

Existential Risk, Climate Change, and Nonideal Justice

Alex McLaughlin*

ABSTRACT

Climate change is often described as an existential risk to the human species, but this terminology has generally been avoided in the climate-justice literature in analytic philosophy. I investigate the source of this disconnect and explore the prospects for incorporating the idea of climate change as an existential risk into debates about climate justice. The concept of existential risk does not feature prominently in these discussions, I suggest, because assumptions that structure ‘ideal’ accounts of climate justice ensure that the prospect of climate change as an extinction-level threat does not arise. Given persistent noncompliance with mitigation duties, however, we have reason to revisit these assumptions. I argue that the most promising way for theories of climate justice to account for the significance of existential risk is to look to the practices of protest and resistance in which a concern about extinction or global catastrophe is frequently given expression.

I. INTRODUCTION

In an open letter to world leaders, Nemonte Nenquimo, cofounder of the Ceibo Alliance, an indigenous-led organisation campaigning against rainforest destruction in Ecuador, accuses western civilisation of “killing life on Earth.” She is writing, she says, because “Indigenous peoples . . . are fighting to protect what we love—our way of life, our rivers, the animals, our forests, life on Earth—and it’s time that you listened to us” (Nenquimo, 2020). Addressing a protest in London organised by Extinction Rebellion, Swedish climate activist, Greta Thunberg, had a similar message. In her view, “the politicians and the people in power” are not facing up to the reality that in light of human degradation of the biosphere, “[w]e are now facing an existential crisis” (Democracy Now 2019). It is possible that Roger Hallam, one of the cofounders of Extinction Rebellion, was at that protest; if he was, he would have no doubt agreed with Thunberg. In his book *Common Sense for the 21st Century*, released in the same year, he claims that whether or not climate change “leads to the extinction of the human species largely depends on whether revolutionary changes happen within our societies in the next decade” (Hallam 2019, 7).

These interventions are examples of a more general tendency among many protesters and activists to describe the ecological crisis, and climate change in particular, as an extinction-level

*University of Exeter, UK

threat. It would not be an exaggeration to say that concerns about extinction are ubiquitous in climate activism (de Moor 2021). To describe climate change as a threat to the survival of the human species is, in the terms of an increasingly influential literature, to describe it as an “existential risk.” In the philosophical literature on climate justice, though, references to existential risk remain sparse (cf. McKinnon 2017). The aim of this paper is to investigate the sources of this apparent disconnect, and to reveal a number of ways in which the concept of existential risk might be connected more substantially to philosophical discussions about climate justice. The discussion unfolds in two parts. First, I show that climate justice has generally been assumed to have a structure which excludes from its remit the concept of existential risk. Debates on the topic make certain idealising assumptions that ensure that climate change that poses an existential threat simply does not arise. Second, I argue that in current circumstances—characterised by persistent noncompliance with first order duties toward climate change mitigation and adaptation—we have reason to doubt the appropriateness of the relevant assumptions, and that a concern about existential risk could play a more central role in a turn from *ideal* to *nonideal* approaches to climate justice. In particular, I suggest that the concept of existential risk, and the closely related concept of global catastrophic risk, could play an *evaluative* and *justificatory* role in a nonideal account of climate justice. But there are problems with each of these suggestions. In the end, my aim is not to make a definitive case for embedding a concern about existential risk, a term about which I have reservations, in our accounts of climate justice; rather, I try and provide a clearer picture of the conceptual avenues for making this connection, and I hope this will prompt further study.

The argument proceeds as follows. Section I clarifies how I understand the terms ‘existential risk’ and ‘climate justice’. Section II addresses a popular view in the literature that attempts to cast doubt on whether climate change should be categorised as an existential risk. Though I do not advance any strong claims about the likelihood of future existential climate risk, I am sceptical of the argument that attempts to rule it out. Section III provides an alternative explanation for the absence of the idea in debates about climate justice: existential risk is absent in these discussions because it is obscured by assumptions about the permissible threshold of climate change that apply to all satisfactory accounts of climate justice. Section III draws on a current of nonideal climate justice to motivate a rethinking of the relationship between climate justice and existential risk. I outline three possible ways in which we might connect debates about climate justice with concerns about extinction and global catastrophe. Two of these are evaluative, representing ways of further specifying what is wrong with global climate change. A third, which I take to be most promising, is justificatory: it holds that the worst-case scenarios associated with climate change are relevant for thinking about the kinds of actions individuals or groups can engage in when resisting climate injustice, a claim which is often advanced in protest and activism.

II. DEFINING EXISTENTIAL RISK

Before engaging in a more detailed discussion about how existential risk might be connected to debates about climate justice, it will be necessary to clarify how those respective terms are being understood. The concept of ‘existential risk’ has become associated with a small but expanding field that we can call Existential Risk Studies (ERS). Stated at the most general level, ERS is concerned with large-scale global risks that could lead to widespread societal collapse or human extinction. The field aims not only to systematise thinking about these risks but also to contribute to their mitigation. There is, of course, a much longer tradition of thinking about extinction, a fact ERS could do more to acknowledge. Most cultures are imbued with eschatological narratives, often with religious underpinnings, and science fiction writing has long explored

apocalyptic imaginaries (see [Beard and Torres 2020](#)). But ERS as a particular self-referential domain of academic study has its roots in a set of prominent institutions,¹ and in a particular brand of utilitarianism, emphasising the vast value of potential future well-being that will be enhanced by advances in technology ([Bostrom 2002](#); cf. [Cremer and Kemp 2021](#)). As the field has expanded, a broadly utilitarian position remains dominant, generally formulated in terms of a view known as ‘longtermism’ (e.g., [MacAskill 2022](#); [Ord 2020](#)). According to longtermism, ensuring the far future goes well is a key priority of our time; according to strong longtermism, a version of the view favoured by a number of influential figures in the field (e.g., [Greaves and MacAskill 2021](#)), ensuring the far future goes well is *the* key priority of our time.

There is much to say about how ERS understands itself, about how problems are framed in prominent texts and about the field’s historical development, but I set these issues aside (see, for example, [Cremer and Kemp \[2021\]](#)). My aim is to take a generic and minimal definition of existential risk, and to explore whether it could have a bearing on contemporary discussions about climate justice. For the purposes of this paper, I understand existential risk simply as the risk of an event or process which, by itself or in combination with other events or processes, threatens the extinction of the human species. Clearly this is a minimal definition, and I should make some qualifications. As stated, existential risk is not a moralised concept: it describes a threat to the survival of the human species. By way of contrast, longtermism understands existential risk in moralised terms, as a phenomenon which is distinctively bad because of the way it threatens to extinguish the enormous value inherent in the well-being of potential people in the (technologically enhanced) far future. I find the longtermist account of existential risk unattractive, but my thin concept also serves an important purpose for the following discussion. I want to explore some different ways existential risk might be relevant for debates about climate justice, and so I leave its moral content open for now. Longtermists would accept that what I classify as an existential risk—an extinction threat—would count as such, even if their moralised definition might encompass a greater range of threats, such as a ‘technological arrest’ that does not lead to extinction, but which prevents humanity from reaching its potential ([Bostrom 2002](#)).

The term ‘existential risk’ is often used differently to the way I use it here. As [Huggel et al. \(2022, 7](#); see also [Caney \[2014, 127\]](#)) note, existential risk can be used to describe a threat “to the existence of a subject, where this subject can be an individual person, an entire community, a nation state, or humankind.” For example, the threat posed to indigenous cultures by settler colonialism is clearly an existential risk to the affected communities, and that would not be encompassed by my definition. Indeed, a tendency to focus on *species-level* rather than *community-level* existential risk is the source of understandable grievance, as many have pointed out that the kinds of losses that animate a concern about humanity—cultural devastation, geographical dislocation, massive loss of life—have already been experienced by many indigenous groups throughout history (e.g., [Whyte 2018, 225–29](#)). I agree that these are important concerns, and they partly explain my reservations about using the concept of existential risk. My discussion is not supposed to imply that the term existential risk should only be used according to my definition, or that the sort of risk I focus on is especially troubling in comparison to others. But I take it that there might be *something* about the relationship between climate change and the future of the human species that will bear on debates about climate justice, and so I restrict my discussion to the particular but prominent definition of existential risk that refers to extinction.

ERS also highlights the concept of *global catastrophic risk*. A global catastrophic risk is distinguished from an existential risk because it threatens to destroy a significant proportion of the human species but will not, in all likelihood, lead to extinction (e.g., [Avin et al. 2018](#)). ERS considers global catastrophic risks a subject of study to the extent that they can shed light on the drivers, mechanisms and ways of mitigating existential risks, or may themselves contribute to existential risk. Although the term ‘catastrophe’ is used somewhat more frequently than

existential risk in debates about climate justice, I nonetheless suggest below that it does not play a significant role in those discussions—it is not assigned the specific meaning it is in ERS and is not elaborated in a way that picks out a threat warranting distinctive philosophical treatment.

The term ‘climate justice’ will be used as a way of referring to debates in analytic political theory and philosophy which aim to address the normative questions raised by climate change and our response to it (see, e.g., [Gardiner et al. \[2010\]](#); [Heyward and Roser \[2015\]](#); [Moss \[2015\]](#)). I will say more about the structure of debates about climate justice below. Note that this stipulative definition is not supposed to advance a claim about how climate justice is framed in political discourse more broadly (see, for example, [Schlosberg and Collins \[2014\]](#)), nor do I wish to suggest that the field, understood as such, is delineated in a way that should not be subject to critical scrutiny. The point is to roughly fix ideas in order to investigate the prospects for connecting two debates that have evolved largely separately from one another. In this exploratory spirit, I will have to rely to some degree on generalisations of prevailing views and ways of thinking. I do not believe, though, that the arguments developed rely on controversial claims about the respective fields of research.

III. LONGTERMISM AND CLIMATE CHANGE

The most obvious possible explanation for why, despite the ubiquitous reference to extinction in climate protest and activism, the idea of climate change as an existential risk has not featured prominently in philosophical debates about climate justice is simply that protesters and activists are wrong: as bad as climate change is and will be in the future, it will not lead to the level of death or societal collapse that would constitute an existential risk. Something like this view has wide currency in ERS. According to [Toby Ord \(2020, 110\)](#), for example, even at 13°C of warming above pre-industrial temperatures it is “difficult to see” how climate change could pose a direct existential risk to humanity. In some regions, he argues, people would still be able to grow crops, and likewise there would remain places in which it would be possible to survive without air conditioning. The same is true, Ord says, of other direct effects associated with climate change: they would undoubtedly cause grave harm at such high levels of warming, but they would be survivable and so should not be classified as existential threats. [William MacAskill \(2022, 136–37\)](#) has recently reiterated this general argument, suggesting that rich “countries would be able to adapt, and temperate regions would emerge relatively unscathed” from warming of seven to ten degrees.

What are we to make of this suggestion? It is beyond the scope of this paper to establish decisively whether climate change should be classified as an existential risk. But I believe there are reasons to treat with strong scepticism some of the claims made about climate change in ERS, as well as the idea that these claims could explain the absence of concerns about extinction in the climate-justice literature. First, the often confident assertions in ERS that climate change does not pose an existential threat belie the controversial and contested nature of the claims on which that view relies. There is a relative lack of research on the implications of warming at higher temperature thresholds ([Kemp et al. 2022](#)), and this alone should lead us to be cautious of the strong claims advanced by prominent ERS scholars. But those who have sought to predict the effects of climate change at such extreme temperature increases have often arrived at strikingly different conclusions from those advanced in ERS (e.g., [Xu and Ramanathan 2017](#); [Scherwood and Huber 2010](#)). [Emilé Torres \(2022\)](#) has recently collected the testimony of a number of climate and environmental scientists who believe not only that MacAskill’s claims about climate change are incorrect but that they are seriously misguided. We should, on their view, treat with strong scepticism the claim that temperate regions would escape “relatively unscathed” from warming of between seven and ten degrees.

Second, and relatedly, there is a concern about the way ERS has understood the causal mechanisms through which climate change might lead to catastrophe or extinction. As noted above, the claim is often that climate change will not *directly* lead to extinction: its impacts, even at the higher end of possible temperature increases, would be compatible with the continuation of some core human activities. This claim disregards the much more likely possibility that climate change could lead to catastrophic outcomes in an indirect or mediated way, through its interaction with a range of social systems and other sources of global risk (Kemp et al. 2022; Beard et al. 2021; Liu et al. 2018). For example, climate change might increase the likelihood of major interstate conflict, exacerbate infectious disease spread or put pressure on such a range of vulnerabilities that it prompts a synchronous collapse of social systems (Kemp et al. 2022, 3). According to this mediated view of climate risk, it is not enough to extrapolate from current trends in economic growth and technological development to determine whether humans could adapt to extreme levels of climate change, or to understand whether core human activities (growing food, spending prolonged periods outside) could be possible within certain environmental parameters; the more complicated task is to try to predict how climate effects might cascade through complex global systems that contain multiple hazards and social contingencies. Thinking in terms of indirect impacts and complex social systems also raises the prospect that catastrophic or existential climate change could occur at lower temperature targets than those considered, for example, by Ord and MacAskill. This is important, since some scepticism in ERS about the catastrophic potential of climate change stems from a growing confidence that future climate change will not be as severe as earlier ‘worst case’ scenarios (Halstead, 2022).

Third, and finally, it should be noted that treatments of climate change in ERS, even if they were accurate, would not serve to explain the sparseness of references to existential risk in the climate-justice literature. One reason for this is that the prominent statements about climate risk in ERS are mainly in recent work, whereas the general absence of references to existential risk in the climate-justice literature is longstanding. But there is a deeper tension between the two literatures, particularly in how they frame climate change and its politics. In debates about climate justice, climate change is characterised as a moral tragedy, a massive global and inter-generational wrong. The political response is viewed as an abject failure—as it stands, where emissions-reduction pledges will not mitigate climate change to the 1.5°C target agreed upon by the international community, much less do so in an equitable way, there is little to celebrate about society’s collective response to climate change. As Henry Shue puts it, political action on climate change has been “shamefully and pathetically unambitious” (2019, 254). Along with executives in the fossil fuel industry, “callous and corrupt politicians” have largely “wasted the last three decades” (Shue 2019, 2; see also, McKinnon [2019]).

In contrast, there is an ambivalence in longtermist treatments of climate change. There is, to be sure, an acknowledgment that climate change is a grave threat—albeit not an existential one—and that its effects will hit hardest those who are most vulnerable and have contributed the least to cumulative emissions (e.g., MacAskill 2022, 136). Emissions reductions are clearly demanded and would produce significant benefits. But at the same time, there is a tendency to speak of the politics of climate change in laudatory terms. John Halstead (2022, 3), for example, claims that “climate change is a great illustration of how society can make progress on a problem if enough people are motivated to solve it.” Similarly, MacAskill (2022, 134) writes that “we are making great progress on climate change.” Note that neither Halstead nor MacAskill deny that mitigation targets will be significantly overshoot (e.g., Halstead 2022, 4)—the picture they describe in terms of great progress is, we must assume, the same as that which induces anger in Shue and others.

These contrasting framings of the problem are connected to further differences in how climate change is discussed. In particular, there is often a desire in ERS to avoid potentially

polarising political cleavages. After all, “[s]afeguarding our future is not left or right, not eastern or western, not owned by the rich or the poor” (Ord 2020, 213), and seeking to apportion blame (216) or framing “it as a political issue on one side of a contentious divide would be a disaster” (213). The climate-justice literature has taken the opposite approach: it is avowedly political, centring on claims about global redistribution, and debates about historical culpability for climate change are arguably the most prominent in the field (e.g., Francis 2021).

The general point here is that it is doubtful that climate-justice scholars either should defer to the prevailing view in ERS about climate risk, or that they would be inclined to. We have independent reason to doubt the arguments advanced about climate change by prominent figures in ERS. But on closer inspection, there is a tension between the ways of thinking about climate change in the two literatures. Climate-justice scholars will likely view the longtermist account of climate risk as at best misguided, and at worst as an egregious mischaracterisation of the moral status of anthropocentric climate change. To clarify, I do not assume that it is likely that climate change will lead to human extinction. But I will proceed, in the spirit of investigation, on the assumption that it is reasonable to be concerned about climate change as an existential or a catastrophic risk.

IV. THE JUST TARGET AND CLIMATE RISK

A puzzle remains, then, concerning the lack of references to existential and catastrophic risk in the climate-justice literature. In this section, I show how certain assumptions that structure debates about climate justice serve to push these concepts from view. Given that the trajectory of climate politics has reliably moved away from the standards of climate justice, there is room to revisit these assumptions, and I duly do so in Section IV.

In their classic form, debates about climate justice are concerned with three broad categories of cost. First, philosophical work has been motivated by worries about *impact costs*—those connected with the effects of a generalised warming of the Earth’s climate. These costs stem, for example, from sea-level rises, the increased incidence of tropical diseases, and extreme weather events. In particular, accounts of climate justice demand that climate change must be prevented from exceeding some threshold beyond which impact costs become morally unacceptable. Second, ensuring that impact costs do not exceed this threshold gives rise to *mitigation costs*, which are incurred by agents when they do things, like cutting their emissions, to reduce the ‘anthropocentric forcing of the climate system.’ Third, *adaptation costs* arise when agents take measures to protect themselves or others from climate harm stemming from impacts not prevented by mitigation. The construction of flood defences is a paradigmatic measure involving adaptation costs.

The most prominent debates in the literature on climate justice have focused on the latter two categories of cost; specifically, they have sought to identify the principles to govern the fair distribution of the burdens of mitigation and adaptation (e.g., Page 2008).² Some have argued, for instance, that the costs of mitigation and adaptation should track historical responsibility for climate change (e.g., Agarwal and Narain 1991), while others have claimed that relative contemporary wealth is the most important normative criterion for burden sharing (e.g., Moellendorf 2022). When we are thinking about existential and catastrophic risk, however, we have in mind impact costs: the concern is that the effects of climate change will lead to mass death and societal collapse.

The impact costs of climate change are in a sense more fundamental for climate justice than mitigation and adaptation costs, but they can be less visible in philosophical debates. They are more fundamental because they set the parameters of debates about climate-change burden sharing. That is, the threshold of impact cost that delimits morally unacceptable climate change is taken to give rise to a set of mitigation and adaptation costs, which are then brought under

principles of distributive justice. But impact costs have proven less analytically central, in the sense that until recently philosophers have had relatively little to say about how we might specify an impact threshold. Rather, debates have focused on arguing for burden-sharing principles themselves, and have largely deferred to the content of international agreement on the question of what overall level of climate change these principles should be in aid of (e.g., [Page 2011](#)).

My claim that the concepts of existential and catastrophic risk have been largely absent from these debates needs to be qualified. It is true that philosophers do not tend to describe climate change as an existential risk, but they do more often allude to the prospect of climate catastrophe. [Stephen Gardiner \(2010\)](#), for example, has noted that the threat of climate catastrophe often features in arguments for controversial geoengineering policies. According to [Catriona McKinnon \(2017, 397\)](#), the Paris Agreement is the last “slim hope humanity has to avert climate catastrophe.” But catastrophe is usually invoked quite generally: its prospect is used as way of motivating a concern about climate change and of revealing more specific normative questions that follow, such as those concerning the fair distribution of mitigation and adaptation burdens. ‘Catastrophe’, used in this way, does not have any specific analytic content, and it is not elaborated any further or used to designate something distinctively morally concerning. As such, I believe it remains true to say that the concept of catastrophe, like that of existential risk, has not played a central role in debates about climate justice—whereas explicit references to existential risk are largely absent, the general invocation of catastrophe does not do any specific normative work in discussions about how to respond to climate change.

In my view, the reason that these concepts have not played a central role in debates about climate justice is simply that any satisfactory account of the permissible threshold of impact costs must exclude climate change that would lead to catastrophe and societal collapse. Put another way, that climate change must not lead to catastrophe or extinction has been assumed as part of the background structure of debates about climate justice. Such an impression is borne out in a recent and belated turn in the literature to consider more explicitly what [Simon Caney \(2018\)](#) calls the Just Target—the threshold of climate change that should not be exceeded. In [Caney’s \(2018, 668–71\)](#) view, we could advance a demanding egalitarian account of the Just Target, according to which we should seek to prevent climate impacts from exacerbating inequalities within and between generations. Alternatively, we could endorse a more minimal version of the Just Target, understood in terms of an intergenerational principle of sufficiency: climate change impacts should not prevent those in the present or the future from accessing basic goods like food, education and healthcare that would allow them to lead lives of sufficient quality. Along similar lines, [Darrel Moellendorf \(2014\)](#) has argued that climate change impacts should not impose costs that set-back the urgent project of global poverty alleviation. [Gardiner \(2017, 441–44\)](#) has attacked Moellendorf’s approach for its purported narrowness (cf. [McLaughlin 2023](#)), suggesting that climate justice ought to prohibit impacts that infringe on a range of moral values and that impose severe costs on nonhuman nature, as well as those which deepen or prolong global poverty. For our purposes, less important than the content of these accounts of the Just Target is what they have in common.

First, in support of my claim above, all of these accounts of the Just Target demand more than that climate impacts do not lead to catastrophe or human extinction. As such, what are considered as primary duties of climate justice—those which require agents to bear mitigation and adaptation costs—are not grounded directly in a concern about catastrophe or existential risk. The problem of climate change as a potential existential risk therefore does not arise in the structure of debates about climate justice, at least as they are understood in relation to international burden sharing. This strikes me as the most plausible explanation for the absence of the concepts of catastrophic and existential risk in debates about climate justice, although I admit it is hard to prove that beyond doubt.

Second, each account of the Just Target has been transgressed in practice. They all condemn climate change impact costs that will now unavoidably occur in the future, if they have not already. Take Moellendorf's claim that climate change should not set back global poverty alleviation, which is generally viewed as the least demanding version of the Just Target. Moellendorf has recently stated both that climate change of more than 1.5°C would be impermissible given it would prolong global poverty and that 1.5°C is now likely unattainable without substantial geoengineering (Moellendorf 2022, chs. 1, 7). The same will be true of Caney and Gardiner's accounts: they will render unjust climate change that is now unavoidable. The transgressing of the Just Target is a reflection of the failure of climate politics, and this failure should prompt a reconsideration of the relationship between climate justice and existential risk.

V. NONIDEAL CLIMATE JUSTICE AND EXISTENTIAL RISK

Existential risk should not feature in the Just Target, and so it will remain the case that a concern about the very large-scale potential impacts of climate change will not ground people's primary duties to bear mitigation and adaptation burdens. Call these duties *ideal* duties of climate justice. If we are to accommodate a distinctive concern about existential or catastrophic climate change in our thinking about climate justice, the above discussion suggests we must look toward *nonideal* approaches to climate justice. It should be noted, though, that the distinction between ideal and nonideal theory can be understood in a number of ways (Valentini 2012). Nonideal theory, as I am using the term, simply refers to political theory which does not assume full compliance. Ideal theory does proceed with this assumption, since it advances a specification of an agent's duties as if all will do their part. We observed this in the context of climate justice above: the Just Target gives rise to a set of costs (mitigation and adaptation), and these are shared out according to favoured principles of distributive justice. But these duties have not been taken up. As Clare Heyward and Dominic Roser (2015, 6) observe, nonideal theory's focus on "human unwillingness to act justly" means it is "particularly pertinent to the case of climate change," a particularly large-scale and egregious instance of noncompliance. I outline three ways in which a focus on the nonideal dimensions of climate justice might connect with concerns about existential and catastrophic risk. My focus is primarily on mitigation duties, since is noncompliance with these that is the primary driver of climate change as an existential or a catastrophic risk.

a. The distinctive wrong of human extinction

One possibility is that paying more attention to existential risk in this context will provide further texture to our moral evaluation of climate change. It is important that our philosophical accounts are apt in their characterisation of wrongdoing, and we might think there is something distinctively troubling about some actors behaving in ways that threaten the entire human species, even though we already have the moral resources to condemn them for the infliction of a grave global and intergenerational harm.

As I mentioned above, the longtermist approach dominant in ERS construes existential risk in terms of a loss of future value, understood in broadly utilitarian terms. Human lives are valuable because of what they contain. They can go well or badly, and we have reason to promote the things that make lives go well. For longtermists, it is the fact that there are so many possible future people, and the fact that technological development has the potential to make these lives go very well, that explains the moral tragedy that extinction would represent (e.g., MacAskill 2022). Utilitarianism is not a prominent view in climate justice (cf. Jamieson 2010; Singer 2010), and so longtermism, in so far as it is underpinned by or closely related to such a view, will unlikely be of broad appeal in the literature as a way of capturing the distinctive wrong of producing changes in the Earth's climate that might lead to human extinction. The accounts of

the Just Target discussed above, for example, are animated by concerns about distributive fairness and a conviction that people have the right to achieve some minimal standard of living—a concern about climate change, on these views, does not follow simply from a general duty we have to make the far future go well.

Perhaps, though, climate-justice scholars might be attracted to alternative ways of specifying the distinctive wrong of human extinction which do not invoke future potential well-being. Johann Frick (2017), for example, has claimed that humanity, “with its unique capacities for complex language use and rational thought, its sensitivity to moral reasons, its ability to appreciate art, music and scientific knowledge, and so on,” possesses a type of noninstrumental value which we can call the “final value of humanity” (Frick 2017, 359; see also McKinnon [2017, 401]; Ord [2020, 49–56]). Assigning humanity final value would allow us to say that extinction would be impersonally bad, and so it would be troubling even if, somehow, it came about in a way that did not involve individual suffering. Importantly, to respond appropriately to this value would not necessarily be to maximise it. According to Frick (2017, 360), the final value of humanity provides each successive generation a *pro tanto* reason to *sustain* it, that is, to ensure what is valuable about humanity persists rather than disappears. To the extent that Frick is right, those responsible for climate change would commit a form of wrongdoing in addition to those which are standardly the subject of debates about climate justice: they threaten to undermine the intergenerational project of sustaining humanity. I am somewhat sceptical, though, about whether the idea that there is some impersonal value that inheres in humanity would have broad appeal in the climate-justice literature. I limit myself to noting two grounds for concern.

First, we might doubt the salience of the purported reason to sustain the final value of humanity. Although we might be tempted by the notion that such a value exists, we might doubt that the *pro tanto* reasons we have to sustain it are weighty when thinking about climate justice: the duties we have to prevent the suffering that will result from climate impacts are far more significant than the reasons we have to sustain the final value of humanity, and these are triggered in any climate scenario plausibly connected to extinction. The final value of humanity, then, even if plausible, might not add much substance to our moral evaluation of climate injustice.

Second, a concern about the final value of humanity might be at odds with a current in the climate-justice literature which emphasises the rights to self-determination of vulnerable communities, and which highlights the fact that the patterns of consumption that have disproportionately caused climate change are connected to a particular but dominant understanding of human progress. From these perspectives, we are encouraged to view humanity in pluralistic terms, and we are warned not to make statements about humanity from a single cultural lens. For example, many have focused on the injustice climate change inflicts on indigenous peoples, whose social and cultural practices are often closely tied to the environment, and whose collective ways of life are threatened by climate impacts, often in ways that are understood to be continuous with broader patterns of colonial violence (e.g., Blomfield 2019; Táíwò 2022). Climate change intersects with other sources of domination, exclusion and exploitation, and it reflects and reinforces unjust social relations on the basis, for example, of race and gender (Battistoni 2017; Cripps 2022). Of course, I will not be able here to give these issues the attention they deserve. But there is a *prima facie* tension between the conviction that climate justice centrally involves working through the injustices that have divided people, preventing vulnerable groups from pursuing their collective projects, and the claim that a further dimension of the wrong of climate change is that it threatens the value of an undifferentiated humanity. Crudely put, the question is whether we could specify what is valuable about humanity in this unified sense without smuggling in culturally biased assumptions tainted by the practices of domination and exclusion that are the focus of the climate-justice literature. Returning to Frick’s remarks, for instance, we might worry that highlighting ‘rational thought’ and an appreciation of ‘scientific

knowledge' as uniquely valuable attributes of the human species would be to prioritise a particular understanding of human goods associated with the enlightenment tradition.

b. Valuing and the human future

Climate change that poses an existential or a catastrophic risk might be distinctive in a different way. Rather than trying to identify some final value for the human species such that extinction would be disvaluable from an impersonal perspective, we might locate the wrongness of extinction in the interests of those currently alive. This is the approach taken by [Samuel Scheffler \(2013\)](#) in his influential *Death and the Afterlife*. According to Scheffler, the expectation that humanity will continue to exist in a form that is recognisable to us plays an important role in allowing us to take value from the things that happen in our lives. In order to motivate this thought, he asks us to imagine that we come to discover that humanity, as a result of a sudden mass infertility, would become extinct after the natural deaths of those currently alive. Scheffler's thesis is that we would be profoundly affected by such knowledge. If we thought that humanity would become extinct shortly after our own deaths, we would find it hard to engage in a range of activities we ordinarily take to be important, and not only those relating to projects, like academic research, which we understand will only realise their goals in the future; we would, he argues, be beset by a much more general apathy, and knowledge about humanity's immanent end would act as a standing threat to our ability to take value from our lives. Assuming that we have an interest in being able to view our projects and our lives as meaningful, Scheffler's argument would allow us to say that causing extinction would be wrong, aside from all the other wrongs that causing human extinction would likely involve, in light of the way it undermines this important interest.

In relation to climate change in particular, the claim would be that an additional wrong associated with climate change, insofar as it poses a threat to the future of humanity, is that it threatens people's ability to lead lives that they take to be meaningful: there is a temporal dimension to valuing, and climate change, by calling into question the future of the species, exposes to us this way our plans and projects assume a human future. To reiterate, we need not consider this the form of wrongdoing central to climate change, nor would endorsing Scheffler's argument require us to think that future generations are *only* important in the way they underwrite our ability to value in the present ([Scheffler 2018](#), 54–58; cf. [Srinivasan 2014](#)). But exploring Scheffler's argument in relation to climate change might allow us to connect a concern about existential risk with debates about climate justice.

Again, there are a number of points we should note about this prospect. As alluded to at the outset, it is a matter of fact that many people do believe that climate change poses a threat to humanity, and so we might think it possible to empirically observe Scheffler's hypothesis—is it the case that those who believe climate change threatens humanity find that value is emptied out of their lives? This does not seem to be the case. On the one hand, there is an observable and increasingly prominent phenomena known as 'climate anxiety', which is disproportionately experienced by young people. According to a prominent recent study, "[d]istress about climate change is associated with young people perceiving that they have no future, that humanity is doomed, and that governments are failing to respond adequately, and with feelings of betrayal and abandonment by governments and adults" ([Hickman et al. 2021](#), e864). Inspired by Scheffler, we might suspect that this anxiety is connected to the challenges young people face in sustaining a sense that the plans they have for their lives are important in the face of a climate catastrophe.

On the other hand, there are a number of complications that cast doubt on the notion that climate anxiety is a symptom of the malaise Scheffler suspects would accompany confidence about near-term human extinction. For example, as severe as climate anxiety is, it has not had

the paralysing effect that Scheffler imagines—high levels of anger and fear have not generally translated into a complete despair (Hickman et al. 2021, e867). Relatedly, climate anxiety among young people can be seen as a rational response to their vulnerability to the severe climate impacts that will unfold in their lifetimes. In this respect, the sense of climate change as an existential risk does not manifest to people in a way that can be easily disentangled from the distorting factors Scheffler contrives his thought experiments to avoid. His infertility scenario is an effort to allow us to imagine impending human extinction without having to encounter the prospective suffering of ourselves and our loved ones, and a concern about ourselves and our loved ones is plausibly central to the phenomena of climate anxiety.

Still, Scheffler's argument might yet capture something distinctive about climate change as an existential risk. In particular, we might expect future climate-change impacts, especially if emissions remain high and the severity of climate change has been underestimated, to induce a wider and more confident sense of climate change as an existential threat. That is, it might be that as climate change escalates, its effects on people's ability to take meaning from their lives will be more pronounced. Or we might think it is simply wrong to endanger such an important interest as people's ability to take value from their lives even if, perhaps because of sustained misinformation, most people fail to appreciate climate change as a threat of the relevant magnitude.

c. Political resistance and climate risk

So far, I have explored whether incorporating a concern about existential risk into our thinking about climate justice, in a context characterised by systematic noncompliance with duties specified at the level of ideal theory, could play an *evaluative* role in helping further specify the moral wrong of climate change. It might represent a failure to respond appropriately to the final value of humanity, or it might threaten people's ability to find value in their projects prior to a catastrophic outcome. Both of these suggestions drew on general attempts to specify what is wrong with extinction and applied them to the case of climate change; though there was some promise in Scheffler's view, I suggested that both of these possibilities would have significant barriers to overcome.

Another possibility is that the catastrophic or existential potential of climate change might play a *justificatory* role in establishing the permissibility of exceptional forms of political action. That is, drawing attention to the sheer scale of climate risk might reveal the permissibility of behaviour that is disruptive and confrontational, transgressing ordinarily accepted moral and legal norms. This way of connecting existential risk to climate justice would be vindicatory, since it represents a potential way of making good the claims of climate activists: when protesters reference human extinction, as they routinely do, they seek to avail themselves the gravity of the threat of climate change in justifying their actions. The thought here is simply that it is relevant to the question 'What can people do in the face of threat X?' that X includes the possibility of catastrophe or extinction.

There are many instances of writers invoking human extinction in their justification of different forms of political resistance, although they would mainly position themselves as outside of the climate-justice debates that are our present focus. In general, these accounts are clear that the potentially catastrophic or existential nature of climate change—or of a broader ecological crisis—warrants an *escalation* in the tactics used by protesters. More specifically, the gravity of the moral stakes at play is supposed to question the idea that climate protest should be limited to civil disobedience, a form of action that, on a popular liberal interpretation, involves conscientious lawbreaking, carried about peacefully and in public, which accepts legal sanction (Rawls 1999, 319–30). Andreas Malm (2021), for example, has recently objected to what he views as a fetishization in some parts of the climate movement of the civil disobedience model, and in particular its often strategic commitment to pacifism. Partly his aim is to show that the strategic

merits of pacifism are overstated: there is, in his view, a tendency among some to sanitise the history of political protest, and to ignore the presence of controlled violence, especially against property. But he also seeks to justify a departure from civility with reference to the existential nature of the threat of climate change. In making the case for the targeted sabotage of fossil fuel infrastructure, for example, he claims that property rights must be balanced against a “weight which must tend towards the infinite because it *encompasses all values*” (Malm 2021, 104, original emphasis).

Though Malm’s arguments have recently achieved much public prominence (e.g., Klein 2021), he is drawing on an established tradition of radical writing and action in environmentalism that advocates a turn away from civility and towards direct action, particularly against property. Though the point is often framed in terms of the ecological rather than the climate crisis, there is agreement that there is something distinctive and ‘encompassing’ about the threat of environmental catastrophe. According to Derek Jensen (2011, 11), for instance, “civilisation is killing the planet, and it is long past time for those of us who care about life on earth to begin taking the actions necessary to stop this culture from destroying every living being.” Jensen is a figurehead of Deep Green Resistance, a movement which has embraced militancy, including tactics such as property sabotage. Steven Best and Anthony Nocella (2006, 9) appeal to a similarly apocalyptic vision in motivating their ‘rebel yell’ for a revolutionary environmentalism: as “global temperatures climb, icecaps and glaciers melt, sea-levels rise, and forests fall, the short-lived human empire has begun to devour itself and implode like a collapsing white dwarf star.” Revolutionary environmentalism, on their view (Best and Nocella 2006, 20–23), is an appropriate response to this predicament, and among its ‘distinguishing traits’ is an acknowledgment that controlled violence, particularly against property, can be appropriate in some political contexts.

There are clearly substantive differences between invocations of the *planet* and *humanity* as the subject of existential risk, and a concern about climate is more specific than a concern about ecological collapse. Importantly, though, we can identify a common justificatory move: environmental damage stemming from human activity is producing a catastrophic- or an extinction-level threat, and the severity and imminence of this threat is such that individuals or groups can take exceptional measures, forgoing both formal political participation and, most strikingly, the norms of civilly disobedient protest. This justification is generally presented as a challenge, which identifies an absolutist commitment to civil disobedience in prominent parts of the climate movement that must, in light of the stakes at play, be abandoned. For Malm, for instance, the idea that protesters should, as a way of demonstrating the sincerity of their convictions and their commitment to publicity, submit to legal punishment is entirely out of place given the emergency context; as he puts it, “that familiar paragraph in the civil disobedience protocol is becoming more obsolete by the day, as a ruling order that destroys the foundations of life deserves no loyalty from its subjects” (Malm 2021, 123). The focus on movement building associated with civil disobedience is, on this view, similarly misplaced. According to Lierre Keith (2011, 27), “there will be no mass movement, not in time to save this planet, our home,” and so confrontational action must be taken by a committed minority. There are distinctly martial tones to this Avant-gardism. What is at stake is a “defensive battle against the status quo’s systematic assault on the planet” (Scheuerman 2022a, 801).

These are strong claims, and they will undoubtedly jar with some who situate themselves within the climate-justice literature. But given the level of noncompliance with duties toward climate change mitigation and the associated possibility of catastrophe, this challenge should be taken seriously. I will not be able to provide a comprehensive discussion of the relevant issues here. Instead, I will attempt to clarify the terms of the debate and will point to a number of promising avenues for future study. Although I will not draw firm conclusions about how protesters

ought to act in the face of climate change that poses a catastrophic or an existential risk, I outline a number of questions a more complete account must address—all of which are already subject to lively discussion outside of the climate-justice literature in analytic political philosophy.

In the first instance, getting clear about the terms of the discussion is important, since it is not obvious that the challenge as I stated it above—that forms of protest that move beyond civil disobedience are warranted in light of the catastrophic scale of climate change—would do much to disturb widely held assumptions about climate justice. Despite the fact that questions about protest and resistance have been relatively neglected in the philosophical literature on climate justice, the general claim that uncivil forms of disobedience are permitted in this context could be endorsed from within the broadly liberal tradition that has been dominant in debates. Indeed, even on the Rawlsian view that is taken to be particularly prohibitive of political resistance (Celikates 2016; cf. Jubb 2019), it is unlikely that civility is required in the present context. According to Rawls, civil disobedience is only demanded in the special case of the ‘nearly just’ state: in this case, people have duties to obey the law and to alleviate injustice, and the norms of civility are supposed to allow them to resolve this tension in a way that exhibits the appropriate respect to their co-citizens. Rawls’s standard of ‘near justice’ is a demanding one (see Jubb 2019; Scheuerman 2022b), and it is unlikely that states which make substantial contributions to climate change can satisfy it. There are, moreover, many prominent defences in adjacent debates in philosophy of uncivil forms of protest, for example, involving legal evasiveness and controlled violence (e.g., Pasternak 2019; Delmas 2018; Shelby 2007), and I believe that these arguments could be taken up in the climate justice literature without necessitating a radical departure from prevailing assumptions in the field. The conditions that are taken to justify uncivil disobedience in those other cases—namely, serious and pervasive injustice that frays or undermines civic bonds—surely exists in the climate case, too. Indeed, the claim that the injustice of climate change permits a departure from civilly disobedient protest does not need to be grounded in an account of climate change as a catastrophic risk—the injustice associated with serious but noncatastrophic climate change could plausibly be met with uncivil disobedience.

A better way of framing the discussion is in terms of the forms of uncivil disobedience that might be permitted, and in which contexts, in light of the potentially catastrophic or existential scale of the threat of climate change. At first glance, we might expect the climate-justice literature to be strongly sceptical about the degree of escalation called for by deep ecologists and revolutionary environmentalists. As I noted above, those advocating for militant environmental action often adopt the language of war, and participants in debates about climate justice have not tended to understand their subject as one fundamentally constituted by conflict and aggression. But on closer inspection, the disagreement might appear overstated. There is a striking disconnect between the rhetoric deployed by radical environmentalists and the strategies they actually advance. Though strong criticism is reserved for the pacifism of the mainstream climate and environmental movements, radical environmentalists’ embrace of violence is very limited, if it should even be described as violent at all: they overwhelmingly remain committed to nonviolence to persons, focusing instead on property which leads to environmental harm (Scheuerman 2022a, 803). A central claim in Malm, for instance, is that it would be permissible for climate activists to deflate the tyres of high-emitting SUVs, so long as the owners of the vehicles were informed of the action, minimising the risk of harm to persons (Malm 2021). Though the sabotage of SUVs is an uncivil form of protest, it is not an act of war. Still, there will likely be disagreement on a number of issues. I restrict myself to noting two.

First, concerns will be raised about the emergency logic invoked by radical environmentalists, which risk legitimising objectionable forms of action. By way of comparison, prominent concerns about geoengineering object to the way advocates of the technologies appeal to a lesser-evil logic—climate change represents an emergency, and we have no choice but to take a

gamble with dangerous technologies—to shortcut ordinary standards of justification (Gardiner 2010). It might be thought that climate protesters do something similar when they claim that the existential risk posed by climate change permits them to engage in militant protest that bypasses formal political channels and the norms of civilly disobedient protest (Scheuerman 2022a, 803ff.). This concern must be handled with care; after all, it is a common reactionary trope, used to obstruct mitigation measures, that protesters exaggerate the scale of climate change, using it as a fig-leaf for a programme of radical political change. The measures that protesters have sought to engage in are also at a far remove from those philosophers have worried about in the case of geoengineering. At stake here—at least to date—is whether a small number of actors might be justified, in light of the threat of climate change, in disrupting property associated with high emissions. But there remains room for disagreement about the politics of exception invoked by protesters when they cast themselves as acting in defence of the human species (Scheuerman 2022a).

Second, and relatedly, the very idea of a vanguard of uncivil climate protesters is at odds with an emphasis on the importance of mass movements that remains prominent in treatments of climate justice. For example, in a discussion about the obstructive presence of fossil fuel interests in climate politics, Moellendorf (2022, 129) has recently claimed that “[i]t is an important practical principle of progressive political realism that the power of money in politics is best met by the power of mass mobilization” (see also Shue [2021]). In order to attract widespread support, however, mass movements must generally frame demands ecumenically and engage in moderate tactics (Chenoweth and Stephen 2011), and it might be objected that a small group of protesters responding to the existential risk of climate change with militant action would be inimical to this mobilization (Scheuerman 2022a, 804). These concerns about the potential trade-offs between mass civil action and uncivil disobedience, again, must be scrutinised. Note, for instance, that references to extinction are widespread among moderate climate activists—the concern, then, will not be about the radicalism of the discursive framing protesters adopt when they foreground existential risk but rather the radicalism of the implied tactics (Simpson et al. 2022, 4). We might also question the empirical claim that an escalation in climate action will undermine simultaneous mass-movement building. Is it true that a moderate climate movement would be undercut by militant protest? And can we expect a civil mass movement to be successful on its own?

To reiterate, I do not want to take a view on these issues here. My claim is that questions about the scope of permissible uncivil climate protest are important to address, and that the potential scale of climate change—its status as an existential or a catastrophic risk—is plausibly relevant for this distinctively nonideal project. More, such work would help connect work in climate justice with the claims of activists themselves, for whom the worst-case scenarios of climate change are central to practices of protest and resistance.

VI. CONCLUSION

In this paper, I have explored possible ways in which the concept of existential risk might be connected to work on climate justice. I suggested, against some prominent work in ERS, that we should not dismiss the idea that climate change could be an existential or catastrophic risk. If this prospect cannot be ruled out, it is plausible that it should have some relevance to debates about climate justice. I investigated three possibilities, locating each in a turn toward ‘nonideal’ theories of climate justice. It might be suggested, for instance, that the gravity of potential climate change threatens the final value of humanity. I raised some concerns about this idea, which stemmed primarily from the way the final value of humanity seems to flatten the species, viewing humanity as an undifferentiated agent. Important criticisms have been raised about how

speaking in such terms can serve to marginalise the perspectives of vulnerable groups. Another possibility, inspired by Scheffler's arguments in *Death and the Afterlife*, is that the prospect of catastrophic or existential climate change could threaten people's ability to take value from their current plans and projects. Although this suggestion warrants further study, it is a complex and partly empirical question whether climate change will manifest to people in a way that produces the confident sense of catastrophe that Scheffler's argument depends on.

A more natural way of thinking about the relevance of existential or catastrophic climate change for climate justice is to connect these potential consequences to discussions about political resistance: if climate change could be so severe, then this should have some bearing on what it would be permissible for individuals or groups to do in response to it. It is noteworthy that many people have taken this to be the case, although they are normally political writers or actors who would not consider themselves part of the analytic political theory literature on climate justice. There is a worry, though, about the implications of this move, since invoking catastrophe or extinction in defence of militant climate protest can look like a blank cheque. I think that debates about climate justice would be well served by thinking through such issues, and by engaging with work that has thought about them before.³

NOTES

1. Perhaps the most prominent of those institutions are the *Future of Humanity Institute* (FHI) and the *Centre for the Study of Existential Risk* (CSER).
2. It is plausible that the idea of climate change as an existential risk has featured more substantially in debates about the discount rate, which have unfolded alongside these debates about climate-change burden sharing (see, for example, Rendall [2019]). I maintain, though, that we can describe debates about climate-change burden sharing as the most prominent in the field.
3. Special thanks are owed to Natalie Jones, both for putting me forward for this project and for comments on early drafts. Versions of this paper were presented at the University of Cambridge, the University of Washington, and the University of Exeter, and I would like to thank those in attendance for their helpful questions. Stephen Gardiner, Tom Hobson, and Arthur Obst all also provided generous written comments. Finally, I would like to thank a reviewer for this journal for their constructive feedback, and Orri Stefánsson for his careful editorial guidance. This research was supported by a British Academy Postdoctoral Fellowship.

REFERENCES

- Agarwal, Anil and Sunita Narain 1991. *Global Warming in an Unequal World: A Case of Environmental Colonialism*, New Delhi: Centre for Science and Environment.
- Avin, Shahar, Bonnie C. Wintle, Julius Weitzdörfer, Seán Ó hÉigeartaigh, William Sutherland, Martin Rees 2018. "Classifying Global Catastrophic Risks," *Futures* 102: 20–26.
- Battistoni, Alyssa 2017. "Living, Not Just Surviving," *The Jacobin*. <https://jacobin.com/2017/08/living-not-just-surviving>.
- Beard, S.J. and Emile Torres 2020. "Ripples on the Great Sea of Life: A Brief History of Existential Risk Studies." <https://ssrn.com/abstract=3730000> or <http://dx.doi.org/10.2139/ssrn.3730000>.
- Beard S.J, Lauren Holt, Asaf Tzachor, Luke Kemp, Shahar Avin, Emile Torres, and Haydn Belfield 2021. "Assessing Climate Change's Contribution to Global Catastrophic Risk," *Futures* 127, 1–14.
- Best, Steven and Anthony Nocella 2006. "A Fire in the Belly of the Beast: The Emergence of Revolutionary Environmentalism," in S. Best and A. Nocella, eds., *Igniting a Revolution: Voices in Defence of the Earth*, Chico, CA: AK Press.
- Blomfield, Megan 2019. *Global Justice, Natural Resources, and Climate Change*, Oxford: Oxford University Press.
- Bostrom, Nick 2002. "Existential Risks: Analysing Human Extinction Scenarios and Related Hazards," *Journal of Evolution and Technology* 9(1).
- Caney, Simon 2014. "Two Kinds of Climate Justice: Avoiding Harm and Sharing Burdens," *Journal of Political Philosophy* 22(2): 125–49.

- . 2018. "Climate Change," in S. Olsaretti, ed., *The Oxford Handbook of Distributive Justice*, Oxford: Oxford University Press.
- Celikates, Robin 2016. "Democratizing Civil Disobedience," *Philosophy and Social Criticism* 42(10): 982–94.
- Chenoweth, Erica and Maria Stephen 2011. *Why Civil Disobedience Works: The Strategic Logic of Nonviolent Conflict*, New York: Columbia University Press.
- Cremer, Carla Zoe and Luke Kemp 2021. "Democratising Risk: In Search of a Methodology to Study Existential Risk." <https://ssrn.com/abstract=3995225>.
- Cripps, Elizabeth 2022. *What Climate Justice Means and Why We Should Care*, London: Bloomsbury Press.
- Delmas, Candice 2018. *A Duty to Resist: When Disobedience Should be Uncivil*, Oxford: Oxford University Press.
- DemocracyNow 2019. "We Are Striking to Disrupt the System": An Hour with 16-Year-Old Climate Activist Greta Thunberg." https://www.democracynow.org/2019/9/11/greta_thunberg_swedish_activist_climate_crisis.
- de Moor, Joost 2021. "Postapocalyptic Narratives in Climate Activism: Their Place and Impact in Five European Cities," *Environmental Politics* 0(0). <https://www.tandfonline.com/doi/full/10.1080/09644016.2021.1959123>.
- Francis, Blake 2021. "In Defence of National Climate Change Responsibility: A Reply to the Fairness Objection," *Philosophy & Public Affairs* 49(2): 115–55.
- Frick, Johan 2017. "On the Survival of Humanity," *Canadian Journal of Philosophy* 47(2): 344–67.
- Gardiner, Stephen 2010. "Is 'Arming the Future' with Geoengineering Really the Lesser Evil? Some Doubts about the Ethics of Intentionally Manipulating the Climate System," in S. Gardiner, et al., eds. (2010, 284–313).
- . 2017. "Climate Ethics in a Dark and Dangerous Time," *Ethics* 127(2): 430–65.
- Gardiner, Stephen, Simon Caney, Dale Jamieson, and Henry Shue, eds. 2010. *Climate Ethics: Essential Readings*, Oxford: Oxford University Press.
- Greaves, Hilary and William MacAskill 2021. "The Case for Strong Longtermism," *GPI Working Paper No.5-2021*.
- Hallam, Roger 2019. *Common Sense for the 21st Century*, Hartford, VT: Chelsea Green.
- Halstead, John. 2022. *Climate Change and Longtermism*. Available online.
- Heyward, Clare and Dominic Roser. eds. 2015. *Climate Justice in a Non-Ideal World*, Oxford: Oxford University Press.
- Hickman, Caroline, Elizabeth Marks, Panu Pihkala, Susan Clayton, R. Eric Lewandowski, Elouise E. Mayall, Britt Wray, Catriona Mellor, and Lise van Susteren 2021. "Climate Anxiety in Children and Young People and Their Beliefs about Government Responses to Climate Change: A Global Survey," *The Lancet Planetary Health* 5(0): e863–73.
- Huggel, Christian, Laurens Bouwer, Sirkku Juhola, Reinhard Mechler, Veruska Muccione, Ben Orlove, and Ivo Wallimann-Helmer 2022. "The Existential Risk Space of Climate Change," *Climatic Change* 174(8): 1–20.
- Jamieson, Dale 2010. "When Utilitarians Should Be Virtue Theorists," in S. Gardiner, et al., eds. (2010, 315–31).
- Jensen, Derek 2011. "Preface," in A. McBay, L. Keith, and D. Jensen, *Deep Green Resistance*, New York: Seven Stories Press, 11–21.
- Jubb, Rob 2019. "Disaggregating Political Authority: What's Wrong with Rawlsian Civil Disobedience?" *Political Studies* 67(4): 955–71.
- Keith, Lierre 2011. "The Problem," in A. McBay, L. Keith, and D. Jensen, *Deep Green Resistance*, New York: Seven Stories Press, 21–31.
- Kemp, Luke, Chi Xu, Joanna Depledge, Kristie L. Ebi, Goodwin Gibbins, Timothy A. Kohler, Johan Rockström, Marten Scheffer, Hans Schellnhuber, Will Steffen and Timothy M. Lenton 2022. "Climate Endgame: Exploring Catastrophic Climate Change Scenarios," *Proceedings of the National Academy of Sciences* 119(34).
- Klein, Ezra 2021. "It Seems Odd that We Would Just Let the World Burn," *New York Times*, July 15. <https://www.nytimes.com/2021/07/15/opinion/climate-change-energy-infrastructure.html>.
- Liu, Hin-Yan, Kristian Lauta, and Matthijs Maas 2018. "Governing Boring Apocalypses: A New Typology of Existential Vulnerabilities and Exposures for Existential Risk Research," *Futures* 102: 6–19.
- MacAskill, William 2022. *What We Owe the Future*, United Kingdom: Oneworld.
- Malm, Andreas 2021. *How to Blow Up a Pipeline*, London: Verso.
- McKinnon, Catriona 2017. "Endangering Humanity: An International Crime?" *Canadian Journal of Philosophy* 47(2-3): 395–415.

- . 2019. “Climate Justice in the Endgame for 2 Degrees,” *British Journal of Politics and International Relations* 21(2): 279–86.
- McLaughlin, Alex 2023. “The Limit of Climate Justice: Unfair Sacrifice and Aggregate Harm,” *Critical Review of Social and Political Philosophy*.
- Moellendorf, Darrel 2022. *Mobilizing Hope: Climate Change and Global Poverty*, Oxford: Oxford University Press.
- . 2014. *The Moral Challenge of Dangerous Climate Change: Values, Poverty and Policy*, Cambridge: Cambridge University Press.
- Moss, Jeremy, ed., 2015. *Climate Change and Justice*, Cambridge: Cambridge University Press.
- Nenquimo, Nemonte 2020. “This Is My Message to the Western World—Your Civilisation Is Killing Life on Earth,” *The Guardian*, <https://www.theguardian.com/commentisfree/2020/oct/12/western-worldyour-civilisation-killing-life-on-earth-indigenous-amazon-planet?fbclid=IwARIDSFeOGtahs-fgAPbu4HXJgx2fYLOTXR008sZMQP3aOgdy8Dbv1rZpZtg>.
- Ord, Toby 2020. *The Precipice*, London: Bloomsbury Publishing.
- Page, Edward 2008. “Distributing the Burdens of Climate Change,” *Environmental Politics*, 17(4): 556–75.
- . 2011. “Climate Justice and the Fair Distribution of Atmospheric Burdens: A Conjunctive Account,” *The Monist* 94(3): 412–32.
- Pasternak, Avia 2019. “Political Rioting: A Moral Assessment,” *Philosophy & Public Affairs* 46(4): 385–418.
- Rawls, John 1999. *A Theory of Justice*, rev. ed., Cambridge, MA: Harvard University Press.
- Rendall, Matthew 2019. “Discounting, Climate Change and the Ecological Fallacy,” *Ethics* 129, 441–63.
- Schlosberg, David and Lisette Collins 2014. “From Environmental to Climate Justice: Climate Change and the Discourse of Environmental Justice,” *WIREs Climate Change* 5: 359–74.
- Scheuerman, William 2022a. “Political Disobedience and the Climate Emergency,” *Philosophy & Social Criticism* 48(6): 791–812.
- . 2022b. “Good-Bye to Non-Violence,” *Political Research Quarterly* 75(4): 1284–97.
- Scheffler, Samuel 2013. *Death and the Afterlife*, Oxford: Oxford University Press.
- . 2018. *Why Worry About Future Generations*, Oxford: Oxford University Press.
- Shelby, Tommie 2007 “Justice, Deviance, and the Dark Ghetto,” *Philosophy & Public Affairs* 35(2): 126–60.
- Sherwood, Steven and Matthew Huber 2010. “An Adaptability Limit to Climate Change Due to Heat Stress” *Proceedings of the National Academy of the Sciences of the United States of America* 107(21): 9552–55.
- Shue, Henry 2019. “Subsistence Protection and Mitigation Ambition: Necessities, Economic and Climatic,” *British Journal of Politics and International Relations* 21(2): 251–62.
- . 2021. *The Pivotal Generation: Why We Have a Moral Responsibility to Slow Climate Change Right Now*, Princeton, NJ: Princeton University Press.
- Simpson, Brent, Robb Willer, and Matthew Feinberg 2022. “Radical Flanks of Social Movements Can Increase Support for Moderate Factions,” *PNAS NEXUS* 1: 1–11.
- Singer, Peter 2010. “One Atmosphere,” in S. Gardiner, et al., eds. (2010, 181–99).
- Srinivasan, Amia 2014. “After the Meteor Strike,” *London Review of Books* 36(18): 13–15.
- Táíwò, Olúfemi 2022. *Reconsidering Reparations*, Oxford: Oxford University Press.
- Torres, Émile 2022. “What ‘Longtermism’ Gets Wrong About Climate Change,” *Bulletin of the Atomic Scientists*. <https://thebulletin.org/2022/11/what-longtermism-gets-wrong-about-climate-change/#post-heading>.
- Valentini, Laura 2012. “Ideal vs. Non-ideal Theory: A Conceptual Map,” *Philosophy Compass* 7(9): 654–64.
- Whyte, Kyle 2018. “Indigenous Science (Fiction) for the Anthropocene: Ancestral Dystopias and Fantasies of Climate Change Crises,” *Environment and Planning E: Nature and Space* 1(1-2): 224–42.
- Xu, Yangyang and Veerabhadran Ramanathan 2017. “Well Below 2 °C: Mitigation Strategies for Avoiding Dangerous to Catastrophic Climate Changes,” *Proceedings of the National Academy of the Sciences of the United States of America* 114(39): 10315–23.