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Review essay

Where we are now: Climate ethics and future challenges

Elizabeth Cripps*

Book discussed in this essay: *Climate Ethics: Essential Readings*. Edited by Stephen M. Gardiner, Simon Caney, Dale Jamieson, and Henry Shue. Oxford: Oxford University Press, 2010, 351 pp. (incl. index). ISBN 978-0195399615.

I. INTRODUCTION

Once the preserve of “deep” green thinkers or the more esoteric field of environmental ethics, environmental concerns have in recent years demanded attention from mainstream political and moral philosophers. In particular, as scientific consensus has hardened on the threat to *humans* of global climate change, theories of climate ethics and climate justice have developed alongside cosmopolitan approaches to global justice. In this sense, the publication of *Climate Ethics*, edited by four of the most prolific and influential thinkers in the field, marks the coming of age of a discipline. However, the collection merits attention as much for the questions it leaves open as those it answers. Given this opportunity, in one volume, to confirm how advanced the discussion is in some areas, the looming holes in others are all the more obvious.

Accordingly, this essay will treat the volume as a chance to take stock. It will identify nine philosophically demanding, under-considered elements of the climate-ethics debate, as it is encapsulated in the collection. To indicate how the debate might move forward, I will draw on a recent series of workshops at the University of Edinburgh on “Climate Change, Moral Duties and Political Change”, as well as offering some thoughts of my own.¹

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¹ Workshop Series: Climate Change, Moral Duties and Political Change (June 2010 to January 2011), Just World Institute, Edinburgh University, in association with the Political Studies Association Specialist Group on Global Justice and Human Rights and the Roberts Fund for Researcher-Led Initiatives [hereinafter JWI Workshop Series]. (Note: where workshop papers drew on papers now forthcoming or published elsewhere, I have cited these directly.)

II. CLIMATE ETHICS: AN OVERVIEW

Climate Ethics brings together papers from the past twenty years, but mostly from the past ten, as well as three original pieces.² It opens with a philosophical and scientific overview provided by Stephen Gardiner's seminal 2004 article, "Ethics and Global Climate Change".³ Thereafter, the collection falls into four parts. In Part II, "The Nature of the Problem", Nicholas Stern's account of the economics of climate change is presented alongside Dale Jamieson's rejection of purely economic or management approaches to meeting its challenges.⁴ According to Jamieson, an overhaul is needed of our system of moral values: we cannot respond appropriately to climate change with a moral framework that evolved in a world of low population densities and low technology, "with seemingly unlimited access to land and other resources".⁵ Gardiner also highlights the extent and complexity of the moral challenges posed by climate change, representing it as a "perfect moral storm", where global, intergenerational, and theoretical challenges collide.⁶

The collection is heavily weighted towards Parts III and IV: "Global Justice and Future Generations" and "Policy Responses to Climate Change". Within the former, frameworks are outlined for climate justice in a global and intergenerational context. Rival principles for assigning responsibility (polluter pays, ability to pay, and beneficiary pays) are compared by Simon Caney and Henry Shue.⁷ Shue then locates the impermissibility of current high-carbon ways of life in the imposition of risk on others.⁸ Caney defends his human rights approach to climate justice.⁹

Amid these discussions, Derek Parfit elucidates his "non-identity problem": a frustrating and philosophically stubborn obstacle facing any theorist of intergenerational ethics.¹⁰ A person's identity depends on the time at which he or she is conceived. Thus, different patterns of behaviour in this generation will result in different individuals being born into future generations. In particular, policies which lead to an environmentally depleted planet will result in different individual actions and different conception times from those that would have resulted under a policy of

² Henry Shue, *Deadly Delays, Saving Opportunities: Creating a More Dangerous World*, in *Climate Ethics*, 146 [hereinafter Shue, *Deadly Delays*]. Paul Baer et al., *Greenhouse Development Rights: A Framework for Climate Protection That Is "More Fair" Than Equal Per Capita Emissions*, in *Climate Ethics*, 215 [hereinafter Baer et al., *Greenhouse*]. Stephen M. Gardiner, *Is "Arming the Future" with Geoengineering Really the Lesser Evil?*, in *Climate Ethics*, 284 [hereinafter Gardiner, *Geoengineering*].

³ Stephen M. Gardiner, *Ethics and Global Climate Change*, in *Climate Ethics*, 3 [hereinafter Gardiner, *Ethics*].

⁴ Nicholas Stern, *The Economics of Climate Change*, in *Climate Ethics*, 39 [hereinafter Stern, *Economics*]. Dale Jamieson, *Ethics, Public Policy, and Global Warming*, in *Climate Ethics*, 77 [hereinafter Jamieson, *Ethics*].

⁵ Jamieson, *Ethics*, at 83.

⁶ Stephen M. Gardiner, *A Perfect Moral Storm: Climate Change, Intergenerational Ethics, and the Problem of Moral Corruption*, in *Climate Ethics*, 87, at 88.

⁷ Simon Caney, *Cosmopolitan Justice, Responsibility, and Global Climate Change*, in *Climate Ethics*, 122 [hereinafter Caney, *Justice, Responsibility*]. Henry Shue, *Global Environment and International Inequality*, in *Climate Ethics*, 101 [hereinafter Shue, *Global Environment*].

⁸ Shue, *Deadly Delays*.

⁹ Simon Caney, *Climate Change, Human Rights, and Moral Thresholds*, in *Climate Ethics*, 163 [hereinafter Caney, *Human Rights*].

¹⁰ Derek Parfit, *Energy Policy and the Further Future: The Identity Problem*, in *Climate Ethics*, 112.

environmental preservation. The persons who make up future generations will not be the same individuals if we act now to tackle climate change, as they would be if we didn't. Given this, we cannot be said to have *harmed* any future person through climate change or other environmental damage: assuming their lives are still worth living, future individuals in a depleted world have not been made "worse off" by a policy without which they would not have existed at all.

Part IV of the collection tackles question of adaptation versus mitigation (Jamieson defends the former as unavoidable, the latter as morally essential), as well as that of the distribution of emissions allocations (equal per-capita quotas, tradable or otherwise, or the Greenhouse Development Rights proposed by Paul Baer and others).¹¹ It questions whether any such economic strategy can be morally justified (Robert Goodin draws an analogy with selling indulgences, which are supposed in Catholic theology to reduce the time a sinner will have to spend in purgatory) and whether a policy of researching geoengineering might be justified on a "lesser evil" argument (Gardiner rejects this claim).¹²

Finally, a slim two-paper Part V considers the individual person's moral dilemma. It focuses on the motivational problem facing anyone who knows that her own polluting actions (driving a high-emitting car, for example) will make no difference to the overall harm resulting from climate change. Jamieson argues that utilitarians should change their motivational structures by turning themselves into environmental-virtue ethicists, that is, develop such "green" character traits as humility, temperance, and mindfulness, rather than calculate individual consequences in deciding how to act.¹³ Walter Sinnott-Armstrong takes a harder line. Under the title, "It's Not My Fault", he claims that tackling climate change is the business not of individuals, who cannot be held accountable for it, but of governments.¹⁴

III. NINE STEPS FORWARD

I have two clarificatory points to make before identifying the central questions which I believe are under-considered in this volume.

The first is that the collection operates within a particular theoretical context: that of mainstream liberal (generally Rawlsian or Millian) political and moral philosophy. Environmental-virtue ethicists, to take one example, might reasonably consider themselves under-represented here, given that the only paper in the collection to consider a virtue-ethics approach does so not on

¹¹ Dale Jamieson, *Adaptation, Mitigation, and Justice*, in *Climate Ethics*, 263 [hereinafter Jamieson, *Adaptation*]. Paul Baer, *Adaptation to Climate Change: Who Pays Whom?*, in *Climate Ethics*, 247 [hereinafter Baer, *Adaptation*]. Henry Shue, *Subsistence Emissions and Luxury Emissions*, in *Climate Ethics*, 200 [hereinafter Shue, *Subsistence Emissions*]. Peter Singer, *One Atmosphere*, in *Climate Ethics*, 181. Baer et al., *Greenhouse*.

¹² Robert Goodin, *Selling Environmental Indulgences*, in *Climate Ethics*, 231. Gardiner, *Geoengineering*.

¹³ Dale Jamieson, *When Utilitarians Should Be Virtue Theorists*, in *Climate Ethics*, 315 [hereinafter Jamieson, *Utilitarians*].

¹⁴ Walter Sinnott-Armstrong, *It's Not My Fault: Global Warming and Individual Moral Obligations*, in *Climate Ethics*, 332.

its own merits but as the means by which that “universal emulator”, utilitarianism, might best secure *its* ultimate end.¹⁵ Within that context, however, and although one might quibble about the inclusion or exclusion of particular papers, the selection can be taken as a more or less representative snapshot of “where we are now”. Thus, in identifying “gaps” I am not so much criticizing the editors as pointing to general omissions in the literature as it has so far developed. Indeed, in the preface to the collection, Gardiner acknowledges that a number of important issues, on which the literature is underdeveloped, have been excluded.¹⁶

Secondly, I am not suggesting that further work is unnecessary on those questions that are already debated at length in the collection. These include the distribution of the burdens of mitigating or adapting to climate change. In particular, more discussion is needed on whether individuals can be required to bear the costs of mitigating or compensating for harm because they have benefited from the activities which caused it, even if they did not cause it themselves (as with current generations in developed countries benefiting from the polluting activities of past generations). Moreover, there is further scope for debate on the justice and feasibility of different methods of allocating emissions quotas, whether among states or among individuals or corporations within states, and regarding the peculiar difficulties of expanding theories of justice or of moral duties to include future generations.¹⁷

These questions, as well as those identified below, were well represented at the aforementioned workshop series held at Edinburgh University’s Just World Institute (JWI). Edward Page presented his critical expansion of Caney’s “hybrid principle” for distributing the burdens of climate change, defending a conjunctive approach which incorporates the polluter-pays, ability-to-pay, and beneficiary-pays principles.¹⁸ Keith Hyams proposed a policy of tradable personal carbon allowances *within* the state, defending as just an initial distribution which is neutral in terms of its impact on an individual’s opportunity for welfare.¹⁹ Matthias Fritsch outlined a model which grounded duties of intergenerational justice in asymmetrical reciprocity rather than the traditional, Rawlsian, notion of reciprocity as mutual advantage.²⁰ Dominic Roser presented an opportunity-costs argument for discounting.²¹

¹⁵ Jamieson, *Utilitarians*, at 326.

¹⁶ *Climate Ethics*, at x.

¹⁷ On the beneficiary-pays principle, see, for example, Axel Gosseries, *Emissions and Free-Riding*, 11 *Ethical Perspectives*, 36 (2004).

¹⁸ Edward Page, *Climate Justice and the Fair Distribution of Atmospheric Burdens: A Conjunctive Account*, 94 *The Monist* (forthcoming). Caney’s hybrid model supplements a polluter-pays principle with an ability-to-pay principle for allocating the burdens of dead polluters, the excusably ignorant, impoverished polluters, and non-compliers.

¹⁹ Keith Hyams, *A Just Response to Climate Change: Personal Carbon Allowances and the Normal-Functioning Approach*, 40 *Journal of Social Philosophy* 237 (2009).

²⁰ Matthias Fritsch, *Asymmetrical Reciprocity in Intergenerational Justice* (6 October 2010, rev. January 2011) (unpublished manuscript, presented at the JWI Workshop Series).

²¹ Dominic Roser and Lukas Meyer, *The Opportunity Cost Argument for Discounting (Or For Something Similar)* (6 October 2010) (unpublished manuscript, presented at the JWI Workshop Series). For Stern’s defence of a minimal discount rate, see *Economics*, at 50-55.

Nevertheless, the following nine areas stand out as in urgent need of further philosophical attention.

1. The Responsibility Gap

The first question is one for moral philosophers: how to assign moral responsibility for harmful climate change given that individuals, in isolation, have not caused harm, and that there has been neither collective intention to harm nor even a global-level *collective* capable of acting intentionally, to which the harm can be attributed.

The problem is implicitly acknowledged in *Climate Ethics*. Jamieson points to the dangerous possibility “that the global environment may be destroyed, yet no-one be responsible”.²² Elsewhere, he calls for a paradigm shift in moral theory to meet the challenges of climate change.²³ Caney notes that contributors to global climate change include individuals, economic corporations, states, and international institutions such as the World Trade Organisation and International Monetary Fund.²⁴ He rejects the view, which he accuses Shue and Eric Neumayer to be relying on, that this aggregation of different actors can be reduced to a collectivist focus on states for the purpose of assigning responsibility.²⁵

However, most of the contributors apparently take it for granted that there is some available means of assigning responsibility for the results of combined actions: that “we” can be held accountable, as individuals or as some kind of putative group. This “we” is sometimes taken to include developed states, or their citizens: “To put it in terms a child could understand,” says Peter Singer, “as far as the atmosphere is concerned, the developed nations broke it”.²⁶ At other points, “we” is shorthand for some other variant on a polluting global elite, or for members of current generations.

Any attempt to defend a polluter-pays principle rests on the assumption that responsibility can be assigned in this way. The assumption is required to support either Shue’s focus on the impermissible risks “we” impose on future generations or Caney’s human-rights approach, resting as this does on the fact that impacts of climate change are “traceable to human causes”.²⁷ Jamieson himself rejects an adaptation-only policy, in part by appeal to the moral risk of a policy which will hit hardest those who have “done least” to bring about the problem of climate change.²⁸ Gardiner, arguing against geoengineering, stresses “an important moral difference

²² Jamieson, *Ethics*, at 84.

²³ Dale Jamieson, *Ethics, Public Policy and Global Warming*, 17 *Science, Technology, and Human Values* 139 (1992).

²⁴ Caney, *Cosmopolitan Justice*, at 125-130.

²⁵ Shue, *Global Environment*. Eric Neumayer, *In Defence of Historical Accountability for Greenhouse Gas Emissions*, 33 *Ecological Economics* 185 (2000).

²⁶ Singer, *One Atmosphere*, at 190.

²⁷ Caney, *Human Rights*, at 169.

²⁸ Jamieson, *Adaptation*, at 268.

between preparing for an emergency and preparing for an emergency that is *to be brought about by one's own moral failure*".²⁹

It makes intuitive moral sense to many of us to assign this kind of negative, collective or aggregate, moral responsibility. However, it pushes the boundaries of traditional moral thinking. It goes beyond even attempts to assign responsibility for collective *inaction* (where there is not yet an identifiable collectivity that has *chosen* not to act, but a number of individuals could have organized themselves to act as a group to prevent some harm), or to attribute a duty to organize to prevent harm or protect basic rights.³⁰

Responses are now being offered to Jamieson's challenge. Gardiner, in a paper discussed at the JWI workshop series, argues that the climate-change case is not so far as it seems from paradigm cases of moral responsibility: the fact that it results from patterns of action, combined with the urgency of the problem, is sufficient to bring familiar moral reasoning into play.³¹ I take a different approach. I defend an expanded notion of collective responsibility, on which a set of individuals (or potential collectivity) can be held responsible for harm resulting from the aggregation of their individual acts.³² The assignment of this weak collective responsibility hinges on a twofold predictability condition: that it is reasonably foreseeable to each individual that her actions in combination with those of others would result in harm; and that sufficient others are similarly motivated to act for their combined actions to bring about the harm.

2. Individual Duties

With this expanded understanding of moral responsibility there arise questions regarding the individual duties of those held collectively responsible for some harm. These come about at two levels. Firstly, what would be a fair distribution of the burdens of a collective effort to fulfil some collectively held duty? In the climate-change case, this is a version of the much-debated distribution-of-burdens problem. However, philosophical thoroughness demands an answer in terms not only of the duties of nations or of citizens of the developed *versus* the developing world, but of each *individual*, given factors such as the cost to her of complying (including the needs which arise from her particular situation, state of health, and geographical location), her past

²⁹ Gardiner, *Geoengineering*, at 293.

³⁰ Robert Goodin, *Protecting the Vulnerable* 134-44 (1985). Larry May, *Sharing Responsibility* 105-25(1992). Henry Shue, *Basic Rights* 35-64 (1980).

³¹ Stephen Gardiner, *Is No-One Responsible for Global Environmental Tragedy? Climate Change as a Challenge to Our Ethical Concepts*, in *The Ethics of Global Climate Change*, 38 (Denis G. Arnold, ed., forthcoming) [hereinafter Gardiner, *Is No-One Responsible*]. See also: Robin Attfield, *Mediated Responsibilities, Global Warming, and the Scope of Ethics*, 40 *Journal of Social Philosophy*, 225 (2000), Andrew Dobson, *Thick Cosmopolitanism*, 54 *Political Studies*, 165 (2006), Christopher Kutz, *Complicity: Ethics and Law for a Collective Age* 166-203 (2000).

³² Elizabeth Cripps, *Climate Change, Collective Harm and Legitimate Coercion*, 14 *Critical Review of International Social and Political Philosophy*, 171 (2011).

carbon emissions, and more local moral claims on her resources, such as duties to her immediate family.³³

The second question is what the individual should do in the absence of any concerted collective attempt to fulfil a collective-level obligation. In the climate-change case, to borrow Sinnott-Armstrong's example, should she refrain from driving for fun? Should she take her holidays in the UK? Or should she devote herself to campaigning for global-level action on climate change, even if so doing would require her to fly around the world? This question has received relatively little attention, considering both its urgency and its interest as a philosophical puzzle.

The only two papers to discuss this question in *Climate Ethics* offer widely opposed perspectives. I find both problematic. Sinnott-Armstrong takes the limitations of traditionally individual-focused moral theories not as a call for an expanded model of collective responsibility but as a ground for denying *any* requirement upon individuals to cut emissions. Instead, he shifts all the burden onto governments. If an individual should do anything, he suggests, it is to persuade the government to live up to *its* responsibilities. However, if the Responsibility Gap, as discussed above, is bridged, then climate change is, in a sense, "our fault". I cannot consider myself detached from the problem. Moreover, the state and the individual are not so entirely separate as Sinnott-Armstrong seems to imply. If the government is an institution acting on behalf of citizens, then those citizens might plausibly have a *duty* to persuade their government to act to fulfil their collective moral obligations.³⁴ Finally, the collective-level problem (and the collectively incurred obligation, if there is one) is *global*: it does not stop at state borders.

On the other hand, Jamieson's utilitarian case for adopting certain "green" character traits is vulnerable to an objection that has been made to rule-consequentialism in general: the non-compliance objection.³⁵ Being a rule-consequentialist (acting according to a moral rule, overall compliance with which would bring about the best consequences) may have non-optimal or even negative consequences in circumstances of partial compliance, that is, where not everyone else obeys the rule. Jamieson relies on the fact that, while an individual focused on the immediate consequences of her actions will decide rationally not to cut her carbon emissions, harmful climate change would be mitigated if all individuals *could* motivate themselves to make those cuts. However, if (as seems likely) not enough other people would comply with a moral rule requiring

³³ See also Paul Harris, *World Ethics and Climate Change* (2010). This distinction anticipates the question of methodology, to be discussed in subsection 8, below. In practice, any scheme would almost certainly have to be implemented via the existing state structure. I do not deny this. My point is simply that, if the individual is the appropriate moral focus of concern in distributing burdens, then ideal theory must focus on the individual even if practical implementation would be a matter of transition to some approximation of that ideal.

³⁴ For a version of this point, see also Gardiner, *Is No-One Responsible*, at 54.

³⁵ Elizabeth Cripps, *Climate Change, Collective Responsibility and Individual Duties: What I must do if we fail to act* (17 June 2010, rev. January 2011) (unpublished manuscript, presented at the JWI Workshop Series). On the noncompliance objection, see: J. J. C. Smart, *Extreme and Restricted Utilitarianism*, 25 *Philosophical Quarterly*, 344 (1956), R. B. Brandt, *Fairness to Indirect Optimific Theories in Ethics*, 98 *Ethics*, 341 (1988), Brad Hooker, *Rule-Consequentialism*, 99 *Mind*, 67 (1990).

emissions cuts for the overall end to be achieved, then it would be irrational for me to do so even if I were motivated by overall consequences.

Accordingly, it remains a major philosophical challenge to outline individual climate duties.³⁶ One option is drawn from virtue ethics: to advocate the development of “green” character traits not for ultimately utilitarian ends, but on Aristotelian grounds more directly concerned with the character of the duty bearer.³⁷ According to virtue theories, acting rightly is not a question of calculating consequences but of acting as the virtuous, or good, person would act. Presenting to the JWI workshops, Kerri Woods defended a virtue of “judgement” in the context of climate change.³⁸ I take another approach in a paper presented to the JWI workshops. I consider three possible individual duties: a duty to mimic the actions that would be required by a fairly allocated collective attempt to tackle the problem (mimicking duty); a duty to promote collective action (promotional duty); and a duty to attempt to mitigate the harm oneself or aid victims directly (direct duty). I argue on broadly consequentialist grounds that the primary duty is promotional, supplemented by a direct duty, and that mimicking actions (including cutting individual emissions) are mandated only indirectly, insofar as they contribute to the fulfilment of promotional or direct duties.

3. The Nature of the Impact

Climate change is bad for us, or at least bad for our poorer contemporaries and our descendents. This much is relatively uncontroversial. But in what, exactly, does this “badness” consist?

This might seem obvious. Climate change harms people. Many persons have suffered—and indefinitely many more are likely to suffer—poor health or even death as a result of it. Others look set to lose their homes or even their homelands. Still others will lose out economically, as their property is damaged or destroyed. However, this question requires further attention, for a number of reasons. Only some people will actually suffer these negative impacts. Moreover, some harms are worse than others: to talk of certain economic costs, such as loss of some property, as being in any way comparable with more fundamental impacts on life or health looks morally outrageous.³⁹ A third point is that the non-identity problem continues to loom problematically over any debate conducted in terms of harm to future individuals.

It is unfair to characterize this as a complete “gap” in *Climate Ethics*: the collection does address the question of how, philosophically, to assess the impact of climate change on human lives.

³⁶ See also James Garvey, *Climate Change and Causal Inefficacy: Why Go Green When It Makes No Difference?* in: *Philosophy and the Environment* (A. O’Hear, ed., forthcoming).

³⁷ E.g. Rosalind Hursthouse, *Environmental Virtue Ethics*, in *Working Virtue: Virtue Ethics and Contemporary Moral Problems*, 167 (Rebecca L. Walker and Philip J. Ivanhoe, eds., 2007).

³⁸ Kerri Woods, *Cosmopolitanism, Climate Change and Individual Duties* (17 November 2010) (unpublished paper, presented at the JWI Workshop Series).

³⁹ See my criticism of Baer in subsection 8 below.

Indeed, co-editor Caney has pioneered the human rights approach to answering it. However, I include it here because promising alternative strategies for assessing that impact are not included. There are, I suggest, at least five (not incompatible) ways in which the question above might be answered, only two of which are considered in any detail in the collection.

Firstly, Caney defends his human-rights approach as capturing an important consideration overlooked by cost-benefit or security-based approaches to climate change, or those which assign intrinsic value to the natural world.⁴⁰ He argues that avoidable anthropogenic climate change violates fundamental rights to life, health, and subsistence, all of which can be shown to be human rights on either intrinsic or instrumental grounds.⁴¹ Caney also argues elsewhere that a rights-based approach can avoid the non-identity problem.⁴²

Alternatively, rather than operate via a human-rights framework, theorists might appeal *directly* to the unacceptably serious impact of climate change on certain central elements of a flourishing human life. A natural framework for this is the capabilities approach.⁴³ This identifies a number of central human functionings, including life, health, and affiliation, the idea being that justice secures individuals the capability to achieve each of these different and incommensurable functionings. There are two already-developed ways in which this approach can be used to express the impact of climate change.⁴⁴ Firstly, it will deprive many individuals of uncontroversially central capabilities, such as life or health. Secondly, a new, environmental, capability might be added to the list. This would suggest, more controversially, that there is something bad for humans in damage to their natural environment, over and above the impact which that damage has on their ability to exercise other central functionings.

A third option is to focus not on the actual negative impact of climate change on many humans but on the *risk* of such impact, which is imposed much more widely. In a paper original to *Climate Ethics*, Shue rejects a central objection to risk-based approaches, arguing that the imposition of certain risks, including those resulting from climate change, can be judged unacceptable even without knowledge of precise probabilities, because the negative result would be serious and avoidable, and the mechanism through which it would come about is well understood.⁴⁵ Catriona

⁴⁰ Caney, *Human Rights*, at 163-4.

⁴¹ *Ibid.*, at 165-9.

⁴² Simon Caney, *Cosmopolitan Justice, Rights and Global Climate Change*, 19 *Canadian Journal of Law and Jurisprudence*, 255, at 264-70 [hereinafter Caney, *Justice, Rights*].

⁴³ E.g. Amartya Sen, *Equality of What*, in *Liberal, Equality and Law* (Sterling M. McMurrin ed., 1987), Amartya Sen, *Development as Freedom* (1999), Martha Nussbaum, *Aristotelian Social Democracy*, in *Liberalism and the Good*, 219 (R. Bruce Douglass, Gerald M. Mara and Henry S. Richardson eds., 1990), Martha Nussbaum, *Women and Human Development* (2000).

⁴⁴ E.g. Edward Page, *Intergenerational Justice of What? Welfare, Resources or Capabilities*, 16 *Environmental Politics*, 455 (2007), Breena Holland, *Justice and the Environment in Nussbaum's Capabilities Approach: Why Sustainable Ecological Capacity Is a Meta-Capability*, 61 *Political Research Quarterly*, 319 (2008).

⁴⁵ Shue, *Deadly Delays*, at 146-50.

McKinnon presented to the JWI workshops a corrective-justice approach to intergenerational duties based on *ex ante* responsibility for risk imposition.⁴⁶

Fourthly, my own suggestion is that the previous two approaches be combined. Jonathan Wolff and Avner de Shalit have developed a model on which the avoidance of certain risks is built into the idea of a capability to function.⁴⁷ Climate change exposes central human functionings to ongoing, significant risk, uncontrollable by the individuals concerned. Thus, borrowing from Wolff and de Shalit's approach, it renders those functionings *insecure*, deprives the individuals of the corresponding capability, and so is "bad" for them in a clearly identifiable and morally serious way. I am exploring this possibility in work in progress.

A final strategy, not explored in *Climate Ethics*, has the advantage of being independently defensible in libertarian terms. This is to argue that the current pattern of emissions reflects a morally unjustifiable assumption of property rights in natural resources or ecological space: one which fails to meet the requirement, known as the Lockean proviso, that ownership rights cannot be acquired in natural resources unless sufficient resources of comparable quality ("enough and as good") are left for others to use. According to Tim Hayward, this argument exposes those in the developed world as the "ecological debtors" of the global poor and future generations.⁴⁸

A final note before moving on to the next outstanding challenge: insofar as I would criticize the editors of *Climate Ethics* for failure to include issues which *have* already been explored in the literature, it would be with reference to the second and fifth points above, and more generally with regard to capabilities, or ecological-debt models, as being promising frameworks for climate justice.

4. Beyond the Human

Climate Ethics focuses on the normative ramifications of the likely impact of climate change on human beings. However, coming full circle to reconnect this school of thought with the "deep green" concerns of early environmentalists, and to re-examine the links between those concerns and the claims of animal-rights theorists, it is now being asked whether our duties of *justice* extend beyond humans. With this possibility come questions about the moral implications of the harm done by anthropogenic climate change to non-humans.

⁴⁶ Catriona McKinnon, *Climate Change and Future Justice*, Chapter 4 (forthcoming) (henceforth McKinnon, *Future Justice*).

⁴⁷ Jonathan Wolff and Avner de-Shalit, *Disadvantage*, 63-73 (2007).

⁴⁸ Tim Hayward, *Global Justice and the Distribution of Natural Resources*, 54 *Political Studies* 349, at 368 (2006). Tim Hayward, *On the Nature of Our Debt to the Global Poor*, 39 *Journal of Social Philosophy* 1, at 16-7 (2008).

Again, the capabilities approach has proved a fertile ground for debate.⁴⁹ Martha Nussbaum expands her account of justice to include severely disabled humans, non-nationals, and sentient non-human animals, whom she argues are also capable of a dignified and flourishing existence.⁵⁰ David Schlosberg has expanded Nussbaum's model further, to include species and ecosystems.⁵¹ His approach has been criticized, both because it grounds claims to consideration in integrity, rather than dignity, and because his expansion would take us outside the circumstances of justice as they are conventionally understood.⁵² It would be impossible, even in theory, simultaneously to guarantee the capabilities-entitlements of humans and non-humans, individuals and species, prey and predator. (For example, how could the flourishing of all individual gazelles be secured without preventing tigers from exercising some of *their* central functionings, which require them to kill and eat gazelles?)

The JWI workshops marked the latest step in the development of this debate. Schlosberg defended his understanding of ecological integrity and argued that persistently conflicting claims are not an objection to a theory of justice.⁵³ Rather, he suggests, a theory acknowledging such inevitable conflict can usefully adjudicate between claims and guide human behaviour into a direction generally less damaging to the natural world. This response is particularly interesting, as it takes the capabilities approach (and, if convincing, could take climate justice) far indeed from the broadly Rawlsian framework within which Nussbaum operates and within which much of the debate in *Climate Ethics* is presented.

Whatever the potential of this particular approach, a more general point may be raised. Rather than automatically prioritizing the one over the other (as the diverging "deep green" and "environmental justice" movements seem to suggest), one philosophical challenge for climate ethicists is to provide an integrated model within which the different and often incompatible claims of humans, non-human animals, and even the natural world, can at least be simultaneously expressed.

⁴⁹ However, it is not the only approach treated as a candidate for expansion. For example, Anders Schinkel is paving the way for such questions via a critique of Onora O'Neill's "practical" approach to determining the scope of justice. See Anders Schinkel, *Determining the Scope of Justice* (16 July 2010) (unpublished manuscript, presented at the JWI Workshop Series).

⁵⁰ Martha Nussbaum, *Frontiers of Justice: Disability, Nationality, Species Membership* (2006).

⁵¹ David Schlosberg, *Defining Environmental Justice: Theories, Movements and Nature*, 129-62 (2007).

⁵² The first of these objections was put to Schlosberg by Breena Holland in a conference presentation: *Getting To Green: Why Should Human Dignity Ground An Environmental Theory Of Justice?* (April 2010) (unpublished manuscript presented at the Western Political Science Association annual meeting, San Francisco). The second is my own: Elizabeth Cripps, *Saving the Polar Bear, Saving the World: Can the Capabilities Approach do Justice to Humans, Animals and Ecosystems?* 16 Res Publica, 1 (2010). On the circumstances of justice, see: David Hume, *A Treatise of Human Nature* 494-5 (L. A. Selby-Bigge, ed., Oxford University Press, 1978), John Rawls, *A Theory of Justice* 109-10 (1971).

⁵³ David Schlosberg, *Ecological Justice: Capabilities and Critics* (16 July 2010) (unpublished manuscript, presented at the JWI Workshop Series).

5. Beyond the Individual

Beyond sometimes categorizing developing nations as the victims of climate change, and highlighting the plight of small-island states in particular, *Climate Ethics* gives little space to the notion of harm to communities.⁵⁴ Such questions arise, however, either because communities could be viewed as potential subjects of justice or of moral duties *in themselves*, or, closer to the broadly individualistic liberal framework within which the collection operates, because the loss of some collective good could constitute a non-substitutable loss to an individual.⁵⁵ In particular, what is owed to citizens in the extreme case of a state losing its homeland as a result of climate change?

These issues cannot be resolved simply by borrowing from the literature on the rights of economic or political refugees. As Alexa Zellentin points out, climate migration differs from other forms of migration both in its finality and in “the fact that entire communities are forced to resettle elsewhere”.⁵⁶ Thus, at least arguably, climate refugees have specific entitlements. In work presented to the JWI workshops, Zellentin and Cara Nine consider what these entitlements might be. Their arguments not only indicate what progress is being made on this increasingly urgent question, but also have implications for theories of climate justice more generally.

On Zellentin’s account, members of communities who lose their homeland to climate change have a right to migrate with dignity. She argues that climate refugees are moreover entitled to such institutional support as is necessary to make them full and equal members of their host societies, because migration with dignity requires protection of the social bases of self-respect, one of which is such free and equal membership. The necessary institutional support, she argues, includes equal formal rights of citizenship; provision of upskilling support to enable competitiveness in its labour market; and cultural sensitivity.

Nine, going further, argues that the collective right of self-determination renders peoples of ecological refugee states candidates for sovereignty over new territories. So, given that Tuvalu has been self-determining and that Tuvaluans, as a people, have a legitimate claim to continue to be so, she argues that current state borders may need to change to accommodate a New Tuvalu. However, she notes that in practice the competing claims to self-determination of other groups are likely to reduce the claims of ecological refugee peoples to a case for “limited self-determination within another state’s territory”.⁵⁷

⁵⁴ E.g. Singer, *One Atmosphere*, at 183; Shue, *Subsistence Emissions*, at 204.

⁵⁵ On the first possibility, Schlosberg is developing a version of the capabilities approach on which climate justice is a much a matter of protecting the central functionings of *communities*, as valuable in themselves, as of individuals. See David Schlosberg, *Justice, Ecological Integrity, and Climate Change*, in *Virtues of the Future: Climate Change, Restoration, and the Challenge of Adapting Humanity* (Allen Thompson and Jeremy Bendik-Keymer, eds., forthcoming).

⁵⁶ Alexa Zellentin, *Climate Migration: Cultural Aspects of Climate Change*, 32 *Analyse & Kritik*, 63, at 63 (2010).

⁵⁷ Cara Nine, *Ecological Refugees, State Borders, and the Lockean Proviso*, 27 *Journal of Applied Philosophy*, 359 (2010).

Such arguments greatly complicate the task of achieving a just distribution of adaptation and mitigation costs. In particular, if Nine's controversial case for a New Tuvalu is accepted, the problem can no longer be assessed simply in terms of who should cut their carbon emissions, by how much they should do so, and who should pay (in economic terms) to enable adaptation. If some duty-bearers might be required to give up some part of their own homeland (in particular, the part they live in), the possibility arises that a distribution of burdens could never be fair. Some sacrifices required to meet the claims of climate victims would involve losses that could never be balanced out by a heavier allocation of other (say, purely economic) burdens to other duty-bearers.

6. Disaster Ethics

I make this point briefly, given the relatively early stage of its philosophical development and the fact that it was not discussed in any detail at the JWI workshops. Climate change brings with it not only a significant (if unquantifiable) risk of serious harm to many humans, but also a smaller risk of a huge global disaster through runaway climate change. The peculiar dangers and moral challenges associated with this risk raise questions which are only briefly noted in *Climate Ethics*, but are beginning to be considered in more detail outside it.⁵⁸

In recent work, McKinnon defends a precautionary policy by appeal to the possibility of passing tipping points beyond which catastrophic climate change cannot be prevented.⁵⁹ Gardiner himself argues, also outside this collection, that the prospect of catastrophe will not even have the positive effect of kick-starting action on climate change.⁶⁰ Rather, he says, it raises the danger of an intergenerational arms race. More generally, the possibility of runaway climate change forces us to consider unpleasant but horribly possible moral dilemmas. What harms might one generation, especially a future generation whose own emissions were not worsening climate change, be justified in imposing on others in order to protect itself from disaster? To what extent are individual states justified in ignoring the plight of victims in other states, in order to shield their own citizens from environmental catastrophe?

7. Population Ethics

Population growth is mentioned only in passing in *Climate Ethics*, although Gardiner does contribute to the very limited philosophical literature available on the question elsewhere.⁶¹ For example, Singer anticipates a population-based objection to assigning nations equal per-capita emissions allocations: because the per-capita share would have to decrease as global population

⁵⁸ E.g. Gardiner, *Ethics*, at 6-7. Shue, *Deadly Delays*, at 152-3.

⁵⁹ Catriona McKinnon, *Runaway Climate Change: A Justice Based Case for Precautions*, 40 *Journal of Social Philosophy*, 187 (2009).

⁶⁰ Stephen M. Gardiner, *Saved by Disaster? Abrupt Climate Change, Political Inertia, and the Possibility of an Intergenerational Arms Race*, 40 *Journal of Social Philosophy*, 140 (2009).

⁶¹ Stephen Gardiner, *The Real Tragedy of the Commons*, 30 *Philosophy and Public Affairs*, 387 (2001), responding to Garrett Hardin, *The Tragedy of the Commons*, 162 *Science*, 1243 (1968).

increased, “a nation that increased its population would be imposing additional burdens on other nations”.⁶² To avoid this, he suggests tying national allocations to populations in a particular year (say, 1990, or UN estimates for national populations in 2050).

That there has been so little attention paid to population ethics is puzzling given the obvious simplicity of the calculation underlying Singer’s objection. The faster the growth of the human population—and barring some technological solution—the lower average per-capita emissions will have to be to mitigate climate change.

There are, I contend, two explanations for this neglect, neither of which justify it philosophically. One is the highly emotive negative reaction likely to greet any suggestion that states use policy instruments to curtail population growth. However, the very mention of population policies need not conjure up images of forced abortions or sterilization. Rather, further work is needed on the tension between the problem of overpopulation, on the one hand, and procreative rights, on the other. Policies to slow or reverse population growth might include education, public campaigns, or a change in financial incentives by altering the child-benefit system. To rule out all such policies simply by citing the right to procreate is to take it as read that this right amounts to an entitlement to be supported by the state to have indefinitely many children. These questions are beginning to be examined, for example by Carol Kates, or in work presented by Carter Dillard to the JWI workshops.⁶³

The other explanation arises, understandably, from the unequal distribution of current emission levels. It is hypocritical, to say the least, to appeal simply to global averages and call for developing countries to curb population size, whilst doing nothing to cut our own, much higher, per-capita emissions. However, proper attention to the calculation above should not lead to this kind of hypocrisy, nor to such morally repugnant responses as Garrett Hardin’s “lifeboat ethics” policy for curbing global population growth: strict immigration controls and no food aid.⁶⁴ Rather, it demonstrates that no-one seriously concerned to achieve climate justice alongside or as part of global economic justice can afford to ignore population. At the extreme, globally, at a certain population level and above, it would become simply impossible to achieve both aims simultaneously.

The climate-ethics debate cannot simply pretend these questions do not exist, or it will end up implicitly relying on the kinds of assumption its theorists might be reluctant to spell out. Take Singer’s approach. In pegging national carbon allowances to a specified population level, he must assume either that states will find a way of stabilizing or reducing population over time, or that it is acceptable for future *individuals* within states with growing populations to bear the costs of

⁶² Singer, *One Atmosphere*, at 191. See also: Goardiner, *Ethics*, at 16, Jamiesan, *Adaptation*, at 272.

⁶³ Carol A. Kates, Reproductive Liberty and Overpopulation, 13 *Environmental Values*, 51 (2004). Carter Dillard, *The Wrong Right To Have Children* (19 January 2011) (Unpublished manuscript, presented at the JWI Workshop Series).

⁶⁴ Garrett Hardin, *Living on a Lifeboat*, 24 *Bioscience* 561 (1974).

the decisions of their parents or grandparents (or their parents or grandparents' contemporaries) to have a greater-than-replacement-rate number of children.

8. The Methodology Gap

I come, finally, to two points regarding the development of climate ethics or climate justice as a discipline. The first is a recurring difficulty in *Climate Ethics*, which is the juxtaposition, almost to the point of blurring, of morally foundational points and points about what is practically or politically realistic.

This is most worrying when it manifests itself as the introduction of a highly questionable moral view under the wings of a practical assumption. Baer, assigning liability for adaptation, suggests that vulnerability to climate change can be treated as broadly equal across the globe because “the greater amount of property at risk in rich countries would counterbalance the greater bodily risk of death and injury in poor countries”.⁶⁵ In a footnote, he accepts this as problematic. However, he asks the reader to bear with him, on the basis that it will in fact be possible to prioritize eliminating bodily risks in poor countries, whilst still protecting property in rich and (especially) poor states.⁶⁶ It seems to me both indefensible and confusing to defend the adoption of a morally dubious premise on the (also doubtful) grounds that this will turn out not to matter in practice.

Elsewhere, some of the authors in the collection jump between moral and practical points. For example, having presented the reader with the clear-cut moral claim that developed nations, having “broken” the global atmosphere, “owe it to the rest of the world to fix the problem”, Singer proposes a policy of equal per-capita future emissions which entirely neglects historical responsibility. He does so partly on the ground of its appeal as a practical compliance, but even this relatively modest proposal is not all *that* practical, as Singer himself acknowledges the gulf between it and political reality. Equally, rejecting a policy of adaptation-only to climate change on what he describes as moral grounds, Jamieson appeals to the *practical* fact that “such a policy is likely to be an application of the “polluted pay” rather than the “polluter pays” principle”.⁶⁷ This, as he rightly points out, has tended to be the case with climate-related disasters hitherto. However, such a consideration *in itself* does not show that no adaptation-only policy (including one which did fairly allocate the costs across states) could be morally justified. It shows, rather, that in the non-ideal circumstances presented by political reality, attempts to rely only on adaptation would be likely to result in morally abhorrent consequences.

My point is not that the practical or political considerations cited by Singer and Jamieson are irrelevant, but rather than they are relevant at different levels to those of the basic moral arguments, and it would greatly illuminate the debate if this were systematically clarified. I am indebted in making these observations to Derek Bell, whose presentation in the JWI workshops highlighted

⁶⁵ Baer, *Adaptation*, at 253.

⁶⁶ *Ibid.*, at 260.

⁶⁷ Jamieson, *Adaptation*, at 267.

in general terms the need for a clear methodological framework for the burgeoning field of climate justice.⁶⁸

Bell has drafted such a framework, beginning with something close to “ideal” theory and moving to progressively more practical considerations of transition, availability, and implementation. It is worth noting, however (as Bell would no doubt acknowledge) that even this approach, focusing as it does on climate justice, would only serve part of the project of meeting the normative challenges of climate change. If we take justice as determining the structure of basic institutions, then further *moral* questions would remain as to the additional or prior duties of individuals. For example, recalling subsections 2 and 4, individuals might have duties to *bring about* just institutions where none exist, or to try to correct aggregate harm through individual sacrifices, or non-human animals might be ruled to be outside the scope of justice but remain the subject of individual moral duties.

9. The Theoretical Gap

Finally, the relationship between theories of climate justice and the extensive array of theories of justice already on the market needs clarifying. There are two levels at which I want to highlight this point, both of which emerged from discussion at the JWI workshops.

Firstly, should theorists address questions of the distribution of the burdens of climate change in isolation, or should they be evaluated as a part of a more general debate on global justice? This not only a question of whether emission-allocation policies can justifiably be developed in isolation from questions of the fair distribution of the costs of adaptation to now unavoidable climate change.⁶⁹ It is also a question of whether a fair allocation of the costs of mitigation *and adaptation* to climate change can or should be determined independently of any other cosmopolitan duties that might mandate global-level redistribution. This is particularly salient given the potential practical tension noted between fulfilment of duties of climate justice and duties of global economic justice, or, relatedly, between what we owe to future generations and what we owe to the current global poor.⁷⁰ (However, it is worth reiterating the obvious point that practical unwillingness need not count against a strong moral argument that we owe duties to both, so long as we could afford to fulfil them.)

Progress is being made on these points. In particular, Bell, building on work by Beckerman and Pasek, strongly defends what he describes as an integrationist approach to climate justice.⁷¹

⁶⁸ Derek Bell, *How Should We Think About Climate Justice?* (17 November 2010) (unpublished paper, presented at the JWI Workshop Series).

⁶⁹ Henry Shue, *The Unavoidability of Justice*, in *The International Politics of the Environment*, 373 (Andrew Hurrell and Benedict Kingsbury, eds., 1992).

⁷⁰ For example, Simon Caney points out that “some of the measures normally suggested for improving the condition of the world’s worst off ... often accelerate global climate change”. (*Justice, Rights*, at 258.) See also subsection 7, above.

⁷¹ Wilfred Beckerman and Joanna Pasek, *The Equitable International Allocation of Tradable Carbon Emission Permits*, 5 *Global Environmental Change*, 405 (1995).

He argues that questions of climate justice, as of other theories of justice, are questions of the distribution of benefits and burdens and of the regulation of activities which generate those benefits and burdens. His five-stage methodological framework includes, as a first step, the development of a general theory of justice, which would then be used to develop a theory of climate justice, in particular.

Secondly, it might be doubted whether a broadly liberal theoretical framework is the most appropriate one for assessing the problems posed by climate change. Hayward (who also adopts an integrationist approach to climate justice) poses this question as a challenge to liberal cosmopolitans.⁷² He points to a tension between economic growth, or even a system of private-property rights, and environmental preservation, and suggests that a global extension of Rawls's "difference principle" (at least on a reading which mandates incentive inequalities) rests on the assumption of such growth.

However, others find resources *within* liberalism that enable it to adapt to these challenges. Catriona McKinnon draws on Rawls's "just savings principle" as a basis for intergenerational *corrective* justice.⁷³ My own view is that the link between liberalism and capitalism can be weakened, in theory if not in practice, and that a collectivized-harm principle provides at least some scope for defending within liberalism a (potentially enforceable) duty to act to tackle climate change. A new collection on *Climate Change and Liberal Priorities*, edited by McKinnon and Gideon Calder, brings welcome debate on the question.⁷⁴

IV. CONCLUSION

This essay has highlighted a number of ways in which the climate-ethics debate needs to move beyond those questions addressed in the Gardiner et al. volume. To reiterate, this is not intended as a criticism of a collection which seeks successfully to reflect a burgeoning debate as it has so far developed, and whose editors, on their own account, had to exclude much that they would have chosen to include. Rather, it is an attempt to indicate how many, and how demanding, are the outstanding questions, as well as how various and how fruitful are the lines of currently developing debate, in a discipline as philosophically challenging as it is practically imperative.

⁷² Tim Hayward, *International Political Theory and the Global Environment: Some Critical Questions for Liberal Cosmopolitans*, 40 *Journal of Social Philosophy*, 276 (2009).

⁷³ McKinnon, *Future Justice*, Chapter 4.

⁷⁴ *Climate Change and Liberal Priorities*, Special Issue, 14 *Critical Review of International Social and Political Philosophy* (Catriona McKinnon and Gideon Calder, eds., 2011).