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## Ethics and Climate Change: A Commentary on MacCracken, Toman and Gardiner

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### ABSTRACT

Climate change is an ethical issue, because it involves the distribution of a scarce resource – the capacity of the atmosphere to absorb our waste gases without producing consequences that no one wants. Various principles might be used to decide what distribution is just. This commentary argues that on any plausible principle, the industrialised nations should be doing much more than they are doing now, and much more than they are required to do by the Kyoto protocol, to reduce their greenhouse gas emissions. The commentary also responds specifically to some issues raised by MacCracken, Toman and Gardiner, including feasibility, the discount rate, and grounds for pessimism.

### KEY WORDS

Ethics, climate change, justice, scarce resources, discount rate

### INTRODUCTION

In the United States, public discussions of climate change have generally focused on scientific, economic and political aspects. Ethics has been relatively neglected. That trend was reinforced by President George W. Bush, who said ‘We will not do anything that harms our economy, because first things first are the people who live in America’ (Bush 2001). Yet the question of what the world’s largest emitter of greenhouse gases should do in respect of climate change is above all a moral question, and the failure of the United States to meet its responsibilities to the rest of the world is a moral failure of the most serious kind. It is, to be more specific, an instance of the unjust appropriation by one nation of a scarce resource to which that nation has no greater claim than any other nation.

## MACCRACKEN

Michael MacCracken effectively presents the scientific consensus on climate change, and offers an account of a range of other perspectives, from the conservation community to the fossil fuel industry. When he describes the political perspective, however, I question his judgment that 'President Bush has taken a national and worldwide pummelling for pulling the US out of the Kyoto Protocol'. Around the world, there has been severe criticism, but in the national media the criticism has been far too mild, and Bush has emerged from it relatively unscathed. He was, after all, re-elected in 2004, and although the Democratic candidate John Kerry did indicate some discontent with Bush's stance on climate change, his attack was half-hearted. He never said that the US, under Bush, was acting as a rogue superpower in regard to climate change, and he did not say that, if elected, he would sign the Kyoto treaty. Nor has there been a congressional resolution condemning Bush's refusal to sign the treaty.

MacCracken also lets Bush off the hook too easily when he writes 'there was no feasible way for the US to meet its Kyoto commitment'. Granted, population growth in the US would have made it tougher for the US to comply with its Kyoto target than for the European Union nations. But this was obvious from the beginning, and the US could have negotiated for a somewhat more favourable target emissions level. (Australia, for example, received a ludicrously favourable target – although it too has subsequently, and shamefully, refused to sign the treaty, thus becoming the only other industrialised nation apart from the US not to do so.) Moreover, even the quota that the US was allocated was entirely within reach, had the administration acted promptly and made reaching it a matter of high priority. As every foreigner who visits the US notices, most buildings are overheated in winter and excessively air-conditioned in summer – a minor symptom of a national habit of extravagantly wasteful energy usage. It is arguable that cutting emissions to the level required by the US's Kyoto target would have resulted, over time, in savings (Spash, 2002, 162–3). Even if such estimates are mistaken, however, and it had resulted in significant economic costs, the US would have remained one of the world's richest nations.

## TOMAN

Michael Toman is concerned to set out the economic framework within which ethical choices must be made, rather than to discuss the ethical choices themselves. He rightly points out that some economic analyses disguise ethical issues as if they were mere economics. The most important of these is the application of a discount rate to future costs. Bjorn Lomborg's claim that the Kyoto Protocol will lead to a net loss of \$150 billion has been widely publicised by those who

do not favour US adhesion to the treaty (Lomborg, 2001). Less widely discussed is Lomborg's decision to discount all future costs at an annual rate of 5 per cent. Since the costs of reducing greenhouse gas emissions will come soon, whereas most of the costs of not doing anything to reduce them fall several decades into the future, this makes a huge difference to the cost/benefit equation. Assume that unchecked global warming will lead to rising sea levels, flooding valuable land in 40 years time. With an annual discount rate of 5 per cent, every \$1000 that the flooding will cost in 40 years is equivalent to only \$142 today. Losses that will occur a century or more hence dwindle to virtually nothing. This is not because of inflation – we are talking about costs expressed in dollars already adjusted for inflation. It is simply discounting the future. That is why, as Toman notes, even a low discount rate 'inherently implies relatively modest mitigation efforts by the current generation and a bequest of a larger climate change problem to future generations'.

In defence of his discount rate, Lomborg appeals to the argument that Toman mentions – that if we invest \$142 today, we can get a risk-free return of 5 per cent on it, and so it will grow to \$1000 in 40 years. This assumes, of course, that the gains thus made will be used to compensate, or at least benefit, those who have suffered from climate change – otherwise this would not be an ethically defensible policy at all. That seems a dubious assumption.

Moreover, different assumptions about interest rates would lead to very different returns, and so to different cost/benefit ratios for action to mitigate climate change (Newell and Pizer, 2001). Long-term government bonds are the standard form of risk-free investment, and they usually return, in real terms, closer to 2 per cent than 5 per cent. Moreover, even if we accept the assumption that all costs and benefits are commensurable and interchangeable, there is an ethical issue about discounting the future. If the wise investment of capital today can be expected to make us richer in future decades, then we should also expect a proportionate rise in the price we are prepared to pay to save human lives, or to protect endangered species. Rich people, like poor ones, will be willing to pay all they have to save their lives and those of their families. Unlike TVs and dishwashers, these values will not decline in proportion to our earnings. An ethical, not an economic, justification would be needed for discounting suffering and death, or the extinction of species, simply because these losses will not occur for forty years. Neither Lomborg nor the economists who apply discount rates to the harms we anticipate from climate change have offered any such justification.

On top of all this, a major change in the climate of our planet would have such drastic and widespread effects that we really have no idea what it would do to prices. This makes cost-benefit approaches less reliable than in the case of more limited changes where we can assume that the world will continue as usual, apart from the specific policy we are seeking to cost.

## GARDINER

For those of us who are convinced of the urgent need for serious action on climate change, Steve Gardiner's account of the problems of our vulnerability to moral corruption in making climate change policy is likely to make us reach for the bottle and drown our sorrows before rising sea levels drown us all. But before I comment on that account, I want to say something about the topic that Gardiner mentions only to put aside: what would be a just and equitable global scheme for mitigating climate change?

## MITIGATION: THREE PRINCIPLES

As I have already indicated, the best way to understand how global warming is an ethical problem is to think of it as a question about how best to divide a scarce resource that no one owns. The scarce resource is the atmosphere, or more specifically, the capacity of the atmosphere to absorb our waste gases without changing the planet's climate in harmful ways. We might compare the situation of the atmosphere, in this respect, to that of a lake surrounded by 200 different villages which depend on the lake for fish, an important part of their food supply. Each of these villages puts its wastes into the lake, but the amount of waste going into the lake varies considerably from village to village. The total amount is rising steadily, however, and experts predict that if the level of sewage is not reduced, the ecology of the lake will change, and some, or perhaps even all, of the fish will die.

Clearly, the villages need to agree on an acceptable amount of waste to go into the lake and, once that level has been agreed upon, to allocate each village a quota for the amount of waste it can put into the lake. There are different possible ways of allocating this quota. One would be to ask which villages have brought about the current problem. If some villages have, historically, put far more waste into the lake than others, it might be argued that they are the ones that should get the lowest quotas for the future – and perhaps even that they ought to compensate the villages that have put little or no waste into the lake for any reduced fish catch that they may suffer. In environmental law, this is known as the 'polluter pays' principle. It is a fundamental point of economic theory that for markets to work efficiently, all costs should be 'internalised' – that is, included in the costs of production – which means that if a producer emits pollution that harms any third parties, the producer should have to pay for the costs of cleaning up the pollution and/or compensating those affected by it.

Another possible principle would be to ignore the past, and give every village an equal waste disposal quota. But if the villages were unequal in population size, this would be unfair to those who live in the larger villages. A fairer solution would be to divide the total amount of waste that the lake can handle by the

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number of people living around the lake, thus obtaining a per capita amount of acceptable pollution. Multiplying this per capita amount by the number of people living in each village would then yield the village's quota for putting sewage into the lake. In the absence of other relevant factors, this is a self-evidently fair way to divide a common resource to which no individual, or group of individuals, has a stronger claim than any other. It is the same rule we use when dividing a pie among a group of, say, ten people, each of whom is hungry enough to want at least a quarter of the pie, but none of whom have any entitlement to more of the pie than any of the others.

If there are wide differences of wealth between the villages around the lake, a third possible principle might be considered. In such circumstances, some hold that it is fair for the better-off to make greater sacrifices than the worst-off – especially if the hardship suffered by the worst-off is due to the circumstances of their birth, the abilities they have inherited, or other circumstances for which they cannot be held responsible.<sup>1</sup> If this principle is sound, the better-off villages should accept far stricter quotas than those villages that are badly-off.

## WHAT SHOULD BE DONE?

I have identified three principles that might plausibly be held to govern the distribution of a scarce resource in circumstances like those we now face with regard to global warming. To decide which of these principles should apply would take us deep into contentious areas of normative ethics. But in practical terms, the choice between the principles is less relevant than one might at first think, because all three of them point in the same direction. Over the past two centuries, the nations that are now classified as developed countries emitted large quantities of carbon dioxide into the atmosphere as they became industrialised. Most of it is still there, and that is why the atmosphere has exhausted its capacity to absorb more greenhouse gases without a change in the planet's climate. Using the principle that the polluter should pay, it therefore seems reasonable that the developed countries, rather than the developing countries, should currently bear the burden of dealing with the problem of global warming. But if we forget about the past and switch to the equal share rule that we use when we cut up a pie, we also reach the outcome that the developed countries are the ones that need to cut their emissions most drastically. Developed nations account for three-quarters of the world's greenhouse gas emissions while constituting only one-quarter of the world's population. The United States uses at least five times its notional quota under a system of equal per capita shares. Turning to the third principle, that the better-off should make greater sacrifices than the poor, leads to the same conclusion: it is the developed nations that are better off, and should be bearing the largest share of the burden of avoiding climate change.

Michael MacCracken suggests that 'pursuit of equity will tend to raise overall costs, including for the poor and disenfranchised'. Many will also say, in the light of what I have suggested above, that for the US to try to reduce its greenhouse gas emissions to a fifth of what they are now – as the equal per capita shares principle suggests it should do – would cause a major economic crash, especially if this were to be done in, say, a single decade. We don't really know if that is the case, but it would be unwise to take the risk. We do need to take consequences into account, and especially costs for the poor and disenfranchised. That, however, includes the 2.4 billion poor people living on less than the purchasing power equivalent of US\$2 per day, all of whom are disenfranchised, so far as US energy policy is concerned, and very few of whom will have the resources to adapt to adverse climate change. In any case, no one is suggesting that, in the foreseeable future, the US should aim to cut back its emissions to anything approximating what its global fair per capita share would be. The point of teasing out the implications of the equal per capita share view is that it shows us just how outrageous the current stance of the US is. The US is like a greedy person who, when the pie has been cut up so that everyone who wants pie can have an equal slice, takes five slices instead of just one, and then walks away, leaving it to the others to figure out how to adjust the remaining portions of the pie. Moreover, this greedy person is already overfed, while many of the others who were hoping for a slice of pie are severely underfed.

There is, in any case, an obvious solution to the concern that an equitable solution may increase overall costs. The Kyoto Protocol already permits developed countries to sell entitlements to emit greenhouse gases that they do not need to use themselves. Because the developing nations have no binding quotas in the first round of Kyoto cuts, they have nothing to sell. But if the Kyoto Protocol were based on equal per capita shares, the developing nations would see that they have nothing to lose, and a great deal to gain, by agreeing to be bound by the same rules as the developed countries. They would then be able to sell their quota. India, for example, would have a quota proportionate to its population of around one billion, but on current emissions it would require only about a third of that amount. So it would be able to sell on the world market entitlements to emit more than 600 million per capita shares. The United States and other developed nations would bid for those entitlements, and others that would be offered by other developing nations. As long as the total global quota is a significant reduction on present global emissions, this system would provide every country with an incentive to reduce its emissions – the developed nations, so that they would not need to buy so much from others, and the developing nations, so that they would have more of their quota free to sell. As a result the developed nations would be able to avoid the kind of drastic reductions in emissions required by a system based on equal per capita shares without saleable quotas, but to do so they would have to transfer some of their wealth to the developing nations. There would be nothing unfair about such a transfer, for it represents the fact that the

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wealth of the developed nations is made possible by their use of a resource that they do not own. They would simply be paying the rent.

Instituting a global system of trading emission quotas would also answer the objection that equal per capita shares would lead to inefficient production, in greenhouse gas terms. The present system of uncontrolled emissions allows developed nations like the United States to reap economic benefits for themselves, while imposing costs on third parties who do not share in the benefits of the polluters' high productivity. A system of equal per capita entitlements combined with a market in emissions quotas would, by internalising the true costs of production, lead to a more economically efficient outcome.

Admittedly, implementing such a system would be a serious challenge for existing global institutions. It would require measuring each country's emissions and applying some form of sanction to countries that exceed their quotas. Somehow this challenge would have to be met. Climate change is a global problem, and it is difficult to envisage any solution that does not require effective global intuitions.

## CONCLUSION: RATIONAL PESSIMISTS AND CLIMATE LOONIES

Given how bad the conduct of the United States (and, for that matter, Australia) is, Steve Gardiner's account of the ways in which the nature of the situation enhances the risk that these nations will continue to shirk their responsibilities suggests that the only rational response is extreme pessimism. If climate change really is the 'perfect moral storm' that Gardiner suggests, it will sink many of us. Cogent as Gardiner's analysis appears, perhaps there are some grounds for more cautious optimism than it would allow. With the exceptions of the US and Australia, the developed countries have all signed the Kyoto Protocol, and are now discussing the further steps that need to be taken. Since Gardiner's account is entirely general, it does not explain the differences between the various developed nations in this respect. While the responses of many European nations still leave much to be desired, their attitudes allow some ground for hope – or would do so if the U.S. would take a similar position.

Is a change in US policy possible? Perhaps it is, though for a tragic reason. In an earlier discussion of this topic, I suggested that those people at greatest risk from global warming, at least in the near future, are poor farmers in the low-lying delta regions of Bangladesh and Egypt, and the inhabitants of Pacific island nations like Tuvulu, where most of the land is barely above sea level. These lands will be inundated by rising sea levels (Singer, 2002). In 2005 Hurricane Katrina and Hurricane Rita showed, however, that some of these victims are also likely to be citizens of the United States – and disproportionately its poorer citizens. Granted, no single hurricane, drought, or other extreme weather event can be conclusively linked to climate change, but we know that hurricanes



intensify when they pass over warm ocean waters, and global warming will increase ocean temperatures in the Gulf of Mexico and elsewhere. After the two hurricanes, Sir John Lawton, chairman of the British Royal Commission on Environmental Pollution, told *The Independent*: 'If this makes the climate loonies in the States realise we've got a problem, some good will come out of a truly awful situation.' (Lawton, 2005) If Lawton is right, this would be a self-interested, rather than ethical reason for acting. Precisely for that reason, it might escape Gardiner's 'perfect moral storm'. And when it comes to escaping such storms, the motivation isn't as important as the outcome.

#### NOTES

I am grateful to Clive Spash for several valuable suggestions.

<sup>1</sup> The best-known exponent of this idea of fairness is John Rawls (1971), esp. pp. 65–83. A different way of giving priority to the worst off is explored in Derek Parfit (2000).

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