

Looking Beyond the Science: A Rhetorical Analysis of the Climate Clock and the Trust Science

Approach to Climate Activism

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Abstract

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Addressing the climate crisis is one of the most pressing issues of our time, yet rising authoritarianism, science skepticism, and doomerism all play a role in stalling political action and making climate destruction feel inevitable. Climate activists thus face a dual challenge: how to persuade others to join us in changing an apparently unchangeable world, and how to tame the tides of skepticism towards the very reality of the crisis? In order to address these questions, this thesis focuses on a case study of the Climate Clock, a well-known public art installation in New York City which seeks to motivate action by counting down the time we have left before passing a critical threshold of warming. I contend that the clock is representative of an approach to climate activism I call the *trust science paradigm*, which focuses on affirming the veracity of climate science. Although an understandable response to the exigence of hostility towards

scientific expertise, I argue that the trust science paradigm is guilty of maintaining an inaccurate and harmful divide between the discursive jurisdiction of scientists and the public, which impoverishes the public understanding of both science and the climate crisis, and our capacity to imagine solutions. As a result, the Climate Clock backfires as a rhetorical strategy, failing to provide a productive solution to the challenge climate activists face. I close by suggesting alternative approaches to an environmental rhetoric that may be more productive.

Introduction

To say that we are running headlong into a scenario of global climate change of catastrophic scale is not to say anything new. The sentiment has long been pronounced by climate scientists and echoed by politicians, journalists, and everyday citizens in our public discourse. Experts from the Intergovernmental Panel on Climate Change (IPCC)—the UN body charged with assessing the science of climate change—put it bluntly: “the temperature *will* increase by 1.5°C in the first half of the 2030s, and will make it very difficult to control temperature increase by 2.0°C towards the end of 21st century. Every increment of global warming will intensify multiple and concurrent hazards in all regions of the world” (emphasis added).¹ Browsing through the climate section of any mainstream media outlet yields reports that confirm the IPCC’s claims—articles on record-setting floods, fires, and droughts across the globe that disrupt millions of people’s wellbeing and livelihoods at best, and leave hundreds or thousands dead at worst. And depending on where you live, these kinds of disasters may not just be in your newsfeed, but also at your door.

And although the IPCC attempts to assure us that “deep, rapid, and sustained mitigation and accelerated implementation of adaptation actions in this decade would reduce projected losses and damages for humans and ecosystems,” a quick survey of the global political landscape is not confidence inspiring.² Trump has withdrawn the US from the 2015 Paris agreement, global attention has been focused on wars in Ukraine, Gaza and Iran, and the rise of authoritarian regimes which ignore public support for government-led responses to the crisis is not isolated to the US but rather representative of a widespread trend seen in countries like Hungary, Turkey,

¹ IPCC, 2023 Synthesis Report:
https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_FullVolume.pdf.

² IPCC, 2023 Synthesis Report.

India and Poland.³ In short, we seem to have an abundance of evidence pointing to the conclusion that *we know what the future holds, and that it's too late to change it*.

This conclusion poses a paradox for climate activists: how can we change an apparently unchangeable world? And how can we persuade people to join us in this seemingly impossible task? This paper aims to offer the beginnings of answers to these questions. It centers on a rhetorical analysis of the Climate Clock, a public art installation in New York City which aims to catalyze climate action by counting down the time we have left until we pass a particularly dangerous threshold of warming. I connect the Climate Clock to a strain of climate activism which I call the *trust science paradigm*. Responding to growing skepticism towards science and expert knowledge, messaging in this paradigm emphasizes the truth of scientific findings on climate change. Although I consider it to be an understandable response to the exigence of hostility towards scientific expertise, my aim in this paper is to argue that the trust science paradigm is guilty of maintaining an inaccurate and harmful divide between the discursive jurisdiction of scientists, citizens, and activists, which impoverishes the public understanding of both science and the climate crisis, and our capacity to imagine solutions. As a result, the Climate Clock backfires as a rhetorical strategy aiming to catalyze climate action, failing to provide a productive solution to the paradox climate activists face.

The argument of my paper proceeds in five sections. In section one, I introduce the climate clock in greater detail. In section two, I review the increasing hostility towards the scientific establishment and argue that the trust science paradigm has emerged in response to such hostility. The clock, I contend, serves as a useful case study of this paradigm in action.

³ McKenzie Carrier and Thomas Carothers, "U.S. Democratic Backsliding in Comparative Perspective," 25 August 2025, <https://carnegieendowment.org/research/2025/08/us-democratic-backsliding-in-comparative-perspective?lang=en>; Jennifer Marlon et al., "Yale Climate Opinion Maps 2024," 28 August 2025, <https://climatecommunication.yale.edu/visualizations-data/ycom-us/>.

Sections three and four contain the bulk of my argument. In section three, I show that the Climate Clock is representative of a common but misguided tendency to view the climate crisis as a kind of looming and instantaneous moment of destruction. Crucially, I argue that this way of framing the climate crisis robs the audience of their sense of agency, achieving the opposite of its intended effect.

Drawing on both rhetorical theory and literature on scientization, quantification, and expertise, in section four I argue that the trust science paradigm promoted by the Climate Clock emerges from an oversimplified conception of the relationship between science and politics, which restricts scientists to making claims about matters of fact, and leaves citizens, activists, and politicians to debate questions of value. This division of discursive jurisdiction, I claim, is neither descriptively accurate nor is it ideal, yet it remains a powerful idea that shapes much of the political conversation about climate change, including the Climate Clock. Having shown why this artifact is counterproductive, in section five I canvas possible alternative approaches to an environmental rhetoric that avoid the pitfalls of the Climate Clock.

Part 1 - The Climate Clock

The Climate Clock occupies 62 feet of space on the side of a commercial building in the highly trafficked Union Square in New York City. In bright orange LED numbers, it purports to count down the time we have left before we surpass 1.5 degrees Celsius of warming, a threshold that has been identified as important by both scientists and policy makers. Originally telling the time of day, in September 2020 the clock switched—first displaying the warning “the earth has a deadline,” and then displaying the numbers “7:103:15:40:07,” representing the years, days,

hours, minutes, and seconds until that deadline.⁴ At the time I am writing this, there are now less than four years left on the clock. The number for the deadline is derived from data from the Mercator Research Institute on Global Commons and Climate Change (MCC) and the IPCC. Estimates of the amount of carbon we can burn before passing 1.5 degrees of warming were combined with estimates of our current rate of carbon emissions to generate the seven year timeframe.⁵

The clock's origins lie in artist Gan Golan's desire to create a public illustration of the urgency of the climate crisis following the birth of his daughter. He teamed up with fellow artist, Andrew Boyd, for the project. Golan is a cartoonist, author, and activist with an affinity for "mediagenic public spectacles" such as projecting video games onto buildings to challenge corporate power.⁶ He helped organize The People's Climate March, and has also been an advocate for the importance of filming police after having been beaten by police during a peaceful protest. Boyd's website identifies him as a writer and a "prankster"; he is the author of several books and his satirical progressive advertising agency reveals a similar affinity to mediagenic spectacle as Golan.⁷ Both of the authors of this artifact, then, seem to be playful and extremely media-savvy with their work, experienced in crafting messaging that garners the attention of the press.

The Climate Clock is aligned with their previous work, and indeed was successful in generating press coverage. The launch of the clock generated dozens of headlines which all shared a similar tone of fixating on an approaching doomsday: "How Long Until It's Too Late to Save Earth from Climate Disaster? This Clock is Counting Down," "New York City's Latest

⁴ Colin Moynihan, "A New York Clock That Told Time Now Tells the Time Remaining," *The New York Times*, September 20th, 2020, <https://www.nytimes.com/2020/09/20/arts/design/climate-clock-metronome-nyc.html>.

⁵ "One Deadline," Climate Clock, accessed April 19th, 2026, <https://climateclock.world/one-deadline>.

⁶ "About," Tribeca Film Institute, accessed March 10th, 2025, https://www.tfiny.org/filmmakers/detail/gan_golan.

⁷ "Home Page," Andrew Boyd, accessed March 10th, 2025, <https://andrewboyd.com/>.

Attraction: A Climate Clock That Counts Down to Doomsday,” “Clock in New York Counts Down the Time Remaining to Avert Climate Disaster.”⁸ *The New York Times* reported on it with the headline “A New York Clock That Told Time Now Tells the Time Remaining.”⁹ Since its initial launch in 2020, additional Climate Clocks have been installed in Berlin, Rome, Seoul, and Glasgow, and the project continues to receive significant press coverage as it passes notable markers. For example, in July 2024 a slew of headlines documented the clock’s passage of the five year mark, bringing renewed attention to its message about the urgency of the crisis.

Part 2 - A Brief History of Right-Wing Climate Skepticism and the Emergence of the Trust Science Paradigm

Though the bulk of this paper focuses on a criticism of the Climate Clock, making sense of this artifact first demands understanding the particular rhetorical situation from which it emerged—the growing skepticism towards the scientific establishment.¹⁰ My aim in this section, then, is to briefly canvas the rise of such skepticism, and to show how climate activists have

⁸ Jennifer Hassan, “How Long Until It’s Too Late to Save the Earth From Climate Disaster? This Clock is Counting Down,” *The Washington Post*, 21 September 2020, <https://www.washingtonpost.com/climate-environment/2020/09/21/climate-change-metronome-clock-nyc/>; Suzanne Rowan Kheller, “New York City’s Latest Attraction: A Climate Clock That Counts Down To Doomsday,” *Forbes*, 25 September 2020, <https://www.forbes.com/sites/suzannerowankelleher/2020/09/25/new-york-citys-latest-attraction-a-climate-clock-that-counts-down-to-doomsday/>; Teresa Machemer, “Clock in New York Counts Down Time Remaining to Avert Climate Disaster,” *Smithsonian Magazine*, 22 September 2020, <https://www.smithsonianmag.com/smart-news/clock-new-york-counts-down-time-remaining-avert-climate-disaster-180975881/>.

⁹ Moynihan, “New York Clock.”

¹⁰ My focus here is on science skepticism from the political right, since that is where most efforts to delay climate action come from, and because practically all climate activism comes from the left. However, it is worth noting that skepticism towards the scientific establishment has also increased on the left in recent years, though left-wing science skepticism tends to be directed at different targets, such as vaccines and genetically modified organisms (GMOs).

adjusted their rhetorical tactics in response, adopting the features of what I call the trust science approach to climate activism.

Although simmering for decades, hostility towards science has erupted under the first and second Trump administrations, and this phenomenon has received much attention across academic disciplines. For example, in 2002—long before figures like Trump and RFK Jr. were sowing distrust about vaccines and autism—political communications consultant Frank Luntz was cooking up creative solutions for Republicans interested in delaying action on climate change. By appealing to the American public’s uncertainty about which scientists to believe, Leah Ceccarelli explains, Luntz advised Republicans to frame climate change as a live controversy in expert communities, thus undermining the credibility of the scientific consensus.¹¹

In 2004, Bruno Latour, a central science and technology studies (STS) scholar famous for pointing out the socially constructed nature of scientific knowledge, worried about the trend he had initiated in science scholarship after observing how figures like Luntz abused arguments about the instability of scientific facts for the sake of right-wing interests in delaying climate action. “Entire Ph.D. programs are still running,” he lamented, “to make sure that good American kids are learning the hard way that facts are made up, that there is no such thing as natural, unmediated, unbiased access to truth, that we are always prisoners of language, that we always speak from a particular standpoint, and so on, while dangerous extremists are using the *very same argument* of social construction to destroy hard-won evidence that could save our lives” (emphasis added).¹²

Such extremists entered the mainstream with the election of Trump in 2016, and sparked a set of new terms to describe the corrosion of the shared factual basis on which our political

¹¹ Leah Ceccarelli, “Manufactured Scientific Controversy,” *Rhetoric and Public Affairs* 14, no. 2 (2011): 204-205.

¹² Bruno Latour, “Why Has Critique Run out of Steam? From Matters of Fact to Matters of Concern,” *Critical Inquiry* 30, (2004): 227.

discourse depends. “Post-truth” was Oxford dictionary’s word of the year in 2016, and terms like “fake news” and “alternative facts” rose to prominence as attempts to explain Trump’s electoral success despite his habitual lying.¹³ By 2019, the attacks on the scientific establishment had become so widespread that sociologist Gil Eyal argued we are experiencing a “crisis of expertise,” such that the term ‘expert’ has almost taken on a pejorative valence.¹⁴ In that vein, Trump consistently claims that climate change is a hoax and that scientists are “stupid people.”¹⁵ Just this year his administration repealed the “endangerment finding,” a scientific consensus affirming that greenhouse gasses pose a threat to human health.¹⁶ The impact of this ruling is that the Environmental Protection Agency no longer has the authority to regulate greenhouse gas emissions. The increased vitriol directed at scientists thus leads to concrete and dangerous impacts on our climate.

It is no wonder then, that in the midst of such a swell of hostility towards scientific findings, climate activists have felt compelled to uplift the veracity of the science on which their movement is based. While earlier eras of climate activism were focused on issues such as conservation or pollution, scholars have noted a shift within the past decade or so to a focus on climate science itself, with activist groups such as *Fridays for the Future* (FFF) and *Extinction Rebellion* (XR) receiving attention for spearheading this shift.¹⁷ FFF originated in 2018, when youth climate activist Greta Thunberg—acting alone—skipped school on a Friday to protest global inaction on the climate crisis. By the following year, the FFF movement had mobilized an

¹³ William Davies, “Stupidology,” *n+1* 51, (2025). <https://www.nplusonemag.com/issue-51/politics/stupidology/>.

¹⁴ Gil Eyal, *The Crisis of Expertise* (Polity Press, 2019).

¹⁵ Lisa Friedman, “Trump Administration Erases Government’s Power to Fight Climate Change,” *The New York Times*, February 12th, 2026, <https://www.nytimes.com/2026/02/12/climate/trump-epa-greenhouse-gases-climate-change.html>.

¹⁶ Friedman, “Trump Erases Government’s Power.”

¹⁷ Joost De Moor et al., “New Kids on the Block: Taking Stock of the Recent Cycle of Climate Activism,” *Social Movement Studies* 20, no. 5 (2021): 619–25, <https://doi.org/10.1080/14742837.2020.1836617>; Frauke Rohden, “Experts, Influencers, and Amplifiers — Exploring Climate Movements’ Hyperlinking Practices,” *Journal of Science Communication* 20, no. 07 (2021): A09, <https://doi.org/10.22323/2.20070209>.

estimated 6 million strikers during a “Global Week for the Future.”¹⁸ XR emerged slightly later, and engages in civil disobedience and nonviolent direct action like blocking roads or gluing oneself to corporate or government buildings in order to cause economic disruption and raise awareness.¹⁹

Despite the difference in tactics, political scientist Joost de Moore and colleagues point out that these newer strains of climate activism are united by a shared emphasis on upholding the truth of climate science.²⁰ For example, FFF’s core demands include calls to both “listen to the best united science currently available” and to “unite behind the science.”²¹ Thunberg echoes these sentiments in her own speech, posting on Facebook in 2019, stating that “we are just passing on the words of the science. Our only demand is that you start listening to it. And then start acting.”²² Similarly, one of XR’s core three demands is to “tell the truth,” which they assert on their website before providing an overview of what the scientific consensus is regarding the impact of increasing temperatures on extreme weather events and sea level rise.²³

This is the collection of rhetorical strategies which I call the trust science paradigm of climate activism—the activists’ sidelining of their own voice in favor of uplifting science and scientists, and the injunctions to trust in the truth of the scientific findings. And given that the Climate Clock is a visual representation of scientific data with the additional political aim of catalyzing climate action, I take it to be clearly operating within the bounds of this paradigm.

¹⁸ De Moor et al., “New Kids,” 621.

¹⁹ De Moor et al., “New Kids.”

²⁰ De Moor et al., “New Kids.”

²¹ “Our Demands,” Fridays for Future, accessed April 19th, 2026, <https://fridaysforfuture.org/what-we-do/our-demands/>.

²² Quoted in Darrick Evensen, “The Rhetorical Limitations of the #FridaysForFuture Movement,” *Nature Climate Change* 9, no. 6 (2019): 428–30, <https://doi.org/10.1038/s41558-019-0481-1>.

²³ Alison Lowe, “Tell The Truth.” Last modified Friday, December 11th, 2020, <https://rebellion.global/blog/2020/12/11/tell-the-truth/>.

There exists a large body of scholarship on climate discourse, and many scholars have touched themes of temporality and timeliness that are related to the Climate Clock. Scholars have examined chronotypes in climate discourse, considered how environmental advocates and enemies alike appeal to multiple different temporalities of climate change in their arguments, and developed concepts such as “perpetual potential,” or the idea that environmental rhetoric poses apocalypse as always on the brink but simultaneously maintains that there is always potential for action.²⁴ Some research does mention the Climate Clock in passing, however none present a sustained and detailed rhetorical analysis of this particular artifact, nor do they consider how it relates to literature on scientization, quantification, or expertise.²⁵ This paper aims to fill that gap. Analyzing the rhetorical dimensions of the Climate Clock thus stands to yield unique insights for scholars interested in the discourse on climate change and science communication that I have outlined here

Part 3 - A Misleading Metaphor

So far I have argued that the Climate Clock is exemplary of the trust science paradigm, an approach to climate activism which seeks to uplift the veracity of the scientific basis of the climate crisis. Examining more closely the implications of the Climate Clock’s message can yield important insights into the broader trend of the trust science approach to climate activism.

²⁴ Jodie Nicotra and Judith Totman Parrish, “Rushing the Cure: Temporal Rhetorics in Global Warming Discourse,” *JAC* 30, no. 1-2 (2010): 215-237; Allyson Gross, “Untimely and Unsolvable: Climate Rhetoric’s Problem of Many Times,” *Rhetoric Society Quarterly* 56, no. 3 (2026): 269-282; Stacy K. Sowards, “Rhetoric of the Perpetual Potential: A Case Study of the Environmentalist Movement to Protect Orangutans,” in *The Environmental Communication Yearbook* ed. Stephen Depoe (Routledge, 2006): 115-135.

²⁵ Brian Monahan and Joel Best, “Clocks, Calendars, and Claims: On the Uses of Time in Social Problems Rhetoric,” *The Sociological Quarterly* 64, no. 2 (2023): 320–38, <https://doi.org/10.1080/00380253.2022.2114962>; Karen Barad, “Troubling Time/s and Ecologies of Nothingness: Re-Turning, Re-Membering, and Facing the Incalculable,” *New Formations* 92, no. 92 (2017): 56–86, <https://doi.org/10.3898/NEWF.92.05.2017>.

In particular, my aim in this section is to argue that the Climate Clock makes a dangerous analogy which misrepresents the nature of the climate crisis, and ultimately robs the audience of their sense of agency—precisely the opposite of the authors’ aim.

Let me begin by suggesting that the Climate Clock is best thought of as a kind of visual metaphor which takes the familiar form of the countdown clock. Although it is a visual text, we could say the metaphor it employs essentially amounts to the following claim: “the time we have left to limit warming to 1.5 degrees Celsius is 3 years, 149 days, 20 hours, 26 minutes, and 40 seconds,” and then 39 seconds, 38 and so on as the clock continues to count down. This claim may sound unassuming or obvious on its face, but metaphors are often so familiar that they fail to register as an actual figure of speech. In such cases, they approach the condition of being a dead or dormant metaphor, or a cliché.²⁶

Yet even dead metaphors carry with them a set of associations that shape the way we think about the concepts they connect. As rhetoric scholar Edwin Black puts it, metaphors can serve as “verbal tokens of ideology,” single words which can conjure a whole “plexus of attitudes that may not at all be discussed in the discourse or even implied in any way other than the use of the single term.”²⁷ Drawing out the entailments of a common metaphor, then, can help elucidate the ideological bent of the discourse around a given issue.

Discourse on climate change is rife with metaphors that subtly shape how we think about the issue. We conceive of time to address the crisis as an ever-closing “window,” through which we must jump at the right time in order to take critical action. Our time to act has a “deadline” and our carbon emissions a “budget,” each of which, if surpassed, will cause us to suffer irreversible consequences.

²⁶ Edwin Black, “The Second Persona,” *The Quarterly Journal of Speech* L6, no. 2 (1970): 109-119.

²⁷ Black, “The Second Persona,” 113.

The Climate Clock's claim, then, becomes more troubling once the entailments of its metaphor are explicitly drawn out. For example, one of the most common images conjured when one thinks of a countdown clock is that of a bomb waiting to go off. The common phrase "ticking time bomb" evokes this image. In fact, the authors of the Climate Clock likely had such an image in mind when creating it, as they have stated explicitly that inspiration came from the Doomsday Clock—another metaphorical clock which was created in 1947 by the Bulletin of Atomic Scientists to represent how close humanity is to nuclear annihilation. Here the function of the countdown clock is to count down to an instantaneous moment of destruction or catastrophe—the moment that the bomb goes off.

But this function is importantly disanalogous from the case of climate change, which does not result in a single moment of catastrophe but a more gradual degradation of livable environments. Further, the kind of data on which the clock is based—the predictions of long term climate modeling systems—necessarily deal with uncertainty. I say this not to cast doubt on the validity of climate science, but simply to point out a feature of the way the science works. Climate modeling systems give us estimated projections, not precise predictions.²⁸ They can project that 1.5°C of warming will lead to more frequent and more severe storms and droughts, but they cannot tell us exactly when or where the next hurricane or heat wave will strike. The lack of precision in the models clashes with the metaphor of the countdown clock employed by the Climate Clock. Countdown clocks are precise and climate models are not. The metaphor implies that we are *counting down to something*, some particular moment or event, yet it is clear that the science cannot tell us, with the level of precision implied by the metaphor, to what exactly it is we are counting down or when it will actually come to pass.

²⁸ Wynne, "Strange Weather."

Similarly, we also tend to see countdown clocks as partitioning time. Think of New Year's Eve, where we count down the seconds until the previous year ends and the new one begins. In the case of a nuclear catastrophe too, there is a clear partition separating the time before and after the catastrophe—the moment the bomb is dropped. But again, when the metaphor is applied to climate change, there is a clear disanalogy. Even though more recent research has suggested that there are important thresholds which, if passed, would generate rapid, accelerated warming—what Philosopher Stephen Gardiner refers to as the “abrupt paradigm”—there is still no single event that demarcates a before or after with respect to the onset of the climate crisis.²⁹ Such tipping point scenarios include the collapse or slowing of the thermohaline ocean circulation, the collapse of the hydrological cycle, and the release of super greenhouse gas methane hydrate that has previously been frozen under the oceans—a scenario that has been called the “big burp theory of the apocalypse.”³⁰ Though phrases like the ‘abrupt paradigm’ and ‘apocalypse’ make it sound as though there is an identifiable moment at which time can be partitioned, even such tipping points do not occur instantaneously. There is no single second before which we can say that the hydrological cycle definitely has not collapsed at all, and after which we can say that it definitely has. In other words, although tipping points exist, our own experience of them will not match our experience of tipping into the next year from the previous after the second-by-second countdown.

Finally, consider one additional setting in which countdown clocks play an important role—a sports game. Much like on New Year's, the clock is also delineating two separate times, before and after the game ends. But here it demarcates not just the passage of time, but rather

²⁹ Stephen M. Gardiner, “Saved by Disaster? Abrupt Climate Change, Political Inertia, and the Possibility of an Intergenerational Arms Race,” *Journal of Social Philosophy* 40, no. 2 (June 2009): 140–62, <https://doi.org/10.1111/j.1467-9833.2009.01444.x>.

³⁰ Nicholas Kristof, “The Big Burp Theory of the Apocalypse,” *The New York Times*, April 18, 2006, <https://www.nytimes.com/2006/04/18/opinion/the-big-burp-theory-of-the-apocalypse.html>.

when the rules of the game still dictate the players' actions, and when points scored still count. That is where all of the tension of a buzzer-beater shot in basketball comes from, for example. If the ball does not make it in before the clock strikes zero, the team will not get any points. This is perhaps the most dangerous analogy that the Climate Clock makes: by using the countdown clock metaphor, the implication for the audience is not only that there is an easily identifiable before/after split, but further that any action taken after the clock strikes zero is meaningless. In other words, the clock seems to tell us that once the deadline has passed, we can no longer "score points" against the climate crisis by reducing carbon emissions.

Such a message not only has the unwanted ethical implication that we are essentially off the hook *after* the clock strikes zero, it also disempowers the audience and dissuades them from taking action *now*. Of course, the intention is to motivate us to take even more aggressive action in the short time remaining, but if the time in which I can meaningfully take action to combat the climate crisis is only three years and some change, one might reason, then what is the point of doing anything at all? Imagining and implementing genuine solutions to the crisis is an incredibly demanding collective challenge that will take more than just a few years, so although a countdown clock quickly approaching zero may be motivating for individual athletes in the contained environment of a sports game, for example, it does not have the same effect for citizens of a large democratic society seeking to combat a complex global problem.

Further, it is also worth mentioning that, even if we were to suddenly make rapid progress across the globe towards reducing emissions, the Climate Clock would continue to count down as it always has. It does not make adjustments to its deadline in response to any progress made or action taken, making the destruction it claims to predict so precisely feel fated and deterministic, ultimately robbing the audience of their sense of agency.

Tellingly, as the clock has continued to creep closer to zero over the years, the authors are beginning to pick up on some of the issues I have identified in this section. Language on the project's website used to highlight that the clock counts down to a moment when the harmful effects of warming will become "irreversible," emphasizing the deterministic nature of the message. Within the past year, however, they have removed all references to the "irreversibility" of the damage and added the qualifying claim that "it will never be too late to take meaningful action to protect people and the planet."³¹ As a consequence, the language on the website now directly contradicts the implication of the countdown clock metaphor—the former tells us it will never be too late, while the latter tells us it will be too late in four years. The Climate Clock, and the trust science paradigm by extension, thus fails as an advocacy strategy, putting forth a muddled message in which audiences have to choose between trusting the science or their own capacities as agents to effect change. Recalling Black's terminology, we can see that the "plexus of attitudes" conjured by the countdown clock metaphor is ultimately one of disempowerment and determinism, rather than possibility.

Part 4 - The Downward Pull of the Stases

As I argued in the previous section, examining entailments of the countdown clock metaphor employed by the Climate Clock reveals a dangerous mischaracterization of the climate crisis which robs the audience of their sense of agency. Below I aim to demonstrate that this mischaracterization stems from features of the discursive environment for which the artifact was designed. In particular, I argue that contemporary discourse about climate change is plagued by a misguided belief that scientists occupy a discursive jurisdiction that is completely separate from

³¹ "One Deadline," Climate Clock, accessed April 13th, 2026, <https://climateclock.world/one-deadline>.

the public sphere where citizens, politicians and activists engage in policy debates. The stark division between the scientific and public spheres ultimately hampers the productivity of climate discourse, leaving political possibilities unexplored.

The rhetorical tradition has a rich set of resources for examining arguments on public policy issues, and stasis theory in particular is useful for elucidating the confusion that stems from the separation of the scientific and public spheres. Rhetorical critic Lynda Olman (née Walsh) explains that stases were originally developed by Roman rhetoricians to describe the progression of deliberative discourse from simpler to more complex questions.³² Borrowing Olman's example, we can see how the stasis levels move from conjectural questions to policy questions, with the answer in each level being dependent on the one in the previous level:

Fact: What is the condition of the lungs of children exposed to cigarette smoke?

Definition: Would we classify the condition (tarry residue) as damage?

Cause/effect: What is the mechanism of this damage? And/or what health effects does the damage produce?

Value: Are nicotine, tar, and the other causes of lung damage worth banning or regulating? Are the health effects life threatening?

Action: What policies will we adopt to reverse or prevent the damage caused to children's lungs by the chemicals in secondhand smoke?³³

Olman points out that we typically turn to science to address questions at the lower levels (fact, definition, cause/effect), while questions at the higher levels (value, action) are seen as part of

³² Lynda Walsh, "Visual Strategies for Establishing Ethos across the 'Is/Ought' Divide in the IPCC's Report Climate Change 2007: Summary for Policy Makers," *POROI* 6, no. 2 (2010): 40.

³³ Walsh, "Visual Strategies," 40-41.

the rightful jurisdiction of politics, where lawmakers and citizens grapple with issues of public concern. She calls this split of the stases the “is/ought” divide, and explains that scientists are often criticized for crossing it. Our contemporary understanding of science, writes Olman, sees scientists’ proper role as “[discovering] how nature [works], and then this information would be ‘handed off’ to the civic arena across the ‘is/ought’ divide, where citizens would then go on to decide how to apply the scientists’ discoveries to technology and policy development.”³⁴ Failure to participate in this ‘hand off’ by making value judgements of their own often exposes scientists to accusations of illegitimacy.

Two things about this separation, however, warrant attention: although we tend to think of the science-society relationship as operating in this separated way, it is neither a good ideal—meaning not aspirational in a normative sense—nor is descriptively accurate. These two points are central tenets of the field of STS, which starts from the assumption that science is a socially embedded, value-laden process, and often argues that recognition of this fact actually leads to *better* scientific knowledge than blindly insisting in the value-free conception of science.³⁵

That the science-society separation is descriptively inaccurate is exemplified by what Olman calls the upward pull of the stases, a phenomenon which highlights the often fuzzy line between questions of science and questions of policy. Olman explains that although we think of the stases as conceptually separate, “the stases exert an irresistible *upward pull* on the discourse surrounding a particular issue because the answer to a question at one stasis generates a question at the one above it (emphasis added).”³⁶ She argues that this upward pull is especially

³⁴ Walsh, “Visual Strategies,” 38.

³⁵ Sergio Sismondo, *An Introduction to Science and Technology Studies* (Wiley-Blackwell, 2012); Thomas Kuhn, *The Structure of Scientific Revolutions* (University of Chicago Press, 2012); Helen Longino, *Science as Social Knowledge* (Princeton University Press, 1990).

³⁶ Walsh, “Visual Strategies,” 42.

pronounced on the topic of climate change, where the claims scientists make are especially alarming. “If scientists state that humans are in fact causing climate change,” Olman writes, “the upward pull of the stases insures that policymakers ‘hear’ scientists saying that this enormous impact on the earth is so obviously bad (value) that it should be avoided (action), even if the scientists are careful not to use value or action language.”³⁷ Philosopher Dale Jamieson has made similar observations about the fuzzy distinction between is and ought. “There is not always a neutral way of characterizing facts,” he explains. “Scientists try very hard to speak in colorless, unexpressive language, but it is difficult to hear about ‘abrupt climate change’ without feeling some trepidation.”³⁸ According to Olman, scientists are thus often taken to be making value or policy statements “via the power of implication,” despite the fact that their role is conceived of as answering questions at the lower levels.³⁹

Similarly, the Climate Clock is also demonstrative of the hazy line between is and ought, though the pull of the stases moves in a different direction. Note that although the clock is intended to persuade audiences to take more climate action, it does not actually make any “ought” claims. Rather, the clock merely demonstrates the estimated time left until a particular threshold is passed—a claim about a matter of fact. Of course, the “ought” is there by implication: by visually demonstrating that the time left before the threshold is low and constantly decreasing, the clock intends to motivate us towards more aggressive efforts to address the crisis. But the implied “us” (who should act?) and the implied “action” (what should we do?) is far from clear. Instead, informed by the trust science approach to climate activism which defensively responds to climate skepticism, the authors of the clock spend more energy merely emphasizing the veracity of the number on the clock and the science on which it is based. This focus is evident in

³⁷ Walsh, “Visual Strategies,” 42.

³⁸ Jamieson, *Reason in a Dark Time*, 75.

³⁹ Walsh, “Visual Strategies,” 42.

their assertions claiming that the deadline is “the most important number in the world,” for example.⁴⁰ So instead of debating *how best to respond to the facts* at hand—which would be the traditional purview of activists—we are left asserting *what the facts are*.

In addition to the typical upward pull of the stases identified by Olman, then, the rhetorical situation in which the Climate Clock participates is one where there is also a *downward pull* on the stases. The skepticism towards scientific findings flourishing on the right forces activists’ hand, compelling them to affirm the legitimacy of science, with the ultimate result being a depression of the discourse below the level of politics. This dynamic is also visible in the kind of rhetoric employed by movements like FFF and XR which implore us to listen to the science.

This downward pull is significant not only in relation to what scholars have theorized about climate discourse in particular, but also in relation to broader theorizing about the relationship between science and politics. The term “scientization” has emerged from STS scholarship to describe the process by which issues in the public sphere become increasingly seen as scientific problems with scientific solutions, obscuring the normative questions they raise.⁴¹ As political theorist Danielle Allen puts it, “science tempts us into thinking we can put an end to politics and transform the human condition into a series of technical problems amenable to definite solutions.”⁴² The upward pull of the stases and the process of scientization draws scientists’ testimony up, while the right-wing skepticism towards climate science draws climate activists’ testimony down. The discourse is thus warped such that neither group is taken to be contributing to the stasis they think they are contributing to. Political solutions from activists are

⁴⁰ Moynihan, “New York Clock.”

⁴¹ Darrick Evensen, “The Rhetorical Limitations of the #FridaysForFuture Movement,” *Nature Climate Change* 9 (2019): 428-433; Brian Wynne, “Strange Weather, Again,” *Theory, Culture & Society* 27, no. 2–3 (March 2010): 294–295, <https://doi.org/10.1177/0263276410361499>.

⁴² Danielle Allen, foreword to *The Human Condition* by Hannah Arendt (University of Chicago Press, 2018), ix-x.

always implied but never explicitly expressed or debated, and scientific claims are taken to give guidance for politics in a way that they are actually not capable of doing. As a consequence, our climate discourse fails to be as generative as it might otherwise be, and remains imaginatively impoverished—a consequence that is on display in the Climate Clock.

Further, the downward pull of stases is also evident in the way that the authors of the climate clock attempt to demonstrate their credibility: by expressing their message numerically. I call this phenomenon the *ethos of quantification*, where activists in the trust science paradigm appeal to the perceived credibility of numbers rather than to their own moral authority qua activists.

Ethos, or a speaker's credibility, is a core concept in rhetorical criticism. Rhetorician Carolyn Miller explains that when the discourse concerns questions about risk or future possibilities, the credibility of the speaker is especially important, since enthymemes and deductive logic cannot guide our thinking.⁴³ Articulating Aristotle's ideas on ethos in *The Rhetoric*, Miller writes that "someone who seems fair-minded is readily believed in any situation, and in situations of uncertainty about the future there may be little else to go on."⁴⁴ Further, "the most decisive influence on persuasion is the *character of the persuader* (I.ii.4)... we put our trust in people who have good sense (phronêsis), good moral values (aretê), and goodwill toward us (eunoia) (II.i.5–7)" (emphasis added).⁴⁵ In other words, when other resources for reasoning fail us, we default to placing trust in those who seem likely to have good judgment in any scenario, those with strong character, and those who seem to have our best interests at heart. Presenting oneself as trustworthy, then, is an important aspect of any persuasive effort.

⁴³ Carolyn Miller, "The Presumptions of Expertise: The Role of Ethos in Risk Analysis," *Configurations* 11, no. 2 (2003): 163–202, <https://doi.org/10.1353/con.2004.0022>.

⁴⁴ Miller, "Presumptions of Expertise," 167.

⁴⁵ Miller, "Presumptions of Expertise," 167.

Given that the Climate Clock has the explicit aim of persuading audiences of the urgency of the climate crisis and the necessity of taking action, Aristotle's conception of ethos suggests that the authors behind it would be wise to demonstrate their own practical wisdom, moral excellence, and goodwill towards their audience. And yet, they remain largely anonymous as one engages with the work. Unlike a typical art installation with a plaque or some kind of identifying information, for those who encounter the Climate Clock in person there is nothing that identifies the installation with its creators Andrew Boyd and Gan Golan. Even for those who happen to venture to the project's website, there is almost no information about Boyd and Golan.

Instead, featured prominently on the website are numerous appeals to the credibility of "the science" itself. The front page explains that "leading scientists tell us we now have 4 years to move civilization off fossil fuels to avert climate catastrophe," emphasizing the caliber of the scientists making the claims.⁴⁶ On the "science" page of the site, where they explain how the deadline was calculated, they highlight that the clock is backed by the "best available science," and elsewhere they tout the IPCC as "the world's foremost authority on climate change" and the MCC as a "global leader" on climate science. Certainly none of these claims are exaggeratory, but what I want to direct our attention towards is how much energy appears to be spent shoring up the credibility of the science on which the clock is based rather than the credibility of the actual authors who created it. Instead of working to present *themselves* as trustworthy, it is almost as if Golan and Boyd are trying to personify "the science" and present *that* as trustworthy.

This kind of personification is a staple of the trust science approach to activism. For example, in a 2019 statement criticizing the Green New Deal for being insufficiently aggressive, Greta Thunberg exclaimed that "the science doesn't mainly speak of great opportunities to create the society we always wanted. This is not primarily an opportunity to create new green jobs, new

⁴⁶ Climate Clock, <https://climateclock.world/>.

businesses or green economic growth. This is above all an emergency.”⁴⁷ Note how her phrasing literally does personify science, conceptualizing it as an agent with its own voice, something that speaks.

Unique to the Climate Clock, however, is that it not only makes an appeal to the trustworthiness of the science—as we can see on the website—but the visualization of the IPCC data in the form of the countdown clock presents the message in a purely quantified format. All we see when we look at the clock are numbers, constantly moving downwards in order to demonstrate the urgency of the issue. I have argued that the move to uphold the truth of climate science is a response to the rhetorical situation in which skepticism about the crisis is prevalent among Americans. But why might the authors of the Climate Clock opt for a purely quantified expression of their message when faced with this exigence?

As it turns out, a wealth of empirical studies demonstrate that people tend to place unwarranted trust in numbers, *simply in virtue of the fact that they are numbers*.⁴⁸ Philosopher C. Thi Nguyen suggests that numbers appear trustworthy in part because they are extremely familiar. When information is presented in quantified form, we have a greater degree of “cognitive fluency,” or the subjective experience of ease of processing that information.⁴⁹ And “the easier an idea is to comprehend,” explains Nguyen, “the more likely we are to accept it as true.”⁵⁰ The appeal of numbers also lies in their “clarity and crispness.”⁵¹ Unlike our messy everyday exchanges or qualitative testimony from experts, numbers lack ambiguity and transport

⁴⁷ Quoted in Jeff McMahon, “Green New Deal Goes Global Despite Greta Thunberg’s Misgivings,” *Forbes* (November 2020), <https://www.forbes.com/sites/jeffmcmahon/2020/11/29/as-green-new-deal-goes-global-greta-thunberg-goes-largely-unheard/>.

⁴⁸ Theodore Porter, *Trust in Numbers* (Princeton University Press, 1995); Sally Engle Merry, *The Seductions of Quantification* (The University of Chicago Press, 2016).

⁴⁹ Christopher Nguyen, “Value Capture,” *Journal of Ethics and Social Philosophy* 27, no. 3 (2024): 492. <https://doi.org/10.26556/jesp.v27i3.3048>.

⁵⁰ Nguyen, “Value Capture,” 492.

⁵¹ Nguyen, “Value Capture,” 491.

easily across different contexts, making information seem straightforward and simple (think of the difference between a student's 4.0 GPA and their teacher's nuanced, qualitative evaluation of their performance). Translating this observation into rhetorical terminology, then, we could say that numbers alone convey a sense of expertise, goodwill, and trustworthiness. Let's call this the *ethos of quantification*.

This phenomenon is so pronounced that Nguyen argues it amounts to a case of "epistemic injustice." Coined by philosopher Miranda Fricker, the term "epistemic injustice" is what occurs when excessive credibility is awarded to undeserving sources, leaving deserving sources ignored and discounted as genuine outlets of knowledge.⁵² As Nguyen puts it, the excessive credibility given to quantified data "harms those who are unwilling or unable to present their information in such quantified form."⁵³ It is no wonder, then, that the authors of the Climate Clock were drawn to a communicative approach that capitalizes on the perceived trustworthiness of numbers. Instead of investing in cultivating their own ethos or even the ethos of scientists as experts, the countdown clock format, framed as a direct representation of the data itself, enables them to easily benefit from the ethos of quantification.

However, the apparent simplicity of the Climate Clock deadline falls apart under scrutiny, where it becomes clear that the number is actually quite value-laden. The clock's website references a table in the 2021 Summary for Policymakers from the IPCC, which lays out different carbon budgets for different levels of risk.⁵⁴ On one axis we see the level of warming, measured at 1.5, 1.7 and 2.0 degrees Celsius, and on the other is the percent likelihood of limiting warming to each temperature, with options ranging from a 17% chance to an 83%

⁵² Miranda Fricker, *Epistemic Injustice: Power and Ethics of Knowing* (Oxford University Press: 2007)

⁵³ Nguyen, "Value Capture," 491.

⁵⁴ IPCC, "Summary for Policymakers," https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_SPM.pdf.

chance. Higher temperature limits would entail increased risk, as would lower likelihoods of curbing warming to any given temperature limit. For example, if we were willing to accept just a 17% chance of limiting warming to 2.0 degrees, our allotted carbon budget would be a generous 2,300—meaning we could burn an additional 2,300 gigatons of carbon. In a lower risk scenario, our budget would be much tighter: if we wanted an 83% chance of curbing warming to 1.5 degrees, we could burn only 300 more gigatons of carbon. On the Climate Clock website, they take a more moderate route, explaining that a budget of 400 gigatons of carbon would ensure a 67% chance of keeping warming below 1.5 degrees. Once the 400 gigaton budget has been identified, they then use data from the MCC which estimates the current rate at which we are burning carbon to determine how long it will take to spend the whole budget, yielding the 7 year deadline.

Notably, however, they do not show the table on their website (although they do link to the whole report), nor do they offer an explanation as to why—out of the twelve different possible budgets presented by the IPCC—they choose the budget that they did. Audiences who encounter the clock in person or in media reporting on it are thus completely unaware of the apparently arbitrary reasoning behind the particular deadline selected. For the few who do venture to the website, find the link to the IPCC report, and scrutinize the referenced table, we are left speculating about why the authors opted for the budget that they did.

It is relatively straightforward to guess why they might have chosen a budget that keeps warming below 1.5 rather than 1.7 or 2 degrees, given that 1.5 degrees Celsius of warming relative to pre-industrial temperatures has been identified as a consequential threshold by both the IPCC and political leaders. But the question remains as to why they opted for the 67% likelihood budget, and here the answer is far from obvious. One might be especially puzzled—and

rightly so—by that choice, given their insistence of the urgency and emergency posed by the climate crisis. If the threat is so worrisome, wouldn't it be better to opt for the most risk-averse budget, where the IPCC predicts an 83% chance of remaining below the 1.5 degree threshold? Conversely, one might wonder why they didn't opt for 50% or 33% likelihood budgets (500 and 650 gigatons respectively), which each would have yielded more time on the clock. After all, their purported aim is to inspire climate action, and it can feel paralyzing to be told that the time we have left to stave off doomsday is only 7 years.

Whatever the case may be, the point is that the apparent simplicity and crispness of the number the authors present as this deadline does not hold up under scrutiny. In fact, the deadline is actually quite value laden. How much risk we are collectively willing to endure is not a question that IPCC reports or quantified data can answer. Rather, it is a complex question about value which demands the qualities of human ethos: good judgement and moral excellence. And yet the Climate Clock offers up an answer to that question under the guise of the ethos of quantification, thereby presenting it as if it were an unambiguous matter of fact.

What ends up happening is a conflation of different kinds of ethos. Miller has identified a similar phenomenon in her rhetorical study of risk analysis on nuclear reactor safety, where she examines the Reactor Safety Study (RSS). She notes that the RSS was dependent not only on statistical methods for calculating risk, but—in cases where there was insufficient historical data or a lack of theoretical models to predict risk mathematically—also on expert opinion, covertly expressed as “subjective probabilities” in order to assuage the engineering community's discomfort with reliance on mere opinion (even the opinion of experts).⁵⁵

The engineering community's preference for quantitative over qualitative methodologies reflects the more widespread trust in numbers I articulated earlier, and the RSS makes a similar

⁵⁵ Miller, “Presumptions of Expertise,” 177.

rhetorical move as the Climate Clock. “By focusing our attention on the facts of the case (and on opinions presented as though they were facts), rather than on the character of the community it represents,” writes Miller, “the RSS makes expert opinion acceptable.”⁵⁶ Moreover, “by treating expert opinion as data and detaching it, to the extent possible, from the character that authorizes it, the RSS rhetorically transforms ethos into logos,” Miller explains.⁵⁷ Unlike the RSS, however, the Climate Clock treats not only the expert opinion of scientists as data with their singular 7 year deadline, but also the authors’ own moral authority as activists making a judgement call about what level of risk is acceptable. The ultimate consequence is this: by failing to identify the mix of expert opinion and activist decision-making that warrants the selected deadline but simultaneously highlighting the clock’s scientific basis, the authors misleadingly represent science as something more certain and value free than it actually is.

It should be clear from my discussion of the trust science paradigm in general and the Climate Clock in particular that a nuanced characterization of science is not what is being communicated by these rhetorical strategies. And the danger of a misunderstanding of science and an inordinate trust in numbers is only intensified in the kind of rhetorical situation for which the Climate Clock was crafted, where skeptics are ready to capitalize on any opportunity to sow seeds of doubt in the public’s mind. Failing to treat science as the nuanced tangle that it is, and instead presenting it as a mechanistic practice detached from the public sphere, where answers are straightforward and objectively true, opens the door for the skeptics, who can disingenuously frame healthy and normal debate amongst scientists as evidence that the science is not yet settled. The authors’ appeal to the ethos of quantification, then, ultimately backfires as a

⁵⁶ Miller, “Presumptions of Expertise,” 184.

⁵⁷ Miller, “Presumptions of Expertise,” 184.

rhetorical strategy by hollowing out the public conception of science and making us more vulnerable to the rhetorical tactics of bad actors.

Part 5 - Conclusion

Let us pause and take stock. I have argued that the Climate Clock is a representative case of what I call the trust science paradigm of climate activism, an approach which responds to growing skepticism towards the scientific basis of climate change by affirming the veracity of climate science. Although I think this is an understandable response to the constraints of this rhetorical situation, I contended that the clock employs a misleading metaphor which misrepresents the nature of the climate crisis, robbing the audience of their sense of agency in turn. Such a consequential misrepresentation stems from a more basic misconception of the relationship between the scientific and public spheres, where science and society are thought of as strictly separated by the is/ought divide. Both the upward pull on scientists' testimony and the downward pull of activists' testimony contribute to a confused and imaginatively depleted climate discourse, where we apply scientific answers to political questions, think we can do politics by asserting claims about matters of fact, and leave unchallenged the feeling that it is too late to change the direction the IPCC tells us we are headed. The Climate Clock is particularly guilty of this, as their dependence on the ethos of quantification upholds an oversimplified vision of science and obscures the challenging moral questions posed by their numerical deadline.

Although it is outside of the scope of this paper to examine alternative rhetorical strategies in depth, I want to close by turning our attention to possible areas for further research

which may help rhetoricians and climate communication scholars identify more productive appeals to climate action.

First, rather than conceptualizing the stases as delineating the discursive jurisdiction of scientists in the “is” realm and activists, politicians and citizens in the “ought” realm, it may be useful to think of the stases *temporally*. On this account, questions in each stasis are not the purview of a single group in society and handed over from one group to the next, but rather are addressed collectively as a debate evolves *over time*. Analyzing the evolution of climate discourse through the lens of a temporal conception of the stases may be fruitful, particularly given that answers to the factual questions of climate change have been established for decades.

Additionally, the work of German Jewish political theorist Hannah Arendt might also inform more hopeful iterations of climate rhetoric. Known for making sense of how totalitarian regimes rise to power and how they can be resisted, Arendt carries a central theme through her body of work, namely, the insistence that, no matter how fixed the future feels, *it could always be otherwise*.

This insistence shows up in a rousing essay she published in 1948, following the Jewish Agency’s declaration of Israel’s independence and in the midst of the period of violence that ensued. Titled “To Save the Jewish Homeland,” the essay argues vigorously for a shared system of governance in Palestine based on Jewish-Arab cooperation.⁵⁸ Remarkably, it does so despite the fact that nothing that was happening in the territory pointed towards the plausibility of her proposal—a state of affairs which Arendt openly acknowledges. And yet, Arendt insists that cooperation is the only way forward, concluding the essay with five clear axioms to guide action going forward and a dramatic closing sentence where she declares “it is still not too late.”⁵⁹

⁵⁸ Hannah Arendt, “To Save the Jewish Homeland,” in *The Jewish Writings*, ed. Jerome Kohn and Ron H. Feldman (Schocken Books, 2007): 388-401.

⁵⁹ Arendt, “To Save the Jewish Homeland,” 401.

Of this stirring final declaration, political theorist Noga Rotem writes that Arendt was engaging in an act of *political dreaming*, given that at the time Arendt wrote it the state of Israel was already a “*fait accompli*” and it was arguably past the point of no return.⁶⁰ For Rotem, Arendt’s dreaming consisted in “the audacity to be hopeful in face of catastrophe; to write and think from within a temporality of the ‘too late’ as if it was not too late, and to dream an alternative as it is disappearing.”⁶¹ The applicability of this kind of attitude to the climate crisis is evident, given that climate discourse is dominated by the sentiment that it may be too late, and that alternatives are rapidly disappearing.

Part of what emboldens Arendt to dream so audaciously is her conception of human freedom, which she defines as the capacity to start something new even in the face of overwhelming odds which make the future appear fixed. In *The Human Condition*, she writes that “the new always happens against the overwhelming odds of statistical laws and their probability, which for all practical, everyday purposes amounts to certainty; the new therefore always appears in the guise of a *miracle*. The fact that man is capable of action means that the unexpected can be expected of him, that he is able to perform what is infinitely improbable” (emphasis added).⁶²

Although, sadly, Arendt’s audacious vision for cooperation in Israel/Palestine has not yet come to fruition and the territory continues to be gripped by violence, the kind of political dreaming for which she advocates has proven critical in other historical cases, where conflicts once thought intractable were actually overcome. The fall of apartheid in South Africa, for example, was viewed by many onlookers as extremely surprising. Scholar of comparative

⁶⁰ Noga Rotem, “Arendt in Palestine” (presentation, University of Washington Political Theory Colloquium, Seattle, WA, December 5, 2025).

⁶¹ Rotem, “Arendt in Palestine.”

⁶² Hannah Arendt, *The Human Condition* (University of Chicago Press, 2018), 178.

politics Adrian Guelke notes that in the 1980s, it was common to see the political conflicts in South Africa, Northern Ireland, and Israel/Palestine as being united by the theme of “intractability” and “stark assumptions about the limited possibilities of progress.”⁶³ In a 1990 article on these cases, for example, political theorist Bernard Crick wrote that he saw the conflict in South Africa as “insoluble” because “no internal solution likely to guarantee peace can possibly satisfy the announced principles of the main disputants.”⁶⁴ The sentiment that South African apartheid would end only in a racial bloodbath was entrenched, and disproven only when the first free elections actually happened in 1994.⁶⁵ Arendt’s insistence that the future is never fixed is affirmed here, in a case of political transformation so rapid and unexpected that it became widely regarded as a miracle.⁶⁶

The historical record is full of such miracles, the fall of the Berlin wall being another common example of a rapid transformation that was unthinkable just months before it occurred. And these kinds of cases serve as inspiration for activists who are currently working on what many think are intractable problems—including Israel/Palestine. For example, in a 2026 interview with journalist Ezra Klein, Israeli activist May Pundak explained her response to skeptics of the vision for shared governance in the territory put forth by the organization she co-leads with a Palestinian activist: “a month before the Berlin wall fell,” she explains, “people said it will never fall. A month before the Good Friday Agreement was signed, people say it will never be solved. Well, guess what? It was. We need to get to that tipping point.”⁶⁷ Indeed, just as there are tipping

⁶³ Adrian Guelke, “South Africa: The Long View on Political Transition,” *Nationalism and Ethnic Politics* 15, no. 3-4 (2009): 417. <https://doi-org.offcampus.lib.washington.edu/10.1080/13537110903358739>.

⁶⁴ Bernard Crick, “The High Price of Peace,” in *The Elusive Search for Peace: South Africa, Israel and Northern Ireland*, eds. Hermann Giliomee and Jannie Gagliano (Oxford University Press, 1990), 265.

⁶⁵ Guelke, “South Africa: Long View.”

⁶⁶ Patti Waldmeir, *Anatomy of a Miracle: The End of Apartheid and The Birth of the New South Africa* (W.W. Norton & Co., 1997).

⁶⁷ Ezra Klein, “A Radical Vision for Israelis and Palestinians,” *The New York Times* (July 2026). <https://www.nytimes.com/2026/07/07/opinion/ezra-klein-podcast-may-pundak-rula-hardal.html>

points in the global climate system that rapidly accelerate the pace of warming, so too are there tipping points in politics that rapidly accelerate the pace of change—and the historical record shows that the political tipping points are much more difficult to predict than the atmospheric ones.

These examples help us to see that fixating on what is probable or statistically likely atmospherically is unhelpful when it comes to thinking about political solutions to the climate crisis. Our capacity to act in defiance of overwhelming odds means that the opportunity is never definitively lost nor is the future definitively fixed, regardless of what statistical models in IPCC reports predict. An environmental rhetoric that does less to certify the brute truth of these scientific data and more to affirm our capacity to take political action in spite of them may be the necessary path forward.

What revisions to the concept of the Climate Clock, then, may better enact the kind of political dreaming that Arendt's audacious call to action in 1948 does, and that we've seen bring success in other apparently intractable problems? Several features of the project's website already offer promising alternatives. Although not featured in the actual installation in New York City, right next to the countdown clock on the website is a "lifeline" clock, which celebrates positive progress towards important climate goals such as the percentage of the global energy supply that comes from renewable sources (15 percent), the amount of land protected by indigenous peoples (43,500,000 km²), how much money has been divested from fossil fuels (\$40.76 trillion), and how much money we could save if we acted aggressively now (\$32 trillion).⁶⁸ The lifeline clock is much closer to the kind of audacious political dreaming we need in response to this crisis, ardently insisting on the goodness of these bits of progress even as the countdown clock continues to tick down right beside it. Making the "lifeline" clock a more

⁶⁸ Climate Clock. <https://climateclock.world/>.

central feature of the project—showing it on the actual physical clock in Union Square and incorporating it into the messaging and press about the project—would be an encouraging improvement.

Additionally, clicking on the online clock reveals an interactive tool where users can adjust the size and speed of investment in climate action to see how it would impact projected emissions and temperature increases or decreases. The tool does an excellent job of restoring a sense of agency to users that the act of merely watching the clock count down to zero takes away, allowing them to imaginatively engage with how adjustments to our current mode of operating in the world can positively affect emissions and risk levels.

This kind of imaginative engagement with possible alternatives to the status quo is especially valuable given that rhetorician Debra Hawhee has argued that the climate crisis is, at its core, a *crisis of imagination* which calls for the creation of new “imaginative pathways” to help us make sense of it.⁶⁹ Legal and political theorist Davina Cooper looks for these kinds of imaginative pathways in what she calls “everyday utopias”: spaces that perform aspects of everyday life in radically different ways.⁷⁰ “Everyday utopias,” Cooper writes, “don’t focus on campaigning or advocacy. They don’t place their energy on pressuring mainstream institutions to change, on winning votes, or on taking over dominant social structures. Rather they work by creating the change they wish to encounter, building and forging new ways of experiencing social and political life.”⁷¹ She examines cases like a women’s bathhouse in Toronto or a money-free exchange community in London as ways of participating in aspects of daily life like having sex or obtaining basic goods in radically altered ways. In the case of Israel/Palestine,

⁶⁹ Debra Hawhee, *A Sense of Urgency: How the Climate Crisis is Changing Rhetoric* (The University of Chicago Press, 2023), 8.

⁷⁰ Davina Cooper, *Everyday Utopias* (Duke University Press, 2013).

⁷¹ Cooper, *Everyday Utopias*, 2.

Rotem argues that friendship between Israelis and Palestinians is a similar kind of radical act that helps demonstrate the possibility of alternatives to the deeply unjust status quo of life in that territory.

These kinds of everyday utopias can serve as a helpful complement to the other revisions I suggested to the Climate Clock, and rhetoricians seeking to articulate more productive forms of climate rhetoric may benefit from finding and examining cases of everyday *climate* utopias as a potential area of future research. In my own city of Seattle, for example, the Beacon Food Forest is an excellent case of a climate-related everyday utopia. Occupying 3.5 acres of land in a public park, the food forest is a shining alternative to the global agriculture industry whose practices optimize for efficiency at the expense of sustainability. Run entirely by volunteers, the forest grows an impressive mix of fruits and vegetables, and is also a haven for pollinators—supporting the health of the overall ecosystem in addition to the health of the community. Visitors are welcome to pick anything they want for free. The forest shows visitors that an alternative model to our economy is possible and appealing, opening up our imaginative capacity beyond the unsustainable status quo which burns carbon and destroys forests in order to import monocropped produce to our grocery stores from halfway around the world. In the face of the status quo, the forest does indeed feel miraculous, just as Arendt claimed the “new” always appears to be.

My discussion of everyday utopias is not to suggest that more traditional activities like campaigning, advocacy, and pressuring mainstream institutions to change are not worth our time. Rather, my point is that everyday utopias serve a useful rhetorical purpose by reminding us that those very activities are useful and worth doing, *even when the future feels fixed*. After all, it is difficult to know when you are on the precipice of a political tipping point. Cultivating this

capacity for political dreaming is necessary as we move forward into a world that is increasingly ravaged by the impacts of the climate crisis, so we can remind ourselves that we will always have the capacity to start something new—even long after the Climate Clock strikes zero.