Climate Change, Fundamental Interests, and Global Justice

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Political philosophers commonly tackle the issue of climate change by focusing on fundamental interests as a basis for human rights. This approach struggles, however, in cases where one set of fundamental interests requires one course of action, and another set of fundamental interests requires another course of action. This article advances an alternative response to climate change based on an account of global justice that gives weight to utilitarian, prioritarian, and luck egalitarian considerations. A practical application of this pluralistic account is provided, which shows that it handles trade-offs between individuals' interests in an appealing way, and that it supports an aggressive policy of climate change mitigation. This account provides a more plausible justification for rights against the harms of climate change.

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1. Introduction

If catastrophe is to be averted, climate change demands a major policy response. But what response? Several political philosophers have approached this topic from the perspective of human rights models grounded in *fundamental interests.* [1] If these accounts are correct, climate change mitigation and adaptation is justified on the basis that climate change threatens fundamental interests.

Advocates of the fundamental interests approach typically (1) specify fundamental interests in certain central areas of human life, (2) specify that these fundamental interests are human rights-implying in (3) some strong, generally non-overridable sense, and (4) indicate that these human rights-implying fundamental interests are threatened by climate change, with the implication that (5) there is a human right against (certain) climate-change induced harms. This article argues that, in order for (3) to follow, the fundamental interests approach must confront the fact that different fundamental interests may be incompatible, and thus (2) must specify how to weigh the competing claims they make, a point which has been largely overlooked. The article also develops an alternative account of the right against climate-change induced harm that recognizes this incompatibility. It is grounded in a pluralistic account of global justice that gives some weight to overall advantage levels, to the absolute well-being of worst-off persons, and to individual responsibility.

The critique of the fundamental interests approach, as it has typically been developed, focuses specifically on Simon Caney's sophisticated and influential view (section 2). I then put forward my pluralistic account (section 3), and apply it to estimates of climate change impacts (section 4). I finally explain how this view might ground rights against suffering climate change-inflicted harms (section 5).

2. Human Rights and fundamental interests

Caney notes that climate change jeopardizes fundamental human interests in nutrition, people's ability to support themselves, and health (Caney 2008, p. 538).[2] However, to prove the existence of a human right we must do more than show the presence of a fundamental human interest. That is a necessary condition, but it must also be the case that 'persons have an interest that is *fundamental enough* to impose obligations on others' (Caney 2008, p. 538, my emphasis). What does fundamental enough mean? Caney says there are several things to be taken into account. There is of course the question of just how vital the threatened interests are, which Caney treats as unproblematic in this case – subsistence or health seem as important as other interests we protect with rights, such as freedom of speech or creed. Next there is the question of the costs involved in securing those fundamental interests. Noting that the *Fourth Assessment Report* suggests that it will cost less than 3 per cent of worldwide GDP in 2030 to stabilize the concentration of CO2 at 445-535 parts per million (Barker et al 2007), Caney makes this comment:

> Were the costs excessive then one might conclude that the interests in avoiding dangerous climate change are not fundamental enough to impose obligations on others. That an interest is vital is insufficient to generate a right to it until we know whether it is appropriate to hold others to be under a duty to it. However, the evidence just cited shows that the costs are reasonable (Caney 2008, p. 539).

Where fundamental interests can be protected by stabilization costing 3 per cent of GDP, 'the duty to protect these interests from dangerous climate change is not unreasonably demanding on the appropriate would-be duty bearers' (Caney 2008, p. 539). But Caney does not explain *why* these demands are not unreasonably demanding. He just presents a bold assertion that the costs of protecting fundamental interests from climate change are not so high that those interests cease to be fundamental enough to generate human rights. Having acknowledged that the cost of protecting fundamental interests may, at least in principle, prevent them from being encompassed by human rights, one would expect the fundamental interests approach to describe (1) the kind(s) of costs he has in mind and (2) the point at which these costs become so high as to prevent the human right from existing.[3] Caney provides neither. We may well believe that 3 per cent of GDP would be a reasonable price to pay. But if that belief is to be justified, it must be based on an account of the relevant costs.

I will now consider three counterarguments that could be drawn from Caney's work. First, we might aim only to establish *pro tanto rights*, which is to say rights which can be outweighed by other considerations. We could simply argue that no cost was too high for a right to be established, as that right would be counterbalanced either by other rights or by other equally morally fundamental considerations.[4] But it seems clear that pro tanto rights could not underpin Caney's overall project. He holds that human rights have 'lexical priority' over other values, meaning they are 'morally more urgent and may not be sacrificed to pursue any of these other values' (Caney 2010, p. 174, n. 11). Although Caney clarifies that he means this priority to be only general, and that 'exceptional cases' might fall outside it, it seems clear that he does not intend rights to be overridden by non-rights in the most important cases. Nor

would a human right to a healthy environment which might be routinely overridden by other rights serve his justificatory needs well. Caney holds that 'the current consumption of fossil fuels is … unjust because it undermines certain key rights' and that 'one source of condemnation [of anthropogenic climate change] is that climate change jeopardises human rights' (Caney 2008, p. 537). This direct connection between human right violation and injustice or condemnation would have to be abandoned if human rights were merely pro tanto.

Second, Caney argues that all fundamental interests can in fact be *simultaneously satisfied:*

> It is, of course, crucial that people have sufficient energy to keep warm, that they can grow crops to support themselves and so on. But the level of GHG emissions that these activities require would not in themselves cause harmful climate change. … [O]ne can both cut back on emissions and yet protect the vital interests … by cutting back on energy-inefficient cars, reducing the volume of air travel, eliminating poor building insulation, decreasing transportation of goods, using renewable energy resources, and so on (Caney 2006, pp. 262-3; see also 2009a, pp. 178-9).

Yet it seems doubtful whether fundamental interests of all kinds could really be satisfied. A state that restricted itself to climate mitigation efforts that have a net positive or neutral economic effect would be unlikely to fully protect fundamental interests against climate change-induced harm.[5] Beyond obvious 'low-hanging fruit', investments in public transportation, sourcing goods locally, and switching to renewable energy all impose a large monetary cost on the state, either directly (as

expenditure) or indirectly by reducing economic growth (and hence tax revenues). A state pursuing these policies therefore has less money to spend on other things, many of which are supportive of fundamental interests. While it is true that the fundamental interests Caney names (those in heating and nourishment) would not usually be seriously undermined by these measures, other fundamental interests might be. Expensive fundamental interests such as (once we go beyond easily preventable or treatable illness) health – Caney's third kind of fundamental interest – cannot be fully upheld in rich countries even prior to significant emissions cuts and massively increased development assistance (both of which would be required just to uphold relatively cheap fundamental interests such as nourishment in poor countries).[6] It is clear that expensive fundamental interests, such as the interest in having access to pricey cutting-edge cancer drugs, would be further undermined after such cuts and redistribution. Furthermore, any given global temperature will benefit some and disadvantage others. It seems that it is impossible for everybody's fundamental interest in health to be fully protected where some will be harmed by higher global temperatures and others benefitted by them. For these reasons it is clear that the very strong empirical claim that all fundamental interests can be protected simultaneously is unsustainable.[7]

Caney seems to gesture at a final argument that might explain why his approach does not explain how to assess costs of protecting fundamental interest. Regarding Bjørn Lomborg's suggestion that heat stress deaths from global warming will be outweighed by lives saved in milder winters and so, ceteris paribus, global warming should be favoured, Caney makes this remark:

> To propose this, though, is to propose engaging in activities which one knows will directly kill some and harm others' health and ability to subsist. This would strike many as morally unacceptable even if it has the side-effect of saving some lives. A human rights approach, however, rules out such policies (Caney 2010, p. 170; cf. Lomborg 2007, pp. 13-18).

So Caney may believe that he does not need to consider the costs of protecting fundamental interests as some policies can be dismissed as morally unacceptable even if they serve fundamental interests as well (or better) than the alternatives. This position seems to rely upon the moral importance of the distinction between killing and letting die, a distinction that is controversial to say the least. Furthermore, even if we accepted the distinction's importance, the reply further relies on the assumptions that (1) the 'business as usual' policy involves killing and (2) a policy of abatement that results in deaths does not involve any killing – rather, these are just cases of letting die. But this is an implausible combination of claims. A policy of abatement is at least as much of an active intervention as a policy of business as usual. Our real reason for favouring a policy of abatement is that we doubt Lomborg's *empirical* claim, and believe that abatement will result in fewer deaths, which is a reason for pursuing it. But such an approach requires us to acknowledge that we cannot satisfy all fundamental interests at once, and must have a way of choosing between them.

3. A pluralistic approach

As we have seen, the fundamental interest approach is unclear on the issue of how we should take into account fundamental interests that might be threatened by global warming abatement. I will now put forward an approach to climate change that

appears to provide a morally plausible way of making these trade-offs. I start by considering three views, each of which captures part but not all of what an account of global justice needs to. I will here be brief; my intention is only to gesture towards the strengths and weaknesses of these views, in order to offer some motivation for combining them as I propose. In the following section I explain how rights can be generated from this approach.

Utilitarianism maximizes welfare, while *prioritarianism* maximizes the position of the worst off.[8] The final theory to be considered is *luck egalitarianism*, which holds that inequalities are permissible iff they reflect differential exercises of responsibility.[9] As a well-known formulation of the view has it, it is unjust for some to be worse off than others through no fault or choice of their own. It would not be just for individuals to be *worse off* on account of making *better* choices, so luck egalitarianism should be understood as increasing the entitlements of those who make choices with (prudent or morally) good results.

I believe that each of these theories has a strength, and two weaknesses. Utlitarianism, for instance, takes into account considerations of *aggregate advantage levels*, which I believe any plausible theory must do. But it overlooks two important considerations. One sort of omitted consideration concerns *the worst off*. For instance, we might be able to bring about two distributions which are identical from a welfare maximizing perspective, but in one case the worst off group are very badly off while in the other the worst off group are much better off than that. Utilitarianism is indifferent between the distributions. But surely we should, else all being equal, favour the distribution containing more welfare for the badly off. The other overlooked consideration concerns *individual responsibility*. In one welfare maximizing scenario it may be that those who have made choices with worse

consequences are much better off than those who have made choices with better consequences [10] In another welfare-maximizing scenario the situation is reversed, and those who have made choices with better consequences are more advantaged. Again, utilitarianism will be indifferent between these distributions. But surely we should not be indifferent between poverty and an absence of poverty, or between saints suffering and sinners suffering.

Prioritarianism has the strength of taking into account the first distributive consideration overlooked by utilitarianism – the position of the worst off. But it overlooks individual responsibility, just as utilitarianism does. Furthermore, it also overlooks aggregate advantage levels. If one distribution contains marginally less advantage for the worst off than a second distribution, but the first distribution contains vastly more overall advantage, we have strong reasons for favouring the first distribution. But prioritarianism would favour the second distribution, just because it contains more advantage for the worst off. It will do so even if the benefit for the better off and averagely off in the first distribution is thousands of times the size of the benefit for the worst off in the second distribution.

Finally, luck egalitarianism's obvious strength is that, unlike the other two theories, it takes into account individual responsibility. But it disregards the position of the worst off, as utilitarianism did, and also disregards aggregate advantage levels, as prioritarianism did.

An obvious solution to the contrasting strengths and weaknesses of these three approaches presents itself: combine all three approaches in a pluralistic approach to global justice that gives some weight to all three types of consideration. The resulting view says a policy or outcome is more just, the more it (1) increases aggregate advantage levels, (2) improves the advantage levels of the worse off, and (3)

advantages persons in proportion to their exercises of responsibility.[11] I will refer to this view as *the pluralistic account*.[12]

For the pluralistic account to have policy implications, we must settle on a firm weighting of the three principles. We do so by considering the implications of alternative weightings of principles in a large number of cases. Some cases might persuade us to alter the weightings of the principles to fit better with our intuitions. In others we might be persuaded to adjust our intuitions to fit with a set of weightings which is otherwise appealing. In welfare economics this process is referred to as 'sensitivity analysis', and in philosophy, following Rawls, as 'reflective equilibrium'.[13]

I do not here have the space to provide the lengthy discussion required to defend a particular weighting. I will instead state what I take to be an appealing weighting, for the purpose of providing an illustration of how the pluralistic account can resolve conflicts between its constituent values. I treat the question of the appropriate weighting as a complex issue internal to the pluralistic account, which is not fully resolved here.

I will suppose that *the moral value of each impact on an individual equals the change in advantage level divided by the resulting advantage level of the individual multiplied by the individual's responsibility score.*[14] One advantage of this view is that its weightings are *operational*, with trade-offs handled by division and multiplication. This reduces (though does not, of course, eliminate) the reliance on intuition, as among operations, only these ones, in this particular configuration, can plausibly accommodate the three values. By contrast, arguments about which *numerical* weightings to attach to which principles rely on intuition all the way down.[15]

4. Application

Robert Mendelsohn and colleagues have estimated the distribution of climate damages between richer and poorer countries. Specifically, they divide countries into GDP per capita quartiles, with each quartile representing a quarter of the world's population in 2100. GDP per capita is unlikely to be of intrinsic importance for distributive justice. But it is nevertheless likely to be a reasonably good proxy for whatever is of intrinsic importance (some more complex account of resources, welfare, or capabilities). For similar reasons, it directly corresponds to one of Caney's fundamental interests (people's ability to support themselves) and is clearly supportive of the other fundamental interests of nutrition and health. There is clearly some interest, then, in how the global distribution of GDP per capita will be affected by climate change. Table 1 provides a summary of some of Mendelsohn et al's findings.

Table 1. Market impacts assuming identical climate change in all countries (billions USD/year)

Quartile	*Per capita income range*	*+2C*	*+3.5C*	*+5C*
Poorest	$144-$4,380	-21.9	-53.3	-80.4
Second	$4,380-$5,785	-7.8	-27.9	-50.8
Third	$5,785-$25,000	25.6	4.2	-22.4
Richest	$25,000-$79,960	56.7	44.2	3.2

Adapted from Mendelsohn et al 2006, 168.[16]

The account I set out above says that the moral value of each impact on an individual equals (1) the change in advantage level (a positive or negative value) divided by (2)

the resulting advantage level (a positive value) of the individual multiplied by (3) the individual's responsibility score (a positive value between 0 and 1000). Obviously, as a necessary compromise with practicality, we are here looking at quartiles of the global population rather than directly at individuals. (1) is straightforward: Table 1 already contains changes in advantage level (or rather, their proxies, GDP impacts). (2) is the starting per capita GDP of the quartile (which I will treat as its initial midpoint GDP), adjusted to reflect the population of the quartile,[17] and then adjusted again for the climate change impact. (3) is more difficult, as we do not have direct access to the relevant responsibility information. However, it seems highly plausible to suppose that people in the two poorer quartiles are usually worse off through no choice of their own, while people in the two richer quartiles are usually better off through no choice of their own. Consider, for instance, the differences in opportunity for a child born in Burundi and a child born in Luxembourg. I will therefore, for illustrative purposes, assume that the responsibility scores are as follows: poorest quartile, 800 (high level of unchosen disadvantage); second quartile, 600 (moderate level of unchosen disadvantage); third quartile, 400 (moderate level of unchosen advantage); and fourth quartile, 200 (high level of unchosen advantage). So to summarize, the pluralistic account's estimate of the moral value of each impact on a quartile equals (1*) the climate change market impact (a proxy for the change in individual advantage levels) divided by (2*) the post-climate change income (a proxy for the resulting individual advantage levels) multiplied by (3*) the quartile's responsibility score (a proxy for individual responsibility scores). Table 2 sets out each of these components and the resulting estimate of moral value for the +2C scenario.

Table 2. Moral assessment of distribution under +2C climate scenario

Quartile	*Quartile income (billions USD/year)*	*+2C impact (billions USD/year)*	*Post-climate change income (billions USD/year)*	*Responsibility score*	*Moral value of +2C climate change*
Poorest	6390	-21.9	6368	800	-2.75
Second	14358	-7.8	14350	600	-0.33
Third	36139	25.6	36164	400	0.28
Richest	148256	56.7	148313	200	0.08
Global	205143	52.6	205196	500	-2.72

On this basis we can say that the pluralistic approach assesses a +2C temperature change as a change for the worse, morally speaking. It is not, however, a change for the worse for everybody. First, there will be individuals within each quartile who benefit from climate change, even to the extent of having fundamental interests satisfied that would not otherwise be satisfied (for instance, people who will avoid cold temperature-related illnesses due to the increased temperature). Second, the two richer quartiles each experience net gains in economic terms, and surely also in fundamental interest terms – however they spend the $82.3 billion per year they gain from the +2C temperature change, they will surely further *somebody's* fundamental interests, such as the beneficiaries of increased healthcare expenditure. But the presence of benefits, even to fundamental interests, is only the start of the story. As some gain and some lose out from climate change, we need to assess the overall moral value of the change in a principled way, as the pluralistic account does. It puts emphasis on the interests of worse off groups, and especially those who are worse off through no fault or choice of their own. The combined effects of these prioritarian and luck egalitarian considerations is to assess the losses imposed by the change as being much morally weightier than the gains it brings about. The 2.75 decrease in moral value accompanying the losses suffered by the poorest quartile

dwarfs the 0.28 and 0.08 increases in moral value accompanying the gains for the third and richest quartiles respectively.

This also brings out the contrast between the pluralistic account and the more standard utilitarian (or quasi-utilitarian) approach found in well-known works of climate change economics (Stern 2007; Nordhaus 2008).[18] Were one only to look at whether a change created a net increase or decrease in benefits, as this standard approach would suggest, the +2C change may well be a change for the better, as it creates a net increase of $52.6 billion in global income.[19] Indeed, this is registered as a pro tanto reason for favouring the +2C temperature change even by the pluralistic account. But in this case the pluralistic account considers that reason to be decisively outweighed by the prioritarian and luck egalitarian reasons for opposing the temperature change.

Although the pluralistic account finds the moral costs of the 2C temperature change to drastically outweigh its benefits, it is, unsurprisingly far preferable to larger +3.5C and +5C temperature changes, which have negative moral values of 7.79 and 12.32 respectively. The general shape of the moral phenomena in these scenarios is similar to that in the +2C scenario, with the dominant feature of massive moral costs accompanying losses for the worst off group being even more pronounced. The pluralistic account shows that the mitigation necessary to limit temperature rises to at most 2C, and preferably rather less, is mandated by global justice.

Table 3. Moral value of three climate scenarios

Quartile	*Moral value of +2C climate change*	*Moral value of +3.5C climate change*	*Moral value of +5C climate change*
Poorest	-2.75	-6.73	-10.19
Second	-0.33	-1.17	-2.13
Third	0.28	0.05	-1.55
Richest	0.08	0.06	<0.01

Global	-2.72	-7.79	-12.32

5. Rights revisited

The pluralistic account provides a compelling way of filling in the details which the standard fundamental interests approach does not provide, allowing us to make principled decisions about which interests to protect when we cannot protect them all. It this section I explore the question of how the pluralistic account treats the issue of *rights* in the context of climate change.

A right against climate-induced harm is formed iff the corresponding obligations do not compromise interests of equal or greater significance. Here significance is measured in terms of the pluralistic account, so an interest becomes more significant the more protecting it increases overall welfare levels, promotes advantage levels of the worst off, and eliminates unchosen disadvantages. As this measure of significance takes a global reading of the three justice-relevant effects of protecting a particular fundamental interest, it takes into account other fundamental interests that may be threatened by that protection. A right will only be formed and, hence, the protection of fundamental interests only offered where that protection promotes the three dimensions of distributive justice recognized by the pluralistic approach better than the alternatives.

This approach to comparing the costs as well as benefits of protecting a given group of fundamental interests can be contrasted with that of Allen Buchanan, an influential defender of human rights. Buchanan describes the issue as ‘the problem of assigning priorities in light of the fact that there is a plurality of human rights and that resources for improving respect for them are limited’ (Buchanan 2004, p. 182). Rather than setting priorities among fundamental interests on the basis of principles of distributive justice as I have, Buchanan urges that the conflict between fundamental

interests is an ‘indeterminacy of values at the deepest level’ which ‘is not even soluble in principle’, though ‘its intractability can be made more palatable’ (Buchanan 2004, p. 185). To this end he proposes that prioritization of fundamental interests should be settled by states which are legitimate in that they recognize their citizens’ very basic human rights, such as a right to democratic governance (Buchanan 2004, pp. 186-90).

Buchanan’s proposal is plausible only as a last resort, to be used in the event that moral principles cannot weigh different fundamental interests. But fundamental interests can be weighed in this way. In unbalanced examples of costs and benefits we have no difficulty at all in making such judgments – if a million pounds could either protect a hundred thousand people from severe malnutrition or a thousand people from similarly severe heatstroke, it is quite clear that, in this case, we should be concerned with the fundamental interest in nutrition. Matters are more difficult when the severity of the harms remain similar and the numbers are closer, but this is just because the moral argument is finely balanced, and it is harder to see in which direction the scales are tipped. In neither case will democratic institutions do a better job of assessing the true moral costs and benefits of protecting a given set of interests than plausible moral principles. And democratic institutions will do an *especially* bad job where they are assessing the relative importance of citizens’ and non-citizens’ interests, as in climate change cases.

Whether the pluralistic account’s comparison of costs and benefits can provide an account of *human rights* in the way that Buchanan and Caney believe their accounts can is a separate issue that is more conceptual than normative. Caney has this to say about his approach:

> if this account is valid it provides a defence of human rights because the interests cited are interests of all human beings: all persons have this right not to be exposed to dangerous climate change (Caney 2008, 539).

On my account the interests cited are interests of all human beings, but I cannot with certainty say that all persons have this right to not be exposed to climate change harms. Some (typically those who hold will theories of rights) are uncomfortable with the idea of rights being in conflict, noting its inconsistency with what Hillel Steiner calls 'the compossibility of rights' (Steiner 1994; see also Kant 1996, 16). If we intend our rights to be generally enforceable, as writers on climate change intend, our rights must surely be compossible. This does not preclude the conceptual possibility of a human right against any climate change-induced harms, but the pattern of duties necessitated by every human having this claim right would be so widespread that many interests more fundamental than particular persons' interests in avoiding climate change-induced harms could not have corresponding duties and (hence) rights. There are clearly some possible policies of mitigation or adaptation that would save a number of persons from dangerous climate change only at the cost of consigning a larger number of persons to harms of a similar severity but of a different genesis. Indeed, the Fifth Assessment Report notes that '[c]urrent policy responses for climate change mitigation or adaptation will result in mixed, and in some cases even detrimental, outcomes for poor and marginalized people' (Olsson et al 2014, 797). Given that the origin of a harm cannot itself be thought morally weighty – at least, assuming that the victim is in no way responsible for the harm – there is little appeal to the view that we should always protect people from dangerous climate change but only sometimes protect them from other dangers. Combining the compossibility of

rights requirement with the implausibility of prioritizing interests in avoiding climate change-induced harm over all other interests results in the conclusion that there can be no sweeping human right against climate-induced harm.[20]

This does not, however, mean that there cannot be a more moderate or restricted human right. It has, for instance, been suggested that human rights might require that 'we significantly reduce the risk of any individual being killed by anthropogenic climate change' while stopping short of 'ironclad' protection (Bell 2011, p. 118). The pluralistic account seems to be most directly reflected in a human right requiring that each individual be protected against dangerous climate change except where this violates other individuals' equally or more significant interests.[21]

6. Conclusion

I have argued that the standard fundamental interests approach to climate change has a significant weakness: it does not admit of determinate trade-offs between the benefits of climate change mitigation and adaptation and their costs. The pluralistic account, which combines utilitarian, prioritarian and luck egalitarian considerations, provides a more plausible approach as it accommodates such trade-offs. Where this account is applied to estimates of climate change impacts, it has the implication that aggressive mitigation is required as a matter of global justice. I concluded by showing how the pluralistic account can support rights against climate change-induced harm.

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Notes

[1] Caney 2008; 2009b; 2010; Shue 1999; 2009; Hayward 2005.

[2] Related lists are presented in Caney 2009a, p. 167; 2009b, pp. 230-3.

[3] James Griffin (2008, p. 66) writes that '[t]here is a general requirement on the resolution of conflicts of values: if it is not to be arbitrary, one must know what values are at stake and how to attach weight to them'.

[4] This approach is suggested by Caney's endorsement of the Razian perspective on rights, as Raz explicitly rejects the notion that rights override other considerations; see Raz 1986, p. 187. Furthermore, in a footnote Caney has himself acknowledged that human rights might sometimes need to be sacrificed for other human rights, though he has never suggested that this applies in the case of rights against climate change-induced harm; see Caney 2010, p. 174, n. 12.

[5] As Tim Hayward (2009, p. 277) notes, sustainable development has been interpreted by liberals such that it 'conveniently implies the possibility of a win-win-win scenario for protecting the environment while at the same time securing economic development and promoting global justice. Yet the truth may be less convenient, given the evident tensions between these objectives in practice'. See also section 4 below.

[6] It might be supposed that Caney would not consider patients to have a fundamental interest in access to expensive treatment, on account of their cost. But he treats the issue of cost only as a factor to consider when asking whether an interest is 'fundamental enough' to generate a human right. He does not consider cost to be something that makes an interest non-fundamental, nor indeed would he be warranted to do so given that one's interest in being healthy is evidently a fundamental interest.

[7] Henry Shue (1996) maintains that human rights provide protection against 'standard threats' to fundamental interests, meaning those threats which are predictable. The standard threats approach, also endorsed by Charles Beitz (2009, p. 111), may seem a promising way to make human rights simultaneously realizable. But few threats are more predictable than poor health in old age, the primary cause of healthcare expenditure in developed countries.

[8] See Parfit 1998. Prioritarianism is often described as encompassing two values: a utilitarian-style aggregative value as well as a value focused specifically on the concerns of the worst off. As my discussion requires that I distinguish these two values, and it is the latter that is the distinctively prioritarian value, I refer to them under the headings of utilitarianism and prioritarianism respectively. For defence of a prioritarian approach to climate justice see Meyer and Roser 2006; 2010. For some challenges with using Rawls' theory (which includes the prioritarian 'difference principle') in the context of climate change, see Gardiner 2011.

[9] The classic statements are Dworkin 1981, Arneson 1989, and Cohen 1989. Other famous luck egalitarians include Nagel (1991), Roemer (1996), and Temkin (1993). For application to climate justice see Gosseries 2007.

[10] One (but only one) kind of consequence of choice would be environmental consequences, which might be approximated through proxies such as carbon footprints. See Schwenkenbecker 2014.

[11] 'Advantage' is used as a placeholder for whichever combination of welfare and/or resources and/or capabilities best describes individual advantage for distributive purposes.

[12] I applied this view to the different issue of allocating the costs of climate change in Knight 2011. The pluralistic account is very similar to Richard Arneson's 'responsibility-catering prioritarianism'; see Arneson 1999; 2000. He does not, however, provide a weighting for the different components as I do below, and in the full statement of my view I construe the 'luck egalitarian' principle differently to how Arneson does; see Knight 2009, ch. 6.

[13] For an account of this method see Knight forthcoming.

[14] Values below 500 indicate that the individual is better off through no choice of their own, while values above 500 indicate that the individual is worse off through no choice of their own.

[15] As Page 2008, p. 572 notes, Baer et al 2007's 60/40 split between capacity and responsibility considerations is 'insufficiently motivated'. Such proposals will always invite further questions - why not 50/50, or 40/60? – that can only be answered with intuition. Indeed, Baer et al 2008 changes the weighting to 50/50.

[16] To make my analysis manageable, I have made a number of assumptions in my presentation. First, I assume that climate change is uniform worldwide. As Mendelsohn et al 2006, p. 168 conclude, '[e]liminating the difference in climate change predictions across countries does not change the distributional results'. Second, Mendelsohn et al 2006, p. 164 present two kinds of predictions for

damages, one based on experimental studies (e.g. using laboratories or greenhouses), the other on cross-sectional studies (based on 'actual outcomes from place to place'). I use the mean of these two numbers to provide an overall estimate of damages, taking into account both experimental and cross-sectional studies. Finally, though Mendelsohn et al 2006, p. 167 specify the upper and lower GDP per capita for the second and third quartiles, they do not provide the lowest GDP per capita for the poorest quartile or the highest GDP per capita for the richest quartile. I take Burundi ($144 GDP per capita in 2005 according to the World Bank) to be the poorest country included in their analysis, and Luxembourg ($79,960) to be the richest.

[17] Mendelsohn et al 2006, p. 166 say their 'assumptions are based on the IS92 scenario', which gives a 'medium global assumption' of 11.3 billion people in year 2100 (Alcamo et al 1995, p. 263). This implies a quartile population of 2.825 billion.

[18] This approach has, however, been disputed within climate change economics; see Dasgupta, 2007; 2008.

[19] Diminishing marginal returns raise their head again here, and a utilitarian could argue that even though there is a net economic gain under climate change, there is a loss of utility. Nevertheless, the contrast with the pluralistic account is clear, for that account's opposition to climate change is not reliant on diminishing marginal returns.

[20] The combination of will theory with compossibility is especially unpromising for such rights given will theory's commitment that rights-bearers have the ability to choose to claim or waive the performance of duties, which rules out future persons having rights against current persons. See Steiner 1994, pp. 259-61; Page 2006, p. 143.

[21] One way in which interests may be less significant, according to the pluralistic account, is by being the interests of those who have made worse choices. This appears to suggest a different problem for attempting to generate *human* rights using the pluralistic approach, namely that some people may act so irresponsibly that they lose their rights. There are however a number of reasons for doubting that this would impede the generation of human rights. First, just as just imprisonment is not usually seen as contrary to a human right to freedom, so too protection against climate change might be withdrawn on account of socially harmful behaviour without violating a human right against climate change-induced harm. Second, and relatedly, every human would still at least have had a right against climate-change-induced harm prior to any socially harmful behaviour, and that might be seen as sufficient to establish

that the right is a human right. Third, it is only one (luck egalitarian) component of the pluralistic view that might in principle support the denial of rights on account of choices, so the overall view may well resist that denial. Finally, the luck egalitarian component itself is best construed as treating any apparently fully responsible act as only partly responsible on account of general metaphysical doubts, and hence it is unlikely that rights would be withdrawn on account of choices, although they might be weakened; see Knight 2015.

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