Two Kinds of Climate Justice: Avoiding Harm and Sharing Burdens*

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There exists a solidarity among men as human beings that makes each co-responsible for every wrong and every injustice in the world, especially for crimes committed in his presence or with his knowledge. If I fail to do whatever I can to prevent them, I too am guilty.

—Karl Jaspers

I. TWO KINDS OF CLIMATE JUSTICE

The overwhelming majority of climate scientists hold that humanity is facing the prospect of severe climate change and the Assessment Reports of the Intergovernmental Panel on Climate Change (IPCC) contain some stark warnings. In the IPCC’s Fourth Assessment Report, the ‘best estimate’ of the increase in global mean temperatures in the period between 1980–1999 and 2080–2099 ranged from 1.8°C (B1 scenario) and 4.0°C (A1F1 scenario). If we consider the ‘likely range’ of temperature increases in this period, we see that the figures range from between a 1.1°C increase (B1) and 6.4°C increase (A1F1). These changes—and the sea level rises and severe weather events associated with climate change—will have disastrous effects on human and non-human life.

One can distinguish between two ways of thinking about climate justice. One starts by focusing on how the burden of combating the problem should be shared fairly among the duty-bearers. An agent’s responsibility, then, is to do her fair share. Its concern is with what I shall term Burden-Sharing Justice. A number of principles of burden-sharing justice have been proposed and assessed. Three, in particular, have been suggested—the principle that those who have caused the problem should bear the burden; the principle that those who have the ability to

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2Solomon et al. 2007, p. 70.
pay should bear the burden; and the principle that those who have benefited from
the activities that cause climate change should bear the burden.³

One might, however, look at the issue from a second point of view. This second
perspective takes as its starting point the imperative to prevent climate change,
and it works back from this to deduce who should do what. Its focus is primarily
on ensuring that the catastrophe is averted (or at least minimised within reason).
This perspective is concerned with the potential victims—those whose
entitlements are threatened—and it ascribes responsibilities to others to uphold
these entitlements.⁴ This approach focuses on what I shall term Harm Avoidance
Justice.

Ideally, both perspectives would coincide. However, in many areas of human
life it is clear that these two kinds of perspective can clash. To see this consider,
what is by comparison with climate change, a fairly trivial example. Consider
a familiar academic context where certain important administrative tasks need
to be allocated. If we make fair burden-sharing our priority, then we may
allocate it to an individual A, who has not yet done her fair share. On the
other hand, if we make getting the job done properly our priority, we may
baulk at giving it to A if, say, A is unreliable and will not do the job properly.
So although, ideally, both kinds of justice would coincide, there is no guarantee
that this will occur. We, therefore, need an account which includes both kinds
of responsibility, and which determines which should take priority when the
two conflict.

We can think of other—less trivial—examples where both perspectives apply
and where they may not happily coincide. This tension will arise whenever four
conditions apply:

(1) there is an important goal the realization of which involves a burden;
(2) the equitable sharing of the burden requires a certain distribution of burdens
    \( D_i \) (Burden-Sharing Justice);
(3) to make sure that the goal is achieved requires a distribution of burdens \( D_{ii} \)
    (Harm Avoidance Justice); and
(4) \( D_i \) and \( D_{ii} \) do not coincide.

Conditions (1)–(4) occur in a number of different contexts. Consider, for
example, the ethics of waging war. One goal obviously is to prosecute a just war
successfully. At the same time, pursuing this imposes severe harms on some, and
we need to comply with principles of just conduct (\textit{jus in bello}). Although it is

³I have discussed these in Caney (2005; 2010a). There is now a considerable literature on these
issues. For some important contributions, see the papers by Gardiner, Shue, Jamieson, and Baer
among others in Gardiner et al. (2010).
⁴Elsewhere I have referred to these two perspectives as ‘entitlement-bearer’ and ‘duty-bearer’
justice (Caney 2010b, p. 199; cf. p. 219 where the possibility that the conceptions of justice may clash
is noted). The same distinction is made, but without reference to climate change, in Shue (1996,
pp. 164–6).
unusual to frame *jus in bello* as being concerned with the fair distribution of harms, that is essentially what is at stake.\(^5\) However, there might be cases where the importance of (2) clashes with (3) and we are forced to consider whether it can be justified to violate the principles of just conduct. We may face what Michael Walzer terms a ‘supreme emergency’, where we have to choose between acting in such a way that we secure the specified goal (*jus ad bellum*) or by acting in ways that distribute the harms equitably (*jus in bello*).\(^6\) Another case where we face a similar dilemma might include dealing with the financial crisis. On the one hand, we might say ‘it’s crucial that we have a stable economy and therefore there is a case for bailing out the banks’. On the other hand, we might say that some bankers brought this about, and so they should bear responsibility for that, and that precludes bailing them out.

So the distinction between the two kinds of justice is hopefully a familiar one. Before proceeding further, it is worth noting that the distinction between *Harm Avoidance Justice* and *Burden-Sharing Justice* is not identical to that between a backward-looking approach and a more forward-looking one. One might think so on the grounds that an approach focusing on avoiding harm is concerned with a certain outcome—one in which people can enjoy certain kinds of entitlements. However, while a harm-avoidance-oriented approach is forward-looking (and thus the elision seems plausible), a burden-sharing approach is not necessarily backward-looking. Those who focus on how burdens should be shared do often appeal to non-backward-looking considerations such as ‘who has the ability to pay?’\(^7\)

Let us return now to the case of climate change. As I have noted above, much of the ethical discussion of climate change has focused on what I have termed *Burden-Sharing Justice*. I think that such discussions are crucial. Nothing that follows challenges the need for such analyses. However, they are, I maintain, incomplete: we also need to analyse matters from the point of *Harm Avoidance Justice*. Climate change poses serious existential threats to many people’s lives and to the very existence of some communities. Its effects will be extremely harmful, possibly catastrophic, for millions of people. Given this, I think we have reason to focus on what would most effectively prevent the onset of dangerous climate change, and then consider what responsibilities would follow from that.\(^8\) My aim in this paper, then, is to develop a normative account of climate change that takes as its starting point the assumption that it is of paramount importance.

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\(^{5}\) Cf. McMahan 2010.

\(^{6}\) See Walzer 1977, ch. 16.

\(^{7}\) The distinction I have in mind is thus distinct from the distinction between ‘deontological models of blame-responsibility’ and ‘consequentialistic utilitarian models of task-responsibility’ that Robert Goodin invokes (1995, p. 88: cf. pt. III, chs. 5, 6, 7).

\(^{8}\) I am indebted here to a presentation by Robert Goodin at the conference on ‘Political Thought and the Environment’ (University of Cambridge, 25 May 2012), which similarly emphasized the importance of adopting this perspective.
that humanity avoids dangerous climate change.\(^9\) I shall begin by considering two approaches which, like mine, are animated by a concern to prevent dangerous climate change from occurring (Sections II–III), before then setting out and seeking to defend my own account (Sections IV–VI).

**II. PRIORITISING PREVENTION 1—INTERNATIONAL PARETIANISM**

The first prevention-oriented approach I wish to consider is that set out by Eric Posner and David Weisbach in their book *Climate Change Justice* (2010). Posner and Weisbach start from a commitment to preventing dangerous climate change and argue that to realize this commitment we must adopt what they term ‘International Paretianism’\(^10\). Their claim is nicely encapsulated in the following passage:

> Any treaty must satisfy what we shall call the principle of International Paretianism: all states must believe themselves better off by their lights as a result of the climate treaty. International Paretianism is not an ethical principle but a pragmatic constraint: in the state system, treaties are not possible unless they have the consent of all states, and states only enter treaties that serve their interests.\(^11\)

Broken down into its constituent parts, Posner and Weisbach’s argument is as follows:

\(\text{(P1)}\) It is necessary to have a climate treaty with which major emitters comply.

\(\text{(P2)}\) To be feasible an effective climate treaty must serve the interests of high emitting states (from ‘Feasibility’ to ‘Pareto Superiority’).

Therefore,

\(\text{(C)}\) A climate treaty must serve the interests of high emitting states.

This argument is unclear in a number of respects. In particular, (P2) is ambiguous in two ways. First, although Posner and Weisbach refer to ‘feasibility’\(^12\) it is not clear what they mean by this. To say that ‘X is feasible’ might mean, inter alia, that X is (i) ‘possible’ or (ii) ‘likely to happen’, or (iii) ‘will happen’.\(^13\) Posner and Weisbach do not consider the different ways in which this concept can be defined.

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\(^9\) A complete analysis of *Harm Avoidance Justice* would need to specify what constitutes ‘dangerous’ climatic changes (UNFCCC Art. 2). Furthermore, should all harms be prevented? Or only up to a certain level? If so, what level? These are important questions which merit answers, but which raise complex normative and empirical issues. Given the complexity of this issue, and given limitations of space, I will not attempt to give a precise definition of dangerous climate change in this paper. I will simply take it to refer to changes in the climate system which pose severe threats to the core interests of many people.


\(^11\) Ibid., footnote omitted.

\(^12\) E.g., ibid.

\(^13\) For an instructive discussion of political feasibility, see Gilabert and Lawford-Smith (2012).
interpreted. In what follows I shall assume, in the first instance, that when they say that a treaty is feasible they mean that it is possible for agents (in this case, governments) to comply with it (interpretation (i)). Later on, I consider interpretations (ii) and (iii). Whichever interpretation we use, I argue, their argument is unsuccessful.

Second, Posner and Weisbach do not say what baseline they are using. However, to say that a treaty must be Pareto-superior one must specify what it is Pareto-superior to, and then explain why this is an appropriate baseline. To see why this matters, consider three possible baselines. The claim might be that for the members of any given state, $S$, a treaty at $t_2$ (and thereafter) should be Pareto-superior to:

(a) the situation members of $S$ face at $t_1$ (the status quo ex ante);
(b) the situation members of $S$ would face at $t_2$ (and thereafter) if no treaty were signed; or
(c) the situation members of $S$ would face at $t_2$ (and thereafter) if a treaty were signed and other states credibly threatened punitive sanctions if $S$ did not agree to and comply with the treaty.

In one passage Posner and Weisbach explicitly endorse (a), writing that ‘a treaty . . . satisfies International Paretianism’ if it ‘advances the interests of all states relative to the status quo’.\textsuperscript{14} If, though, this is their considered view, then it is highly implausible, for (a) may not be a live option after $t_1$ has elapsed. Consider, for example, the following situation.

Suppose that a coalition of states implements a climate treaty and suppose that this coalition credibly threatens to punish a state, $S$, if it does not sign up to and comply with this treaty. In these circumstances, $S$ may have a good self-interested reason to comply—even if what $S$ agrees to is worse than the status quo at $t_1$ (option a), and even if it is worse for the members of $S$ than a world without a climate treaty would be at $t_2$ (option b). Options (a) and (b) are not relevant baselines because they are not available to $S$ at $t_2$. (c), though, is relevant. Suppose, finally, that the sanctions that the coalition will impose on $S$ are worse for $S$ than the burdens involved in compliance. In this kind of case, states may then rationally agree to something that worsens their condition at $t_2$ when compared with $t_1$. This is highly relevant for international environmental diplomacy because some states, coalitions of states, and international organizations can threaten to impose sanctions on non-complying states. Climate treaties, thus, need not be Pareto-superior to the status quo.

Suppose that Posner and Weisbach address these concerns and provide a plausible conception of feasibility and the baseline. Their argument is still unsuccessful. To see why, it is worth distinguishing between two different kinds

\textsuperscript{14}Posner and Weisbach 2010, p. 143.
of perspective when thinking about the feasibility of a climate treaty. In particular, one can distinguish between, on the one hand, the perspective of a state that is a major emitter (call this the *internal point of view*), and, on the other hand, the perspective of others (perhaps the representatives of other states) who are trying to persuade major emitters to reduce their emissions (call this the *external point of view*). It is vital to make this distinction because the argument from International Paretianism has force only from the external point of view, but lacks it from the internal point of view.

To explain: while it might be true that if someone wishes to design a treaty that an emitter will sign up to and comply with then the first agent (assuming she cannot compel the emitter, or that she can but has good reason not to do so) should take this consideration into account. She has reason to try to design a treaty which caters to the interests of the emitting state. However, this gives the emitter no reason at all not to sign up without the inducement. The emitter cannot say (to borrow Posner and Weisbach’s words) that ‘[f]easibility rules out’ signing this treaty.\(^{15}\) He cannot because it is not true: it is quite possible for him to do this. He, therefore, cannot appeal to the infeasibility of committing himself to Pareto-inferior policies because it is *not* infeasible for him to reduce his emissions. Infeasibility here is not a bar. It should be called what is it, namely ‘unwillingness’.

The argument I am making here is structurally analogous to that which G. A. Cohen levels against Rawls’s treatment of the talented in his defence of the Difference Principle. As Cohen points out, whereas people other than the most talented may say that it is necessary to reward the talented to ensure that they work to the benefit of the least advantaged, this is not an argument that the talented themselves can make (barring cases of akrasia).\(^{16}\)

Posner and Weisbach’s argument gains whatever credibility it might possess because they present their claim in the passive mood. They write, for example, that ‘only a treaty that satisfies International Paretianism—that is, that advances the interests of all states relative to the status quo—is feasible’.\(^{17}\) But this passive way of putting it is misleading.\(^{18}\) Treaties are agreed to by *agents* and we need to examine it from their point of view. From the point of view of the members of a high emitting political community, it is just not true that it is not possible for them to sign up to a treaty that leaves them worse off. They can.

Posner and Weisbach might make two replies. First, they might protest that they are not using ‘feasible’ to mean ‘is possible’. Rather, they might argue, they are using ‘feasible’ to mean ‘is likely to happen’ or, perhaps, ‘will happen’. This, however, does not help their case for the same argument applies against this.

\(^{15}\)Ibid., p. 6.

\(^{16}\)See Cohen 1991, esp. secs. 3 and 4; see also Cohen 2008, ch. 1.

\(^{17}\)Posner and Weisbach 2010, p. 143: see also p. 6.

\(^{18}\)See also Cohen’s comment on how the ‘incentives argument’ sounds plausible only when expressed in an ‘impersonal form’ (1991, pp. 272–3; 2008, p. 35).
From the external point of view, it is defensible to argue that ‘concessions need to be made to high emitters because without that they are not likely to comply (or will not comply)’. But if a high emitting country like the USA simply says ‘this treaty needs to reward us because unless it does so then we are not likely to comply’ (or, just, ‘we will not comply’), then it is hard to see why this counts as a justification at all. It is a prediction of expected behaviour and perhaps a threat. Pointing out that a proposed obligation is not possible is relevant. But saying that, though it is possible for one to do X, one is not likely to comply with it (or, more baldly, one will not comply with it) has no argumentative power. To posit that ‘ought’ implies ‘can’ is reasonable (if not uncontroversial), but to claim that ‘ought’ implies either ‘is likely to’ or ‘will’ is obviously implausible.

At this point, Posner and Weisbach might adopt a second tack. They might argue that it is not possible for elected representatives to reduce emissions in such a way that their citizens were worse off, because if they did so they would be voted out of office, and, if their successors pledged to adopt a climate policy that would leave their citizens worse off they too would suffer the same outcome. Elected representatives are beholden to their electorate and the latter would punish them. It is therefore not possible for a government to enact and put into practice a radical mitigation policy.

In reply: this has some plausibility, but it does not save Posner and Weisbach’s argument for it just entails that members of the political community as a whole have a duty to reduce emissions. So governments have a responsibility to cut emissions; and electors too have a pro tanto duty not to punish them for such action. Indeed, they have a (pro tanto) duty to punish them for any deviation from this course of action. Also the politicians in this scenario have a responsibility to persuade the electorate of the need for mitigation and adaptation. So both elected and electors have responsibilities. The key point is that it is possible for the members of the political unit as a whole to act in ways that reduce emissions, and this is all that my argument above needs.

The objection thus, remains intact. Posner and Weisbach’s claim that the only feasible climate treaty is one that improves the lot of all signatories is mistaken.

III. PRIORITISING PREVENTION 2—ACTING WITHOUT SACRIFICE

Having considered one approach that puts preventing climate change at the forefront of its concerns, let us now consider a second approach—one inspired by recent work by Duncan Foley and John Broome. Foley and Broome have both argued that mitigating climate change does not actually involve any sacrifice. I will focus on Broome’s discussion of it, in his recent book Climate Matters (2012), because he stresses there that this conclusion has considerable political

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19See Foley (2008) and Broome (2012, ch. 3).
significance for it enables humanity to overcome the current impasse in climate negotiations and implement an effective climate treaty.

Broome reasons as follows. Those who emit greenhouse gases are not internalizing the costs of their activity. Climate change is, thus, what economists term an ‘externality’. Externalities are inefficient. Therefore, it follows from this that we can move from where we are to a more efficient outcome. Specifically, we could move to a situation where emitters stop their harmful activity and thus do not inflict harm on others (whom Broome calls ‘receivers’), and, crucially, the emitters are also no worse off. What does this mean in practice? How could we leave those who would emit no worse off? Broome’s proposal is that we borrow from the future—for example, using up some natural resources we would otherwise leave for future generations—and compensate people for refraining from emitting dangerous amounts of greenhouse gases. We can thus achieve what Broome terms ‘efficiency without sacrifice’.

It is important to be clear that Broome does not think that this is the best outcome. He prefers what he terms ‘efficiency with sacrifice’. This requires current emitters to stop their harmful behaviour and not be compensated by taking benefits from the future. Broome holds that ‘efficiency with sacrifice’ is better for two reasons. His first is essentially utilitarian. His second is that justice requires that the cost of emitting be picked up by the actual polluters (and not by their more affluent descendants). Justice, in his view, requires that the polluter should pay. For these two reasons, ‘efficiency with sacrifice’ is better than ‘efficiency without sacrifice’.

However, Broome is keen to emphasize that, for pragmatic reasons, we might aim for ‘efficiency without sacrifice’. It is for this reason that his argument is very relevant here. For, in line with my emphasis on preventing climate change, Broome canvasses ‘efficiency without sacrifice’ as a way of breaking the political deadlock. As he puts it, ‘it has the moral purpose of moving the political process forward’.

Broome (and Foley’s) argument has considerable appeal. However, I think it fails to show that a ‘no sacrifice’ option is available. Before presenting my central concern, it is worth noting a limitation in Broome and Foley’s argument. Their argument critically depends on the empirical assumption that climate change is an inefficiency: that is, both assume that there are other outcomes which contain more welfare. This may be true, but it is not obviously true, and depends on empirical assumptions about the aggregate impacts of climate change and the costs and benefits of mitigating (and adapting to) climate change. Broome

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21Ibid., p. 44.
22Ibid., p. 44; see also Rendall 2011.
23Broome 2012, pp. 45ff.
24For these two arguments, see Broome (2012, pp. 45–6).
25Ibid., p. 48; see also pp. 15, 38.
emphasizes that emitters are imposing external costs on others. This is true. But it does not, in itself, entail that this is a case of an ‘externality’, if that is understood to entail that there is a more efficient distribution available. For it is, of course, possible to have cases where A imposes an external cost on B, where the benefit to A gained by this activity is greater than the harm to B. In this kind of case, preventing the external cost will result in a net loss to society, and so would be termed inefficient. Of course, it might still be the right thing to do.

We can thus distinguish between two kinds of cases where A imposes external costs on others—those where the benefits to A are less than the harm to B (harm with inefficiency) and those where the benefits to A are more than the harm to B (harm without inefficiency). For Broome and Foley’s argument to go through the first possibility must be correct. Broome does not say much in defence of this assumption.\(^{26}\) I should make clear that I am not challenging this empirical claim. My point is the more modest one of making clear that the Foley-Broome argument depends on a key empirical premise. If this is mistaken—if, for example, mitigating climate change prevents harm but nonetheless results in a net loss of welfare—then their argument fails.

Suppose that we grant this. The central weakness in Broome’s argument lies in its assumption that it is possible to act now and to pass on all of the costs to future people. I do not deny that it is possible to pass on some costs to future generations. Current generations can, for example, use certain natural resources that they would have otherwise passed on to future generations. Is it, however, possible to pass on all the costs? I think we have good reason to be sceptical of this, and to believe that mitigation may impose costs on some for which they cannot be compensated. Consider those who work in professions that depend for their existence on fossil fuels. A radical programme of mitigation of the kind required to avert dangerous climate change would require laying off many who work in heavy industry, manufacturing, coalmining, and construction. However, for very many people having a job is a crucial and non-substitutable source of well-being. Their job provides not only money (which can, of course, be provided in other ways) but also certain other goods which may be essential to having a fulfilling life. It gives them a sense of purpose and meaning in life; it defines their identity, and is often tied up with their sense of self-respect. For such people, to live a fulfilling life requires, as a necessary condition, earning a living (rather than just getting money), making their own way in the world, and using skills they have developed over the years. Being made redundant robs them of all of these goods and thereby removes a source of well-being that cannot be made up by

\(^{26}\)In a footnote, Broome (2012, p. 194 fn. 3) notes that both William Nordhaus (2008, p. 180) and Nicholas Stern (2009, p. 85) maintain that not mitigating climate change would be inefficient. He also cites Foley (2008).
providing other goods. To this we should then add that, in very many cases, those laid off will be unable to reskill and learn new professions. In such cases, mitigation will necessarily incur a sacrifice—one that cannot be passed on to others. More generally, the point is this: the fact that a policy removes a source of well-being from A but makes B much better off does not entail that B can transfer some of that benefit to A so that A is no worse off. The enforced unemployment of those in fossil fuel-dependent jobs is a case in point. Lest my argument be misunderstood: my claim is not that this entails that mitigation should not be pursued (after all the abolition of slavery probably also led to loss of jobs). It is just that if we engage in it, it is likely to impose a considerable sacrifice on some.

IV. PRIORITISING PREVENTION 3—TAKING THE INSTITUTIONAL CONTEXT AND THE POLITICAL CHALLENGES SERIOUSLY

Having criticised two approaches that might both appear to help us make progress in preventing dangerous change, I shall now outline and then defend my own prevention-oriented approach. The two preceding accounts have both sought to minimize the sacrifices that need to be made—either by acceding to the self-interest of high emitting states and not requiring them to make any sacrifices (International Paretianism), or by not requiring anyone to make any sacrifices (Efficiency Without Sacrifice).

My account starts from the recognition that, even if some costs can be passed on, some sacrifices have to be made. Given this, we cannot just assume that agents will comply with their duties to mitigate and enable adaptation to climate change. Unless one thinks that agents will spontaneously comply with such burdensome responsibilities—and our experience of human nature and the inconclusive nature of the negotiations on climate change for the last two decades have surely taught us that such a belief would be naive in the extreme—anyone serious about preventing climate change (and thus avoiding harm) needs to reflect on how to respond to current and future non-compliance.

There are two distinct kinds of response to this challenge. To elaborate on these it is, however, necessary to distinguish here between two kinds of responsibility—what can be termed first-order and second-order responsibilities. First-order responsibilities, as I employ that term, are responsibilities that certain agents have to perform (or omit) certain actions. In the context of addressing climate change these first-order responsibilities include responsibilities to mitigate climate change (through reducing emissions and maintaining greenhouse gas sinks), to enable adaption, and to compensate people for harm done. Second-order responsibilities, by contrast, refer to responsibilities that some have

27For a survey of some relevant empirical data, see Price, Friedland, and Vinokur (1998, pp. 303–16).
to ensure that agents comply with their *first-order responsibilities*.\(^{28}\) (This is a rough formulation of the distinction, and I will refine it later.)

Now with this distinction on hand, we can outline the two kinds of response to current and future non-compliance. The first operates at the *first-order* level and says that when there is non-compliance, others should cover some, if not all, of the *first-order responsibilities* of those who do not comply.\(^{29}\) I have defended this kind of response elsewhere.\(^{30}\)

Whilst undoubtedly important, this kind of response is insufficient. To adopt this approach, and only this approach, wrongly treats levels of non-compliance as a given, and then responds to it in a reactive way, seeking merely to cope with it. Since, however, agents operate in social, economic, and political contexts, it is possible to structure these contexts in ways which induce agents to comply with their *first-order* responsibilities. Given this, and given the paramount importance of preventing dangerous climate change, we therefore have good reason to design these contexts to enable greater compliance and thereby avoid harm. It would be irresponsible to ignore these opportunities for reducing non-compliance, and then hope that those who comply with their responsibilities will cover for the failings of others.\(^{31}\) Put more succinctly: the first response needs to be supplemented with an account of *second-order responsibilities*.\(^{32}\)

Given this, my aim in the remainder of this article is to outline and motivate support for an account of *second-order responsibilities*. The most logical way to derive such an account is to start by identifying what needs to be done to minimize the prospects of dangerous climate change (the ‘tasks’). Then, with an account of the tasks in hand, we can use this to ascertain who is best placed to perform these tasks (the ‘second-order agents’), and the qualities they must possess (the ‘traits’). Having outlined what needs to be done and by whom, I turn

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\(^{29}\)See Shue’s (1996, pp. 171–3) discussion of ‘default duties’.

\(^{30}\)See Caney (2005, pp. 766–7, 769–72), which argues that agents have a duty—within certain limits—to make up for the failings of others. For an alternative view that denies this, see Miller (2008, pp. 152–5); (2011; cf. 2008, p. 153). For a compelling critique of Miller’s (2011) views, see Stemplowska (2011).

\(^{31}\)It would also be unfair on the compliers too. See here Elizabeth Cripps’s (2013, pp. 141–50) illuminating discussion of what she terms ‘promotional duties’ and the three reasons she gives in support of them. Cripps offers a different way of thinking about climatic responsibilities, and would reject the emphasis that my account places on first-order responsibilities. For an evaluation of her framework see Caney (forthcoming).

\(^{32}\)For an earlier brief affirmation of the two distinct kinds of response to non-compliance, see my discussion of principles D3 and D4 in Caney (2005, p. 769). Sections IV and V of this paper are an attempt to develop an account of what I there referred to as D4.
then (in Section V) to provide a normative justification which can establish why these agents are under an obligation to perform these tasks (the ‘normative rationale’).

This account of second-order responsibilities, I will argue, yields four important normative conclusions: (i) draws attention to different kinds of action than are commonly mentioned; (ii) identifies a wider range of agents than is normally proposed; (iii) results in a different apportionment of responsibilities; and (iv) rests on a distinct normative basis for ascribing responsibilities.

I shall begin, then, by describing the approach to be adopted in the remainder of this section, before turning in the next section to justify it.33

A. TASK DELINEATION

As noted above, if our aim is to avert dangerous climate change, then it makes sense to commence our analysis with an account of what needs to be done to achieve this goal. In order to do this, we need to specify the content of the second-order responsibilities required to avert dangerous climate change. Without claiming to be exhaustive, one might identify at least six kinds of action that agents can perform.34

The first, is enforcement: those who have (or could have) the political power to set up enforcement mechanisms may have a responsibility to do so. To give one example, Joseph Stiglitz has proposed that the WTO should employ trade sanctions against states that do not make an appropriate reduction in greenhouse gas emissions.35 In addition to enforcing compliance (or, perhaps, as an alternative to doing this), one might also compel an agent to disclose its level of greenhouse gas emissions. Such enforced transparency does not, in itself, compel an agent to comply, but it may often, nonetheless, lead to greater compliance because agents do not wish to look bad in the eyes of others. Such transparency initiatives can operate through what Geoffrey Brennan and Philip Pettit call the ‘economy of esteem’.36

33The need for agents to perform what I am terming second-order responsibilities has not received much discussion in the literature on climate ethics. For two valuable exceptions, see Cripps (2013, ch. 6) and Maltais (forthcoming). (See also Henry Shue’s [2011] important discussion of leadership, though I think his focus is more on the first-order level.) Maltais’ paper distinguishes between the responsibility to mitigate climate change and the responsibility to create effective international cooperative frameworks. He maintains, however, that states should create ‘conditions for achieving effective international action’ by ‘implement[ing] domestic reforms that rapidly accelerate our ability to make the transition to economies with very low GHG emissions’ (p. 2). They should, that is, facilitate cooperation by leading by example and by ‘demonstrating the compatibility of economic welfare and emissions reduction’ (p. 2, see also pp. 6–7). In what follows, I defend a broader conception of both the second-order agents and also the types of actions they should adopt.

34The agents in question might include, but are not restricted to, individuals, firms, trade unions, churches, states, and international institutions.


36See Brennan and Pettit 2004.
A second type of second-order course of action is incentivization. Whereas enforcement imposes a burden on non-compliers, incentivization offers benefits to them in exchange for compliance. Organizations like the WTO and EU can, and do, insist that those belonging to them, and those seeking to join, must satisfy certain criteria. Such organizations can thus withhold membership (and, therefore, the benefits of such membership) from states that do not comply with their mitigation and adaptation responsibilities.

A third type of second-order action is what we might term enablement. By this I mean the capacity to enable others to engage in mitigation or adaptation. For example, some agents’ willingness to comply with their first-order responsibilities to reduce their greenhouse gas emissions may be undermined because low-carbon alternatives may be difficult to find (or, in a variation on this, because the low-carbon alternatives are quite expensive). Given this, one way that some can affect whether agents comply with first-order responsibilities to mitigate is by: (a) facilitating scientific research (into clean technologies, new energy sources, and ways of increasing energy efficiency); and (b) transferring these scientific innovations widely so that people may reduce emissions more easily. For example, one way to enable agents to comply is by designing urban spaces so that people can move around (between their homes, workplaces, schools, and leisure activities) in ways which do not involve emitting high levels of greenhouse gases.37

At this point it is worth noting that ‘enablement’ can take us beyond second-order action as I defined it above. For as well as assisting people to do what they have a first-order responsibility to do, enablement can also have the consequence that agents who previously lacked a particular first-order responsibility (either because they could not engage in the necessary action or because they could do so but only at unreasonable cost) can now—because of enablement—be expected to bear that responsibility. The generation and transfer of clean technology can, for example, enable the world’s least advantaged to develop, and in doing so gives them an opportunity, but also a responsibility, to do so in ways that do not exacerbate climate change. We should thus reconceive second-order responsibilities so that they are not simply (i) responsibilities to ensure that agents comply with their first-order responsibilities, but also (ii) include responsibilities to create possibilities for some to be allocated some new first-order responsibilities that they previously lacked. (This is the reformulation promised above when I first introduced the distinction.)

Consider now a fourth kind of second-order policy. Some agents can influence the behaviour of others by creating norms that discourage high emissions lifestyles (or, alternatively, that foster a commitment to adaptation). To employ a term coined by Cass Sunstein, some can act as ‘norm entrepreneurs’.38 Norms can

37 For a discussion of the environmental costs of ‘sprawl’, see Williamson (2010, ch. 8).
be tremendously influential for they define what options count as appropriate and what not. To take two recent examples, attitudes towards smoking in confined spaces and attitudes to drink-driving have changed dramatically in the UK in the last thirty to forty years. If we consider now international politics, the importance of norms and taboos in explaining state behaviour has also been attested to by a number of justly influential ‘constructivist’ works in international relations. Representative examples include Neta Crawford’s work on the role of norms in decolonization and the abolition of slavery, Martha Finnemore’s work on UNESCO, the Red Cross, and the World Bank, and Nina Tannenwald’s compelling analysis of the ‘nuclear taboo’.

In addition to norm-creation, some can affect the way in which activities that cause greenhouse gas emissions are framed. To illustrate: the coverage of the cost of petrol is frequently framed by national media solely in terms of increasing the cost of living of drivers (and those whose livelihood is affected by transportation), and not at all in terms of its impact on greenhouse gas emissions. Those who are able to frame the issue so that the link with environmental degradation is brought out can thus affect norms of ‘appropriateness’.

Consider now a fifth kind of second-order policy—namely undermining resistance to effective climate policies. As Naomi Oreskes and Erik Conway have convincingly argued in *Merchants of Doubt*, oil companies have sought to spread misinformation about the nature, extent, and causes of global warming. In addition to this, it has been persuasively argued that media representations of climate change are often misleading, and hence that the public understanding of climate science is often poor and out of line with the scientific consensus. One service that some (in the media) can provide is to give an accurate portrayal of the state of climate science, reporting the levels of agreement on the existence of anthropogenic climate change, as well as including the areas of considerable uncertainty. In addition to this, others (notably climate scientists and national science academies) can, and often do, rebut factual and other errors propounded by those who deny climate science.

To this list we can also add civil disobedience. Citizens can discourage, impede, and even prevent their governments from engaging in activities which increase emissions above an acceptable level by engaging in civil disobedience. They can—and often do—seek to block the construction of new motorways and new airports (or new runways at existing airports). By doing so they prevent, or at

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40See James March and Johan Olsen’s (1989, pp. 23–4, 160–2) seminal work on the ‘logic of appropriateness’.
41See Oreskes and Conway 2010, ch. 6.
42See Boykoff 2011.
43We should though be aware of the many pitfalls that climate scientists face when they seek to communicate scientific findings and climate projections to the wider public.
least obstruct, the ability of governments to default on their first-order responsibilities.\footnote{For an argument for civil disobedience in order to protect future generations from environmental harm, see Carter (1998).}

Demographic policy. The six kinds of second-order policy listed above will affect the norms, opportunities, and constraints that agents face. A seventh way of affecting the extent to which society mitigates climate change (and can adapt to climatic changes) is to affect demographic change.\footnote{For a discussion, see Cafaro (2012).} This may include affecting both the total number of people who are born, as well as the composition of the world’s population (that is, how many are born in countries with high emissions-lifestyles). Those who can affect demographic change—for example, through education, providing affordable contraception, protecting the civil and political rights of women, and by increasing the opportunities available to women—can thus affect the volume of future emissions (and people’s capacity to adapt).\footnote{See Bongaarts and Sinding 2011, pp. 574–6.}

B. KINDS OF ACTORS

Given this an account of what needs to be done, the next logical step is to consider who has the capacity to perform these tasks. To do so we might refer to each of the tasks presented above and then infer from this who can do what. Doing this will confirm that some actors that one might expect would have second-order responsibilities (such as governments and international institutions) can indeed play a pivotal role. However, it will also draw attention to the contribution that other less obvious actors can make.

If we begin, for example, with enforcement then the relevant agents of justice clearly include political actors such as states and international institutions like the WTO, the IMF and the World Bank. Furthermore, and in line with my response to Posner and Weisbach, it also implies that citizens can play a kind of enforcement role for they can punish governments that fail to put in place environmental policies.\footnote{See also the perceptive remarks by Steve Vanderheiden on the role that ‘followers’, as well as ‘leaders’, can play (2012, pp. 465–6, 468).} In addition to this, powerful agents can create new institutions with enforcement powers.

A similarly conventional picture emerges if we consider incentivization. Again, we can see that governments and international institutions can play a significant role. As noted above, membership of the organizations like the European Community and the World Trade Organization is often extremely beneficial, and given this, such organizations can use this to induce compliance by stipulating that those joining their organizations must honour certain environmental standards.
If we examine other tasks, however, we arrive at less conventional answers. Consider enablement for example. As I noted above, one important kind of enablement is technological innovation and diffusion. Given this, research councils, university science departments (who often have large research budgets), and corporations all have a capacity to make a significant contribution by orienting their research capacities to promoting these goals. As I also noted above, the layout of cities and towns can make a significant difference to the emissions that result from transportation. Given this, it follows that urban planners have a significant role to play—not a conclusion that has been stressed by the existing literature on climate ethics.

Reflecting on other tasks also reveals the role that can be played by other actors that one might not immediately consider to be potential agents of justice. For example, if we turn now to norm-creation, we can see that a significant role can be played by figures as diverse as church leaders, poets, novelists, charismatic individuals, and gifted communicators. To see the potential role played by communicators think, for example, of the influential science writer Rachel Carson, whose work, *Silent Spring* ([1962] 1965), chronicled the impacts of pesticides and had an enormous galvanising impact on environmentalism.

If we turn now to consider undermining resistance, we can also see that those who can communicate the findings of climate science effectively—such as climate scientists and science journalists—have an important role to play. We might think here, for example, of the role played by scientists like James Hansen. Also, those who are highly trusted—especially those who are regarded as reliable by communities which tend to resist climate change initiatives—can perform a vital function.48

Reflection on who can discharge second-order responsibilities thus reveals the role that a wide variety of very different actors can play—including not just government departments, but also journalists, scientists, writers, research councils, churches, urban planners, officials responsible for demographic policy, and charismatic individuals.

C. TRAITS

We might also note that the criteria for who should have some second-order responsibilities are not the same as the criteria for who should be subject to first-order responsibilities. Someone may be under a duty to mitigate climate change (a first-order responsibility) simply in virtue of their unjustly high

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48Here we might think, for example, of the distinguished climate scientists Kerry Emmanuel (MIT) and Richard Alley (Penn State), both of whom made considerable efforts to inform the general public about climate change, and both of whom have made it very clear that they generally self-identify as Republicans (Gillis 2013).
emissions in the past. By contrast, to be under a duty to perform some second-order responsibilities (most notably those that require performing a leadership role) may require certain virtues or character traits. For example, if they are to act as ‘norm entrepreneurs’, and to be effective at accurately conveying information and persuading people to act, then agents must enjoy a certain moral authority and enjoy good standing among others. They must be regarded as trustworthy by others and command respect. Some bearers of first-order responsibilities should, thus, not be bearers of second-order responsibilities.

V. THE POWER/RESPONSIBILITY PRINCIPLE

Section IV sought to introduce the idea of second-order responsibilities and to flesh out the kinds of tasks that need to be performed and the agents who can best perform them. It did not, however, give any argument as to why the agents designated in Section IV have this kind of responsibility. It was primarily descriptive.

My aim in this section is to address this lacuna and provide a justification of why the kinds of agents specified in Section IV have a duty to undertake second-order responsibilities. To begin our analysis, it is worth noting that one unifying feature of the account outlined in Section IV is that it attributes responsibilities to those who can make a valuable difference. Put more succinctly, it operates on the principle that ‘with power comes responsibility’ (hereafter the Power/Responsibility Principle). It posits that those with the power to compel or induce or enable others to act in climate-friendly ways have a responsibility to do so. Since I am using the concept of power, I need to make clear how I am defining it. For the purposes of this article, I follow Robert Dahl who writes that ‘A has power over B to the extent that he can get B to do something that B would not otherwise do’.

The dictum that ‘with power comes responsibility’ is often voiced, especially in times of crisis. For example, Franklin Roosevelt wrote in his ‘Jefferson Day Address’ that ‘[t]oday we have learned in the agony of war that great power involves great responsibility’. Similar sentiments were echoed by Winston Churchill who famously said that ‘[t]he price of greatness is responsibility’. The phrase has entered into popular consciousness.

49Note: my claim is about some second-order responsibilities (such as those that involve playing a leadership role and persuading others to comply), but not necessarily all of them.
50For a related point, see also O’Neill (2005, p. 435).
52See <http://georgiainfo.galileo.usg.edu/FDRspeeches/FDRspeech45-1.htm>. Roosevelt did not deliver this speech because he died before he was scheduled to give it.
53Kennedy 1999, p. 255.
54It is, for example, associated with a character (Uncle Ben) in the Spider-Man comic series.
For all this, the precise principle I am invoking has rarely received philosophical analysis. In *The Idea of Justice*, Amartya Sen affirms what looks like a similar principle. He refers to what he terms the ‘obligation of effective power’.\(^5\) However, when he explicates this it becomes clear that he simply means the capacity to aid people, which is not quite the principle I am analysing. A related point can be made with reference to David Miller’s analysis of responsibilities. Miller refers to what he terms ‘the principle of capacity’ which he defines as stating ‘that remedial responsibilities ought to be assigned according to the capacity of each agent to discharge them’.\(^6\) Again this is an important principle, but it does not distinguish between different ways of having a capacity to help others. Consider, for example, the oft-invoked principle that burdens of mitigating climate change and enabling adaptation should be borne by those with the greatest ability to pay (the ‘Ability to Pay’ Principle). This is a kind of capacity principle. However, it is quite distinct from the Power/Responsibility Principle for two reasons. First the Power/Responsibility Principle—unlike the Ability to Pay Principle—is focused on *second-order responsibilities*. Furthermore, and even more importantly, many of those who have the power to make a difference do not have that power because of their access to financial resources and thus their ability to pay. The sources of their power may lie in their role in the political process (e.g., politicians or urban planners), or their knowledge and expertise (e.g., those capable of scientific innovations), or their powers of persuasion (e.g., norm entrepreneurs). The Power/Responsibility Principle is, thus, a distinct kind of capacity principle. Furthermore, as we shall see soon, it rests on a distinct kind of justification.

Why should we accept it? I shall not seek to provide a general account of when this principle applies and why. I shall, however, try to show why it applies in this context and thus why, given the prospect of dangerous climate change, those who can take up *second-order responsibilities* and thereby promote the ideal of *Harm Avoidance* have, modulo certain conditions, a duty to do so. My claim appeals to the following highly plausible assumptions.\(^7\)

[1] **Emergency.** First, humanity faces a prospect of disastrous harms. To refer again to the IPCC, its Fourth Assessment Report chronicles severe threats to life (from heat stress, extreme precipitation, and storm surges), health (with increased exposure to several infectious diseases), access to water and to food (resulting in malnutrition and hunger).\(^8\)

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\(^6\) Miller 2001, p. 460.

\(^7\) To be clear, my claim here is that these four conditions are collectively *sufficient* to impose (second-order) responsibilities on the powerful.

\(^8\) For a comprehensive overview of climatic impacts, see Parry, Canziani, Palutikof, van der Linden, and Hanson (2007). For a summary of the effects of climate change on core human rights, see Caney (2009).
In addition to this, the time left to prevent the onset of dangerous climate change is quickly running out. According to one influential account, humanity must emit less than a trillion tonnes of carbon if it is to have a 50% chance of avoiding bringing about an increase in global mean temperatures of 2°C from pre-industrial temperatures. At the moment, we have emitted over half a trillion tonnes, and, at the time of writing and using current projections, the trillionth tonne will be emitted in approximately 2040. There is thus an urgent need for decisive action.59

[2] Effectiveness. Second, certain agents can reduce, or severely limit, the chances of these dire outcomes. Though their capacities vary, the second-order agents listed in the preceding section can all make a marked difference to whether people comply with their first-order responsibilities. In many cases, they have considerable leverage.

[3] A Crucial and Privileged Causal Role. In addition to this, the agents identified in the previous section do not simply have the capacity to effect change. It is also the case that they have a capacity that many others lack. Their action is, thus, crucial in the sense that if disaster is to be averted, these kinds of agents must act.

Though it may be too strong to say that the intervention of all these agents is necessary, it is plausible to suggest that the action of many of them in concert is necessary (and sufficient) to provide the right kind of choice-architecture to avert dangerous climate change. Unlike others, they can make a major difference.60 For example, energy experts can play a critical role by cooperating to produce low-carbon technologies and thereby help, among other things, developing countries develop in a clean way. This is a role that almost all other actors cannot perform. And, organizations like the WTO and EU can exert a leverage that other actors simply cannot. In other words, second-order agents have a capacity that others lack. Whether dangerous climate change is averted thus depends on whether a sufficient number of second-order agents take up these roles.

[4] No Sufficiently Weighty Countervailing Considerations. The final step maintains that the second-order agents listed in the preceding section do not, in general, have countervailing responsibilities that take priority. I suspect that this is the most contentious step in my argument.

59I am here relying on Allen et al. (2009), Meinshausen et al. (2009), and www.trillionthtonne.org.

60For an excellent discussion of this point (that where some are dependent on some others who are the only ones who can ensure protection, then those others are under an obligation to protect) see Goodin (1985, esp. p. 34, see also ch. 5). My account is structurally similar to Goodin’s ‘vulnerability model’, but unlike Goodin I am applying it only to second-order responsibilities, whereas he is applying it to those (see the discussion of collective responsibilities, 1985, pp. 136–41), but also to what I am terming first-order responsibilities.
Before considering two challenges to it, we should note that—as mentioned above—the reasoning for the Power/Responsibility Principle as a second-order principle, is quite distinct from the reasoning normally mooted in support of the standard accounts of first-order responsibilities, including, for example, the Ability to Pay Principle. Consider the various reasons that have been given in support of the idea that burdens should be borne in accordance with people’s ability to pay. Some defend it on the grounds that making those with the greatest wealth bear the lion’s share of the burden would result in the ‘least aggregate sacrifice’.  

Second, some defend the same conclusion but appeal instead to ‘the principle of equal sacrifice’. Third, some might defend it by reference to a more general commitment to equality. What is relevant in this context is that, as we have just seen, the argument for the Power/Responsibility Principle is distinct from all of these. Whereas these arguments for the Ability to Pay Principle focus on the fairest or most efficient way of sharing the burden, the argument for the Power/Responsibility Principle adduced above is, by contrast, that acting on it is necessary to protect those whose interests are threatened. It puts harm prevention first.

Let us turn now to consider ways that someone might resist the above argument, especially step [4]. First, someone might say that some of those designated second-order agents might have countervailing obligations. For example, it is commonly asserted that governments have a special responsibility to their own citizens to promote their interests.

In reply: This is plausible, but such responsibilities are clearly not absolute. We recognize that when a great deal is at stake such special responsibilities can be overridden. For example, I may have a special responsibility to keep a promise to meet someone, but if on my way there I encounter someone in great need and, if it is the case not only that I can play an effective role but my contribution is critical, then we recognize that this should take priority. Second, many second-order agents will not have countervailing responsibilities. For example, research scientists, church leaders, and charismatic individuals will not generally have fiduciary responsibilities that require them to abstain from the actions I described. In addition to this, governments with vulnerable populations will have a fiduciary responsibility to induce compliance with mitigation responsibilities. Finally, governments may have responsibilities that converge with mitigation policies—for example, a responsibility to improve air quality may call for a reduction in emissions and thus converge with mitigation policies.

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63 To be sure, one could distinguish between two approaches to ascribing second-order responsibilities. One would be to focus on fairness to all second-order duty-bearers. The second would be to focus on harm prevention and put that first. I am exploring the second option here.
A critic might then press a second objection. They might say that undertaking *second-order responsibilities* may impose excessive costs on the duty-bearers. Three points can be made in reply. First, it is worth noting that for many of the second-order agents I specified above, complying with their second-order responsibilities (as listed in IV.A) imposes little or no cost on the actor. Consider, for example, political organizations that can insist that new members meet certain environmental standards if they are to join. In many cases this imposes no burden on the organization: rather what they are doing is making a decision that might impose a cost on the would-be member. Or consider spokespersons for influential social organizations (like churches): their affirmation of environmental goals need not generate any extra cost on them. Or consider urban planners: they can ensure that built up areas be designed in such a way as to facilitate the use of cycling, to minimize sprawl, and to ensure that housing, schools, recreation, and shops are close to each other. This might conceivably impose costs on some, but the key point is that it does not impose costs on the urban planners. They therefore cannot object that the posited duty is too onerous on them. Consider, too, government officials who implement ‘transparency’ initiatives: this too may impose burdens on others but, as Brennan and Pettit note, it is not costly for the officials.  

Finally, it is worth observing that some measures can actually reduce the burdens born by many taxpayers. For example, eliminating subsidies to fossil fuels (which in 2011 came to 523 billion dollars) would result in a net gain for taxpayers, or no let loss if the funds were diverted elsewhere (such as investing in clean technology).

A second point can also be made to the ‘excessive cost’ concern, namely that, in some of the cases under consideration, those being asked to perform *second-order responsibilities* may be being asked to perform tasks that they are already obligated to perform. For example, it is arguable that journalists have a duty to report the existing degree of consensus concerning climate change.

This leaves a third point. Some costs will no doubt remain. Clearly, however, we cannot reject a view simply because it imposes costs on some: after all, inaction by all second-order agents would also result in the imposition of costs on others (the victims of climate change). In determining how much sacrifice the putative bearers of *second-order responsibilities* should bear, it is worth noting three further considerations. First, the costs on second-order agents are likely to be small when compared to the costs of inaction. Second, it is instructive to make a comparison with other cases where there is a call for sacrifices. Consider, for example, humanitarian intervention. Very few reject humanitarian intervention out of hand in all cases, and where some do, it is often because of practical concerns about whether such interventions succeed. But humanitarian

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64Brennan and Pettit 2004, p. 258.

65This figure comes from the International Energy Authority, <http://www.worldenergyoutlook.org/resources/energysubsidies/>.
intervention frequently results in deaths of troops on the intervening side. This prompts the following thought: If we are willing to send some to their death to defend others, then can we reasonably object to imposing non-lethal sacrifices on people to defend similarly important interests (in life, physical integrity, health, and subsistence)? Third, it is worth noting that those who take up second-order responsibilities might be able to seek compensation for their efforts at a later date. Their position can be contrasted with the victims of climate change because if action is not undertaken, then they may have very meagre (sometimes non-existent) capacities to seek compensation.

Thus neither way of arguing that there are overwhelming countervailing considerations seems promising. Given this then: since there is a prospect of disastrous effects on people’s lives and since some agents not only can play an effective role, but their action is critical to avoiding these disastrous impacts; and, finally, since these agents lack compelling countervailing reasons for action we are, I think, driven to the conclusion that those agents with the power to discharge second-order responsibilities have a duty to do so.

One final point: If the argument given above is correct, then some agents may have two distinct kinds of responsibilities—some first-order and some second-order. I have emphasized that the second order responsibilities are governed by a different principle (the Power/Responsibility Principle) to the first-order responsibilities (such as the Ability to Pay or Polluter Pays Principles). However, that agents’ responsibilities in the two domains are governed by different principles does not necessarily entail that the distributions in one domain (the first-order) should not take into account those in another (the second-order). For example, it is consistent with my argument that those who undertake burdensome second-order responsibilities can be compensated by allocating to them reduced first-order responsibilities. (To give an analogy: someone who takes on the burdensome (second-order) task of being a head of department might be given reduced (first-order) teaching responsibilities.)

VI. CONCLUDING REMARKS

It is time now to conclude. I have argued that we should examine the ethical challenges posed by climate change from two different perspectives—what I have termed Burden-Sharing Justice and Harm Avoidance Justice. Much of the
normative analysis of the responsibilities relating to climate change has focused solely on Burden-Sharing Justice. My aim in this article has been to examine what an approach that prioritizes avoiding harm would look like. In doing so, I have examined two approaches which attempt to do this, but found both wanting because neither recognizes that averting dangerous climate change requires that some make sacrifices. Acknowledging the need for some sacrifices entails that we take seriously the need to create and sustain an institutional context which induces people to comply with their duties to mitigate and to enable adaptation. It calls, that is, for an account of second-order responsibilities.

Such responsibilities, so I have argued, should be guided by what I term the Power/Responsibility Principle where this asserts that, under certain circumstances, those with the power to ensure that agents comply with their first-order responsibilities have a responsibility to use their power to protect people from the existential threats posed by climate change. This principle differs in its application, nature, and justification from those principles commonly invoked in discussions of climatic responsibilities. It differs in its application for it is directed towards second-order responsibilities, not first-order ones; it differs in its nature because, as I argued above, it cannot be assimilated to common principles such as the Ability to Pay Principle or the Polluter Pays Principle; and, it differs in its justification because it can be grounded (as I have done here) on a commitment to avoiding catastrophe, rather than appeals to equitable burden-sharing.69

The Power/Responsibility Principle takes us out of a realm where the focus is just on responsibilities to reduce emissions and to engage in adaptation, for it also provides an account of the more explicitly political responsibilities that are needed if we are to avoid severe climatic changes.

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69Note, I am not claiming either that it cannot be grounded on a commitment to fairness among second-order duty bearers or that it is incompatible with that commitment.


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