2050 and 2070, sixteen additional climate tipping points are more likely to be activated (McKay et al. 2022), which could see the global average temperature rise to 4.0°C or more (7.2°F or more) by century's end (Spratt 2019; Lynas 2020; McKay et al. 2022), rendering the world unrecognizable.

Since the Earth ultimately functions as a unified, whole ecosystem of interdependent parts, of which humans are just one, the climate crisis is also a civilizational crisis, triggering social tipping points or conditions in which societies become unstable. These impacts are readily evident when regions are viewed from a systems perspective that includes human activity (Meadows 2008). As global temperatures increase, so will the strength and frequency of storms, ocean temperatures, stress on food crops, periods of drought, glacial ice melt, sea ice melt, and habitat suitability for certain species, such as mosquitoes. Reasonable predictions of tertiary impacts include increases in crop failure, the severity and frequency of floods, wildfires, and incidence of heat-induced illnesses, and rise

in sea level, as well as decreases in the availability of potable water and food supplies. A higher incidence of diseases is inevitable, such as ebola and malaria from mosquitoes and cholera and other infectious diseases contracted from unsanitary flood waters. Each of these conditions also unleashes a challenging series of events in the social sphere, such as civil unrest, internal displacement, and mass migration. With up to 1.2 billion climate migrants projected by mid-century, climate change will cause cascading disruptions in many societies around the world, even if they are not directly impacted by rising temperatures (IEP 2020). Since many migrants will come from the economically depressed global south with little resources to offer and in the direst need, no society is currently prepared to handle this scale of mass migration, either along the journey points or in the destination countries. Activating just one tipping point, the cessation of the AMOC, would not only have a disastrous impacts on the whole ocean and climate system, it would also eliminate major food sources for two billion people, destroy industries, and result in food shortages, driving starvation, civil unrest, and displacement. Consider the effects from Europe's "Little Ice Age" (from the fourteenth to nineteenth century), which occurred as a result of the weakening of the AMOC.⁷ Since water temperatures influence air temperatures, which dropped on average 2°C, the seasons changed, killing crops and causing millions in Europe to starve, with 1816 being declared "the Year without a Summer" (Arellano-Nava et al. 2022; Lapointe and Bradley 2021).

Discounting tipping points, Earth still appears to be on track for a 2.7°C (almost 5°F) global average temperature rise by the century's end, a disastrous scenario for many, especially the world's poorest people (UNEP 2021, 2022; *UN News* 2022). Factoring in tipping points, the world may be on the road to a 4°C (7.2°F) rise or more by century's end, which would threaten civilization in almost all parts of the globe (IEP 2020). One Australian thinktank concluded that human civilization could end as early as 2050 (Spratt 2019; Spratt and Dunlop 2019). This grim scenario prompted the United Nations Secretary-General António Guterres to state that "it's now or never": unless governments everywhere make a dramatic change across all sectors, "we will be doomed," and "the world will be uninhabitable" (*UN News* 2022). It is likely that only one billion people would be able to survive a 4°C world, and the majority of those survivors would be forced into the remaining habitable areas of the planet, roughly above the forty-ninth parallel north (above the United States and Canadian border, or northern France, or above Xinjiang in China) or, in the Southern Hemisphere, in the tip of Patagonia and in Antarctica (Vince 2019; Spratt 2019).

Responding with "Climate Apocalypse"

With a future this foreboding and unprecedented in human history, it is no wonder that many commentators find themselves drawing on apocalyptic theology to imagine the scale and depth of destruction now facing humanity.

Referring to a “climate apocalypse” has become an increasingly popular way of framing the unfolding climate crisis. Specific data on the actual frequency and valence of this usage in media should be available within the next few years (Vander Stichele 2023),⁸ but in the meantime, even a cursory search of recent headlines finds that the phrase has entered widespread usage. In 2019, the *The New Yorker* featured author Jonathan Franzen’s article “What If We Stopped Pretending?” The arresting pull quote pronounced in white italics on a black background: “The Climate Apocalypse Is Coming. To Prepare for It, We Need to Admit That We Can’t Prevent It” (Franzen 2019). The graphics feature a stunning illustration by Leonardo Santamaria that shows the silhouette of a woman, presumably a mother, pushing a child on a tire swing, surrounded with a blackened forest ablaze with red, orange, and yellow flames. Similarly, on July 4, 2022, the title of the *New York Times* opinion editorial by Paul Krugman warned of “Another Step toward Climate Apocalypse,” next to which was a photo by Emilio Fraile of Europa Press of a silhouetted firefighter walking toward a terrifying wall of forest fire flames in hues of orange, yellow, and black (Krugman 2022). Or consider a *Boston Globe* article by Sabrina Shankman from July 24, 2021, which features a triptych of photos: a melting glacier on the left, a building on fire in the middle panel, and flood evacuees on a raft in the right-hand panel. Above this, the headline reads in large lettering, “Welcome to the Climate Apocalypse. (It Will Get worse.)” (Shankman 2021).

Each journalist used the phrase “climate apocalypse” to stress the severity of the state of climate change, not only to help their readers become cognizant of the grim reality of climate change but also presumably so that they would take action. There is even a new Wikipedia entry on “climate apocalypse” that highlights that climate action is crucial:

A **climate apocalypse** (also called a **climate dystopia** and a **climate-induced collapse**, among other names) generally denotes a predicted scenario involving the global collapse of human civilization and potential human extinction as either a direct or indirect result of anthropogenic climate change. Many academics and researchers posit that in actuality, *unless a major course correction is imminently implemented*, some or all of the Earth will be rendered uninhabitable as a result of extreme temperatures, severe weather events, an inability to grow crops, and an altered composition of the Earth’s atmosphere. (Wikipedia 2020, emphasis added)

The phrase “climate apocalypse” also informs other semantic domains, including “eco-apocalypse” and “environmental apocalypse,” as well as other climate-related phenomena, in a “X + apocalypse” linguistic formula. For instance, during the record-breaking heatwaves of the 2022 summer, a French meteorologist named Francois Gourand used the phrase “heat apocalypse” to

describe the unprecedented and devastating weather in southern Europe (*Agence France-Presse* 2022), and the phrase was so potent that it went around international news media like the fire it was describing, appearing, for instance, as the headline in the *Guardian*, *Agence France-Presse*, *Al Jazeera*, *CNBC*, *The Washington Post*, and *9Now* in Australia. *The Atlantic* also featured a story in the fall of 2022 on the Turkish “honey apocalypse” caused by climate change, with the headline “Turkey’s Honey Apocalypse Is a Warning to the World” (Nadworny 2022).

Such usages are not limited to the media. The use of “climate apocalypse” and similar terms is also prevalent in scholarship on climate change, as even a cursory review of the many recent titles makes clear, e.g., *The Environmental Apocalypse* (Kowalski 2023), *An Inconvenient Apocalypse: Environmental Collapse, Climate Crisis, and the Fall of Humanity* (Jackson and Jensen 2022) and *Political Spirituality in an Age of Eco-Apocalypse* (Perkinson 2015). Many of these texts have the goal of explicitly or implicitly motivating effective climate action—that is, they still have hope. Others have less or no hope. The *Dark Mountain Manifesto*, the Dark Mountain Project, and twenty-four Dark Mountain books build a social, creative, and literary space that is “a love song for a collapsing world” (Kingsnorth and Hine 2009; Dark Mountain Project 2023). Created by the environmentalists Paul Kingsnorth and Dougald Hine, the first decade or so of the project took a decidedly dark turn, although Kingsnorth has recently converted to Romanian Orthodox Christianity in a way that now holds out a sliver of hope (Kingsnorth 2021).

“Climate Apocalypse” as a Generator of Passivity: Ortner on Key Symbols

Although the goal of using the phrase “climate apocalypse” may be to motivate climate action, what is the actual impact of this rhetoric and apocalyptic framing of climate change? Does referring to this situation as a “climate apocalypse” help or hinder in motivating the critical collective action we must all take within just a few years? Answering this accurately and making the best decisions regarding how to frame climate crisis in public discourse requires critically analyzing audience reception of the phrase “climate apocalypse.” The work of anthropologist Sherry B. Ortner on key symbols, symbols that play a key cultural role and hold a particular place of importance, is quite useful for such an analysis.

Given the widespread usage of “climate apocalypse” in academia, journalism, and other media, it seems intuitive that this symbolic phrase expresses an idea that is important to the audience. Ortner’s work offers the means to determine whether the phrase “climate apocalypse” and other symbols serve as “key symbols” that perform vital functions in a particular society. She lists five indicators, any of which could signal that a given symbol is a “key symbol” (Ortner 1973, 1338). Since her work uses 1970s anthropological terminology, she refers to how “natives” view a particular symbol, “X” (Ortner 1973, 1338). In this case, “members of the general public” may be substituted for “natives” and “climate

apocalypse” for the “X” symbol to see whether “climate apocalypse” functions as a key symbol for many audiences according to Ortner’s five indicators (at least in the United States and Western Europe, and perhaps elsewhere).

Ortner’s first and second indicators state: “The [members of the general public] tell us that [climate apocalypse] is culturally important,” and “The [members of the general public] seem positively or negatively aroused by [climate change], rather than indifferent” (Ortner 1973, 1338). The potency of the phrase “climate apocalypse” is clear in the many activist protests that took place across Europe in 2022 and 2023, as well as in the apocalyptic framing of climate change by United Nations Secretary-General António Guterres, who addressed the World Economic Forum of global leaders in Davos, Switzerland, in 2020 by describing climate change as the worst of the Four Horsemen of the Apocalypse, which he said included: “Climate change, mistrust of leaders, increased geopolitical tension, and the dark side of the technological revolution” (World Economic Forum 2020).

Ortner’s third indicator of a key symbol is that: “[Climate apocalypse] comes up in many different contexts . . . or symbolic domains (myth, ritual, art, formal rhetoric, etc.)” (Ortner 1973, 1338). As I have noted, “climate apocalypse” comes up in street protests, French weather reports, the most respected journalistic venues, scholarly accounts, art, film, and music. “Climate apocalypse” also crosses semantic domains to produce the related phrases “heat apocalypse,” “eco-apocalypse,” “honey apocalypse,” and so forth.

Ortner’s fourth indicator states: “There is greater cultural elaboration surrounding [climate apocalypse] . . . compared with similar phenomena” (Ortner 1973, 1338). While I know of no hard data regarding such a comparison, the idea of “climate apocalypse” anecdotally appears to receive greater “cultural elaboration” than some other scenarios of existential risk, such as the danger from supervolcanoes or asteroidal impacts (Torres 2024). Ortner’s fifth indicator does not seem to be applicable: “There are greater cultural restrictions regarding [climate apocalypse] (Ortner 1973, 1338). Still, “climate apocalypse” fulfills four of Ortner’s five indicators of key symbols; thus, I suggest the concept does function as a key symbol for many societies today.

The real value of Ortner’s work is not simply to confirm a hunch that “climate apocalypse” conveys a critical social idea. She also distinguishes between two kinds of key symbols that function in different ways. The first is the summarizing key symbol, namely: “those symbols which are seen as summing up, expressing, representing for the participants in an emotionally powerful and relatively undifferentiated way, what the system means to them. This category is essentially the category of sacred symbols . . . and includes . . . catalysts of emotion” (Ortner 1973, 1340). “Climate apocalypse” appears to function as a “summarizing symbol”—a way for those learning climate facts to express their total impression of the dire ecological and civilizational future, to

express their deep emotion over this, and to do so using the sacred language of “apocalypse.” This applies to both the popular meaning of “apocalypse” as “endtime” and the religiously valenced “apocalypse,” as Guterres’s extended metaphor of the Four Horsemen of the Apocalypse made clear (World Economic Forum 2020).

Regarding the function of a summarizing key symbol, Ortner explains, “The important mode of operation of summarizing symbols [including most sacred symbols] . . . is [their] focusing power, [their] . . . intensifying” (Ortner 1973, 1342). They “speak primarily to attitudes, to a crystallization of commitment” (Ortner 1973, 1342). The summarizing key symbol, however, is not a vehicle for prompting careful reflection on the crucial details needed to navigate the climate crisis or reach agreements at COP28 (the United Nations climate change conference) and beyond. To grasp the visceral yet irrational responses that a summarizing key symbol might evoke, consider the actions groups such as Just Stop Oil, Extinction Rebellion, and Occupy in 2022 and 2023, when young people threw food at precious art treasures in Europe and glued themselves to the walls and frames in famous museums, to a dinosaur exhibit, to various roads, and to the floor at the University of Lisbon. Although the goal of the activists was to draw attention to the climate crisis, the form of their protest performance remained disconnected from their explanations and deterred the audience they intended to persuade.

For instance, after throwing soup on Vincent Van Gogh’s *Sunflowers* (which was protected by glass) in London’s National Gallery, Phoebe Plummer shouted to the crowd, “What is worth more: art or life?” (Quiroz 2022). Similarly, after covering John Constable’s *Hay Wain* with a dystopian painting of Earth’s climate future and gluing herself to the frame, activist Hannah Hunt yelled: “So yes, there is glue on the frame, but there is blood on the hands of our government” (*ITV News* 2022). While the meaning was clear to the activists, onlookers tended to express horror and puzzlement rather than a deeper understanding of the climate crisis, even long after the event. This is because, according to Ortner, summarizing symbols such as “Throwing Food at Art” or “Gluing Ourselves to Objects” succeed in “operat[ing] to compound and synthesize a complex system of ideas, to ‘summarize’ them under a unitary form” (i.e., climate change = destruction; commitment to climate action = gluing ourselves here because we will not be deterred) (Ortner 1973, 1340). However, a detailed understanding of the signified quickly gets lost. While disruptive summarizing symbols are emotionally powerful and may act as catalysts of commitment for those who already belong to the cause, as Ortner states, “[they do] not encourage reflection on the logical relations of ideas” (Ortner 1973, 1340). When national treasures are damaged or the functioning of an institution such as a university is impeded, such disruptive symbolic tactics, even though nonviolent, widen the gulf between “us” and “them,” and those who might have come around to

the cause initially can find themselves confused, frustrated, or angry about the symbolic acts. Michael E. Mann, Professor of Earth and Environmental Science and Director of the Penn Center for Science, Sustainability, and the Media at the University of Pennsylvania, lamented over the Van Gogh *Sunflower*-tomato soup incident, stating: “The public outrage was palpable. The reliably progressive Dan Rather, a consistent advocate for urgent climate action, opined: ‘It’s destructive to protest the destruction of our planet by trying to destroy beautiful art,’” and Mann tweeted, “If you’ve lost Dan, maybe rethink your strategy folks” (Mann 2022). An Anneberg Policy Center poll of 1,031 respondents from October 2022 asked, “Do nonviolent disruptive actions decrease/increase your support for efforts to address climate change?” (Mann 2022). Only 13 percent said such actions increased their support, while 46 percent said the tactics decreased their support, and “a whopping 27 [percent], in fact, said [nonviolent disruptive tactics] *greatly* decrease their support [for addressing climate change],” a result that tracked across all age groups, from 18–29 to 65+ (Patterson and Mann 2022). Despite the activists’ bravery, dedication, creativity, and willingness to suffer for their ideals, if their real goal is to gain attention for the climate crisis in order to spur change and action, a summarizing symbol such as “Food Thrown at Art = climate crisis” has the reverse effect.

Interestingly, the media coverage mapped these disruptive climate actions onto another summarizing symbol in which “climate apocalypse = climate crisis.” *ITV News* described Hannah Hunt’s attack on Constable’s *Hay Wain* as painting “an apocalyptic vision” over the painting (*ITV News* 2022), and *New York Times* reporter Ross Douthat reported the actions of the Just Stop Oil activists who threw tomato soup on Van Gogh’s *Sunflowers* by stating: “The activists are protesting . . . the expansion of the energy support, on the grounds that fossil fuels are pushing the world toward *climate apocalypse*” (Douthat 2022, emphasis added). This journalistic phrasing indicates that, at least in this context, the rhetorical function of “climate apocalypse” is as a summarizing symbol. The phrase is an emotionally charged condensation, but it does not promote further understanding of the complex, wicked problem of the climate crisis, nor does it spur effective collective action. While it catalyzes commitment by those already committed to combatting climate change, it does little to motivate new action.

In fact, characterizing disruptive protests as apocalyptic may deter those who are not climate activists by cementing historical associations with environmental radicalism. As early as 1997, Lois Ann Lorentzen (1997, 144, in Crockford 2021) called Earth First! “an ecological apocalyptic movement.” Martha Lee also wrote of Earth First!ers as a millenarian group who spoke of “environmental apocalypse,” believing that industrial society would bring about “total economic collapse, the cessation of the infrastructure of our current civilization is only a heartbeat away” (Lee 1997, 120–28). Lee classified the early Earth First! movement as a millenarian group due to several characteristics:

- Believers awaited an imminent apocalypse.
- This apocalypse would end the current social order, industrial capitalism.
- Believers formed a group of “elect” whose right-thinking in understanding the crucial importance of wilderness enabled them to prepare the Earth for the impending apocalypse by preserving what little wilderness remained.
- The end of industrial capitalism would usher in the ultimate, or final, stage of human history. (Lee 1997, as summarized in Crockford 2021)

EarthFirst! was committed to “monkeywrenching”—or property damage to stop harm to the environment, the implicit threat of the Food Thrown at Art actions—which ranged from pouring karo syrup in the gas tanks of construction equipment to attempting to sabotage power lines at a nuclear energy facility (Flannery 2016, 197).⁹ The activists were motivated by biocentrism—the idea that every species of life is as valuable as every other (Foreman 1991, 26). Since at its root biocentrism arises from compassion, most EarthFirst!ers and other radical environmentalists have rejected violence against persons, yet the philosophy has the potential to devalue human life. Some eco-activists have become eco-terrorists, fighting against what co-founder Dave Foreman called the “Humanpox,” or those ravaging the environment (Foreman 1991). Foreman even believed that the Humanpox had a different genetic strain of human ancestors than environmentalists (Foreman 1991, 57; Flannery 2016, 192). Such us versus them dualism is inscribed further by a “climate apocalypse” framing of climate change, which plays on tropes of good and evil persons and can in some cases catalyze violence (see Flannery 2016, 67–78, 192).

In contrast to *summarizing key symbols*, “*elaborating [key] symbols . . . work in the opposite direction, providing vehicles for sorting out complex and undifferentiated feelings and ideas, making them comprehensible to oneself, communicable to others, and translatable into orderly action*” (Ortner 1973, 1340, emphasis added). A conceptual elaborating symbol on the climate crisis would be “good to think with,” as Lévi-Strauss might say, by guiding the audience in “conceptualiz[ing] the interrelationships among phenomena by analogy to the interrelations among the parts of the root metaphor” (Ortner 1973, 1340). It may primarily possess conceptual elaborating power, what Stephen Pepper (1942) called “root metaphors,” or it may primarily possess action elaborating power, actually spurring climate actions (Ortner 1973, 1340).

An example of an effective elaborating symbol that is also a disruptive action would be the 1960 Greensboro sit-in in which African American college students sat at a segregated Woolworth’s counter and refused to leave after being denied service. The more one thinks about the symbol, the more details of the actual referent emerge. An excellent example of an elaborating key symbol on climate change that takes the form of a literary image is Greta Thunberg’s statement

to the World Economic Forum at Davos: “I want you to act as if our house is on fire, because it is” (World Economic Forum 2019). The various parts of the elaborating symbol make sense in relation to various aspects of the climate crisis, and the more one thinks about it, the more one comes to understand anthropogenic climate change. Fire is hot and global warming is hot—plus, climate change literally increases the risk of fires. When there is a fire, people know what they have to do: get out of the house. But once we think through that part of the metaphor, we realize that the house is our planet, and we have nowhere to go. Thus, we have to act quickly to put out the fire, which certainly means not feeding it more fuel or using more fossil fuel. As an organizing symbol that helps formulate further understanding and as a cultural strategy, “our house is on fire” works to spur action in a way that “climate apocalypse” and “Throwing Food at Art” cannot.

“Climate Apocalypse” as a Generator of Passivity: Peirce on Symbols and Collective Memory Theory

Semiotic theories on metaphor and social memory theory explain even further why the framing “climate apocalypse” will backfire as a strategy for spurring activism. The semiotician Charles Peirce proposed that there are three ways signs communicate meaning. For Peirce, an icon is a sign that has an obvious physical connection with the signified; it represents that thing (an acorn, a clock). At the other end of the spectrum, a symbol, as Peirce defines it, is a sign with no innate connection to the signified (male, female, 4) (a very different framework than Ortner’s). The index is a sign that has some kind of relationship with the signified that needs to be teased out (Peirce 1907, 1992, 1998) (see Figure 1).

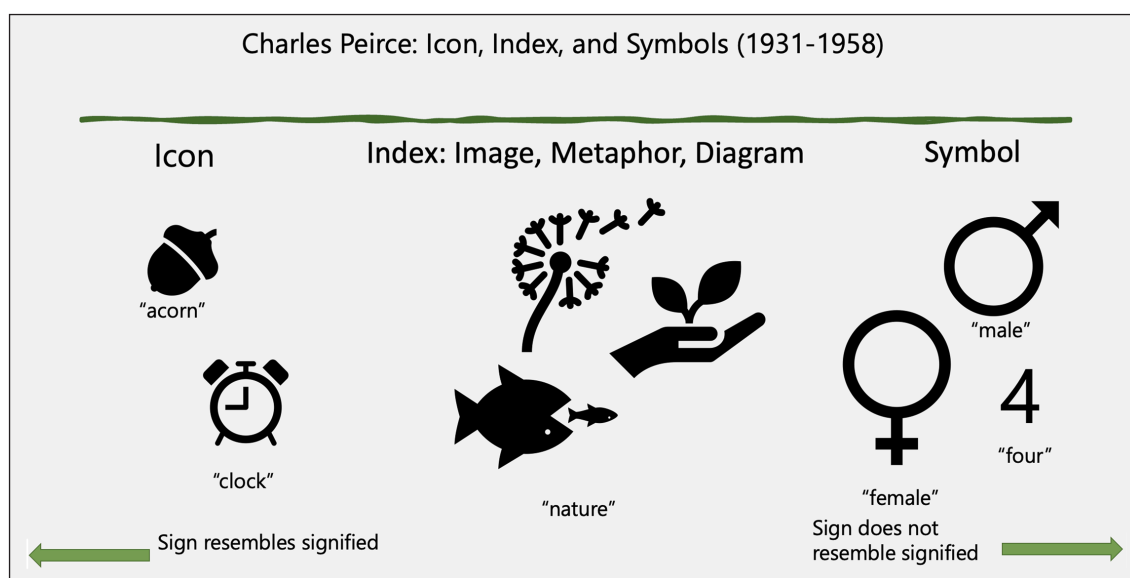


Figure 1: Charles Peirce on icon, index, and symbol (Peirce 1931–58).

I suggest that those who employ the sign of “apocalypse” in reference to the climate crisis do so because they are thinking of it as having a literal correspondence with the climate future of disaster—that is, they construe “climate apocalypse” as an icon in which “apocalypse” is a total devastation wreaked by the climate future. In other words, it is world ending. Repeatedly, across domains of usage of “climate apocalypse,” it is this world-ending aspect that is in view, particularly in the popular consciousness and the media. While an Australian thinktank’s serious report on “existential climate-related security risk” from 2019 nowhere uses the term “apocalyptic,” the media readily translated the data into apocalyptic terms, with the headline “End of Civilization: Climate Change Apocalypse Could Start by 2050 If We Don’t Act, Report Warns” (Weise 2019; see Spratt and Dunlop 2019).

Yet, as historians and religion scholars know, “apocalypse” entails so much more than the end of the world; otherwise, “The End of the World,” plain and simple, would function as the main key symbol. The several thousand-year history of apocalyptic thinking plays with a trove of religious and literary narratives possessing certain typical themes and structures, mapping vast terrains of conceptual regions belonging to the cognitive container of apocalypse (Collins 1998). Apocalypse is no icon. Rather, in the public imagination, the sign “apocalypse” is a very complex index. The signifier “climate apocalypse” indicates some sort of relationship with what is signified—climate crisis—but this is a relationship that needs to be teased out carefully. Moreover, the index type is a metaphor, the most fluid category of all the signifiers identified by Peirce.

Alexander Feodorov (2018) extends Peirce’s basic treatment of metaphor in his article “Peirce’s Garden of Forking Metaphors.” Feodorov notes that “metaphor . . . transfers meaning between different logical universes . . .” but as opposed to analogy, metaphor has much more play, it is a “hypoiconic sign, i.e., an embodiment of pure potentiality” (Feodorov 2018, 189, 199). Between the sign “climate apocalypse” and the signified, the climate future, there is always a third thing in this “forking metaphor” (i.e., the middle tine of a fork) (Feodorov 2018). That is, there is always something that the mind of the hearer has to fill in to bridge the sign and the signified. Since “climate apocalypse” is a summarizing key symbol, meaning that it is weak on helping its audience think through the complexities of that scenario, the “Thirdness” of the forking metaphor “climate apocalypse” must be filled in by the audience’s own mental play because it is not inherent to the symbol (Feodorov 2018).¹⁰

Collective, or social, memory theory can be helpful in understanding the process by which this mental filling-in between “climate apocalypse” and climate change occurs and how this generates passivity, deterring the audience from taking effective climate actions. Social memory theory analyzes the ways in which groups dynamically construct the past in relation to the present. The theory posits that the remembered past is socially constructed in terms of the

pressing needs of the present with “coherence-bestowing activities” (Kirk and Thatcher 2005, 7–15). “Climate apocalypse” has currency because so many people are concerned with the world-ending quality of climate change.

Social memory theory also maintains that since the remembered past reflects an ongoing attempt to make sense of the present, the way societies construct the past continues to evolve as present needs shift and various motifs from the repository of past images recede or become accentuated (Kirk and Thatcher 2005, 7–15). This social memory-making process is similar in some ways to how an individual’s neuro-biological memory functions. Individuals’ memories are not stored biologically as a discrete, static files of former events. Instead, several neural pathways must reconstitute each time a memory is “recalled,” crafted anew out of an array of available building blocks of memory (Budson and Kensinger 2023). In a similar fashion, the ancient literary genre “apocalypse,” which arose in ancient Persia and coalesced in early Judaism and Christianity (Collins 1979, 1998), supplied numerous cultures over time and space with a repository of recurring themes and motifs. As a story, an apocalypse is a revelation that explains how a righteous group who is presently suffering under cosmically evil forces will someday be delivered through the dramatic intervention of divinely sent agents of deliverance. These agents will rescue the righteous and punish the wicked, inaugurating changes so vast that an end and new beginning to history can be spoken of, a “new heaven and a new earth” (Collins 1979, 14; Flannery 2016, 2). Social memory theory therefore suggests that certain persistent features from this apocalyptic history are always bubbling beneath “climate apocalypse,” ready to surface when they relate to our pressing present needs. These associations may not be consciously acknowledged—indeed, if Freud was right about the unconscious, then it would be the apocalyptic themes repressed at a deeper, unexcavated level that exert the most power over us (Freud 1913, 485–93).

In this way, social memory has framing capacities for the future, with political, affective, and value-laden goals that program future actions (Schwartz 1996, 909). As Schwartz (1996, 909) puts it, collective memory is both a model *of* society and a model *for* society; memory is a social frame that is orienting and influences future activities. Collective/social memory exerts power as a “cultural program that orients our intentions, sets our moods, and enables us to act” (Schwartz 1996, 921, 909–10). When climate change is expressed through the apocalyptic story, millennia of apocalyptic tropes orient the audience’s intentions, set their moods, and influence their action—or their collective inaction.

I suggest that when the public hears the metaphor (in Peirce’s terminology, the index) of “climate apocalypse,” the pre-cognitive container of “apocalypse” brings along a well-entrenched referential system of symbolic associations from the long history of Jewish and Christian apocalypticism that moves audiences to collective passivity in at least five different ways.

First, when contemporary sources speak of “climate apocalypse,” it evokes the world-ending aspect of apocalyptic theology and ignores the world-creating aspects that have always been the ultimate *telos* of apocalypse in Judaism, Christianity, and Islam. Climate disaster is not a threshold into a better, more just world, it is the opposite. The phrase “climate apocalypse” is purposefully overwhelming. It should not be dismissed as merely alarmist rhetoric, because the real climate facts are so dire. Yet when the framing of “climate apocalypse” manipulates sacred stories to inflict trauma with no emphasis on the world-redeeming parts of historical apocalyptic theology, it may create passivity rather than spur quick and cooperative climate action.

The extent to which young people equate climate change with the world-ending aspects of apocalypse was captured in a 2021 poll in *The Lancet*, in which fifty-six percent of people ages 16–26 agreed that “humanity is doomed” (Hickman et al. 2021). Fully seventy-five percent of this age group called the future “frightening” (Behnke 2022). Generation Z’s climate anxiety has even produced a musical genre called “apocalypse pop,” with songs such as “Colony Collapse” by Snag, which laments: “The more that I learn, the more I believe the Earth is a corpse laid at our feet” (Behnke 2022). The world-ending aspects of “climate apocalypse” are also stressed by eco-activists such as Extinction Rebellion, which protested in sixty European cities from October 7–11, 2019, announcing: “To governments of the world: We declared a climate and ecological emergency. You did not do enough. To everybody else: rebel . . . This isn’t a distant *apocalypse*. People all over the world are suffering and dying right now” (*Agence France-Presse* 2019). Accordingly, *France 24* ran the headline “Climate ‘Apocalypse’: Extinction Rebellion Begins Fortnight of Protests” (*France 24* 2019).

Second, the framing of “climate apocalypse” reinforces the assumptions of apocalyptic religions that expect the end time to come soon, a theological development that has dangerous consequences at this moment of climate crisis. Apocalyptic evangelical Christianity in particular is still associated with greater climate denial or the belief that the effects of climate change are signs of the end time. The fourth angel in Revelation 16:8–9, who pours his bowl of wrath on the sun and is given the power to scorch people with fire, may be interpreted as rising temperatures or heatwaves. The angel who destroys one-third of the sea in Revelation 16:3–4 may be interpreted as the death of ocean life and coral. Yet since most Christian believers in an imminent apocalypse *welcome* the end time, environmental disasters interpreted in this way create passivity and hinder climate action.

The apocalyptic religious framing of climate change becomes particularly problematic in societies with strong apocalyptic leanings, such as the United States. In 2010, fully forty-one percent of Americans surveyed by the Pew Research Center (2010) said Jesus will “probably” return by 2050. Conflating

the climate crisis and a belief in an imminent end time impacts the willingness of the general American public to make the degree and scale of sacrifices necessary for climate change mitigation and societal resiliency. Perversely, the United States is more responsible than any other nation for climate change in terms of both historical and current per capita emissions (Ritchie 2019; Ritchie, Rosado, and Roser 2023),¹¹ yet continues to play an outsized role in international climate negotiations.

Evangelical Christian apocalyptic ideology can also affect climate action in nations with key ecosystems, such the overwhelmingly Christian Democratic Republic of Congo, which has the second-largest rainforest in the world and the largest wetland—critical carbon sinks for the planetary climate system. The message in this heavily churched country (which is thirty-five to forty-five percent evangelical) that climate change is a sign of the apocalyptic end time reduces buy in for protecting natural resources, despite the extraordinary financial incentives to do so, considering the average per capita annual income of less than US\$600 per person (World Bank 2023). To be clear, it is not evangelical Christianity per se that generates climate passivity, it is the apocalyptic framing of climate change. If, for instance, the dominant symbol associated with the climate crisis were to address Jesus's clarion call to care for the poor (e.g., Matthew 25:31–46), a scriptural emphasis that is far more pervasive in the Bible than apocalypticism, then recognizing the inordinate impact of American lifestyles on the global poor on account of climate change could very well motivate worldwide climate action.

Third, the very logic of apocalyptic theology is that human effort will be ineffective in righting a broken world. This too is detrimental, even in a secular setting. Consciously or unconsciously, the framing of “climate apocalypse” contributes to the widespread tendency of people to place hope for salvation from disaster in savior figures such as inventors, scientists, or governments who might rescue humanity in the nick of time. This takes the burden of difficult problem solving and civilizational-scale transformation off our shoulders. Instead, it consciously or unconsciously places hope in a magical inventor, an all too risky proposition given that many billionaire technocrats do not have equity and humanitarian concerns motivating their core missions. This is especially dangerous considering the popularity of the “longtermism” philosophy among technological innovators, a belief that ignores equity or social justice in favor of perpetuating the human species, which only requires preserving a remnant of humans (Torres 2021).

Fourth, each time the narrative of “climate apocalypse” is reinscribed, it reinforces the expectation that somehow the innocent will be saved and the wicked will be punished. When apocalypse is applied to the climate crisis, this theology becomes truly perverse, cruel, and damaging. The poorest nations

and Indigenous peoples did not create the climate crisis, but they will suffer the most from it. Half of all historical CO₂ emissions were created by just twenty-three countries, twenty-two of which are Western European Christian nations or colonies. The other half were generated by 150 countries, many of which are located in the poorer Global South, which includes the equatorial and coastal regions that will be hit hardest by the impacts of climate change (Popovich and Plumer 2021). The twenty countries out of the 195 at COP27 that are responsible for eighty percent of carbon emissions will protect their self-interests before ever acting to protect the majority of the world, despite the fact that other nations are not historically responsible for creating climate change and will feel its worst impacts.

Ethically speaking, it is particularly problematic when someone in a highly polluting society such as the United States uses the term “climate apocalypse,” because they are unconsciously identifying themselves as the one suffering. In the logic of apocalypticism, this means that Americans are conceptually framing themselves as the righteous who will be saved, yet considering responsibility for both historical and current per capita emissions, those in the United States are most certainly the wicked (Popovich and Plumer 2021). With relatively greater resources with which to adapt to the impacts of climate change, many Americans may be able to escape the worst harms. Indeed, the most affluent in the world’s high-emissions societies—those who created climate change—will fare the best in the climate crisis. By contrast, vulnerable peoples in those same developed nations, including black and brown peoples, will tend to fare less well, and the poor of the Global South will absolutely languish. The richest of us might even escape to Mars or a survival bunker built by the rich (Torres 2021). If predictions of a 4°C global average temperature rise by the century’s end hold, however, only a billion humans will survive—and they will mostly be those who caused climate change (Spratt 2019).

The fifth and perhaps the most destructive implication of framing the climate crisis as a “climate apocalypse” is that in the logic of apocalypticism, the brokenness of the world is not humans’ fault. Apocalypticism absolves us because a cosmic evil that is bigger than human history has the world in its grips. The term “climate apocalypse” imparts the feeling that humans aren’t *really* responsible (even though we are, since climate change is perpetuated by economies and lifestyles fueled by fossil fuel consumption) and creates an aura of helplessness in which we are not the ones who can fix it. Surely some inventor will save us in the nick of time, or some consortium of governments will suddenly work out their difficulties to cooperate and repair the damage done to the climate. On the other hand, if the ninety-seven plus percent of climate scientists are correct and humans caused climate change, then we humans *have* to fix it. The house is on fire.

Conclusion

United Nations Secretary-General Antonio Guterres stated on November 4, 2022, that unless COP27 produced historic agreements, “we will be doomed,” adding, “this is not fiction or exaggeration” (Harvey 2022b). Already known for having spoken of climate change as the most dangerous of the Four Horsemen of the Apocalypse, Guterres often uses religious imagery to impart urgency to climate action (World Economic Forum 2020). Recently, he stated, “We are on a highway to climate *hell* with our foot on the accelerator” in which there is “wave upon wave of suffering for billions of people” (Guterres 2022). This may be a mixed metaphor, but it is still a better type of key symbol than “climate apocalypse,” because humans need to act *now* to stop emitting more carbon so that we can slow our path towards a disastrous future, and maybe even change course. We need to reclaim the choice before us, as Guterres dramatically stated: “We have a choice. Collective action or collective suicide. It is in our hands” (Harvey 2022a).

Through its non- or pre-cognitive container of associations, the narrative of “climate apocalypse” creates trauma and elicits a passive response in audiences in multiple ways, even when employed in secular contexts. Human effort is deemed ineffective in righting a broken world, leading to inaction. The world-ending, violent, and traumatic aspects of apocalypticism rather than its world-creating character become the focus of climate discussions, leading to passivity and despair. Consciously or unconsciously, the framing places hope for salvation in savior figures (inventors, scientists, governments) who might rescue humanity in the nick of time, obscuring the need for sweeping civilizational transformations to end fossil fuel consumption. Moreover, in the realm of religious responses, the impact of using the apocalyptic story to describe climate change becomes even more detrimental. By identifying climate change with signs from the Book of Revelation and fitting scientific and experiential data into the narrative of imminent catastrophe and the divine salvation of the righteous, vast swaths of the American public and communities in nations with keystone ecosystems, such as the Democratic Republic of Congo, have become complacent. Finally, perpetuating the narrative of “climate apocalypse” obscures crucial differences between the traditional apocalyptic story, in which the righteous are rescued and the wicked are punished in the end time, and actual social injustices of climate change, in which the most vulnerable and the populations that have produced the fewest greenhouse gases will likely suffer the most. Hence, the framing of “climate apocalypse” both draws on narrative violence and perpetuates violence.

I strongly suggest that anyone urging climate action stop saying “climate apocalypse.” While it is a difficult task to find a suitable alternative, the most compelling visions will be *elaborating key symbols* that not only convey the world-ending potential of the climate crisis but also the world-beginning possibilities that societal transformations could bring about. For instance, in

his environmental encyclical *Laudato Si': On Care for Our Common Home*, Pope Francis I urges humanity to abandon the consumptive, technocratic civilization that created climate change, stating: “Nobody is suggesting a return to the Stone Age, but we do need to slow down and look at reality in a different way” (*Laudato Si'*, 114). Even when Pope Francis expresses his vision in apocalyptic terms, he stresses the world-creating side of apocalypticism: “This leads us to direct our gaze *to the end of time* . . . so that God may be everything to every one (1 Corinthians 15:28) . . . the risen One is mysteriously holding [the creatures of this world] to himself and directing them towards fullness as their end” (*LS*, 100). He also uses the elaborating symbol of the Earth as “God’s art” (*LS*, 80), painting an intensely inclusive and positive cosmic vision: “The universe unfolds in God, who fills it completely” (*LS*, 233). In a similar way, the Orthodox Christian leader Ecumenical Bartholomew uses an elaborating symbol for the Earth when he states that environmental sin is a sin against God because “[t]he Lord suffuses all of creation with His divine presence in one continuous legato from the substance of atoms to the Mind of God” (Ecumenical Bartholomew 2011, 136). Biblical models can also offer the *Urzeit-Endzeit* paradigm of texts such as Isaiah 2:2–5 and 11:1–16, in which the end time sees the restoration of the original harmony of the Garden of Eden.

Others have argued that since much of the problem of climate change has emanated from a particular Christian worldview of humankind’s divinely dispensed domination of “nature” (White 1967; Taylor 2009), it may be fruitful to look to Indigenous/native/First Nations/aboriginal cultures for symbols of worlds ending and yet beginning, e.g., the Diné and Hopi’s “fifth world,” or to religions such as Hinduism or Buddhism, which view the universe itself as cycling over and again through destruction and creation. Inspiration can also be found in frameworks that transcend any particular religion and envision the kind of future humankind might wish to create, such as the One Billion for Peace Pledge (BioEarth 2023) or the Earth Charter (Earth Charter Institute 2023).¹² Although crafting the appropriate language to convey the urgency of the climate crisis while also motivating climate action is no simple task, many sources can provide inspiration for thoughtful and creative elaborating symbols. Thus, it is time for climate activists to stop saying “climate apocalypse,” if we want to avoid one.

Notes

- ¹ This article is based on my paper presented at the Society of Biblical Literature Annual Meeting, Denver, Colorado, November 20, 2022. I wish to thank the Apocalypse Now program unit for this invitation, especially the co-chairs, Ana T. Valdez and Bert Jan Lietaert Peerbolte.
- ² As reported by the European Union's Copernicus Climate Change Service (Van Campenhout 2023).
- ³ Despite twenty-seven Conference of Parties (COP) leadership gatherings on climate change, the Mauna Loa observatory continues to show rising CO₂ levels, see <https://gml.noaa.gov/ccgg/trends/monthly.html>.
- ⁴ Temperature rise is calculated in the IPCC reports as the concentration over pre-industrial levels, which they measure from 1850–1900 (defined in the IPCC *AR6 Special 1.5°C Report 2018*).
- ⁵ This is a prudent concern. Understandably, the IPCC has made these temperature thresholds the focus of their recommendations, likely as an attempt to influence decision makers, who operate by negotiating around benchmarks. Yet, a problem arises in that the COP dynamics lack the flexibility needed to respond to new climate data quickly, especially considering the lag time between emerging climate data and changes in recommendations by the IPCC, which can only occur after the relevant teams have conducted a thorough review of new scientific studies.
- ⁶ One new study suggests that the mass bleaching of almost all coral reefs, which would also lead to vast ocean dead zones across the planet, will occur at 1.5°C (Heron et al. 2022).
- ⁷ A 2023 study concluded that the collapse of the AMOC is ninety five percent certain to occur between 2025 and 2095, most likely in 2057 (Ditlevsen and Ditlevsen 2023). The AMOC is a large system of ocean currents in the Atlantic Ocean that mixes nutrients and waters from the tropics to the Arctic—like mixing cake batter from the bottom of the bowl to the top. It has operated for 12,000 years since the end of the Ice Age, although it weakened from 1315–1851. Climatologists were unsure what caused this anomaly (the coldest period in 10,000 years), but a recent paper in 2021 may have solved the riddle. The AMOC normally conveys warm tropical water to the Arctic along the north European coast, where it meets cold Arctic waters, loses heat, and then sinks and flows south along the North American coast. In the fourteenth century, a series of erupting volcanoes and extra solar activity warmed the tropical current that flowed up to the Arctic, releasing an overabundance of formerly frozen sea ice into the North Atlantic, lowering salinity, and changing the usual layering of the water strata normally differentiated by salinity and temperature, which resulted in the collapse of the AMOC and colder air temperatures (on average 2°C).
- ⁸ At least one scientific research project emanating out of Tilburg University in the Netherlands is already underway under the guidance of Dr Caroline Vander Stichele. The team is tracking social media posts by some sixty environmental groups to track instances of phrases such as “climate apocalypse” as well as related climate terms with religious valences, such as “climate sinner,” “climate ritual,” and “climate sangha” (Vander Stichele 2023).
- ⁹ Lee argues that by the mid-1980s EarthFirst! underwent a significant change, drawing in more “social justice”-oriented “career activists” from the Pacific Northwest who tempered the early tendency toward violence such that the end time “would be a golden age in which species’ life in the biosphere would be balanced, wilderness would reemerge, and humans would live in harmony with their environment” (Crockford 2021, summarizing Lee 1997).
- ¹⁰ The pathway of the creative force of metaphor lies beyond the scope of this paper but is nevertheless intriguing. Merrell adds: “In this vein, I would ask that you consider the creative process as emerging from metaphoricality, at the heart of which lies hypoiconicity. This involves a creative process beginning with feeling, sentiment, and emotion (Peirce’s Firstness), which, after passing through sensation and the experience of imagined or physical world particulars (Secondness), might eventually find their way to explicitness through ideas, thoughts, and concepts incorporated in words (Thirdness)” (Merrell 2006, 120).
- ¹¹ The United States alone is responsible for over twenty percent of all historic greenhouse gas emissions (Ritchie 2019). Even though China is the greatest emitter of CO₂ today—and even though the emissions per person in the United States have steadily dropped since 2000 while China’s are

rising—in 2023, the emissions per person in the United States were still 14.9 tons per person compared to 9 tons per person in China (Ritchie, Rosado and Roser 2023).

- ¹² However, the iconography of the Earth Charter's Ark of Hope project, which houses a copy of the charter, reveals an extremely strong influence from Biblical religions, especially Christianity. See www.arkofhope.org.

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