

Sustainability and Intergenerational Justice

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1. The Question

As temporary custodians of the planet, those who are alive at any given time can do a better or worse job of handing it on to their successors. I take that simple thought to animate concerns about what we ought to be doing to preserve conditions that will make life worth living (or indeed **liveable** at all) in the future, and especially in the time after those currently alive will have died ('future generations'). There are widespread suspicions that we are not doing enough for future generations, but how do we determine what is enough? Putting the question in that way leads us, I suggest, towards a formulation of it in terms of intergenerational justice.

A methodological principle to which I shall appeal more systematically in section 2 is that we shall make most headway in asking ethical questions about the future if we start by asking them about the present and then see how the results can be extended to apply to the future. The rationale for this procedure is that we are accustomed to thinking about relations among contemporaries and have developed a quite sophisticated apparatus to help us in doing so. We have no similar apparatus to aid our thoughts about relations between people living at different times. Rather than starting from scratch, then, my proposal is that we

should move from the familiar to the unfamiliar, making whatever adaptations seem necessary along the way.

If we follow this precept, and start from relations among contemporaries, we shall immediately run into a contrast that virtually all moral systems draw, though they derive it differently and use different vocabularies, between what it would be desirable (virtuous, benevolent, supererogatory) to do for others and what it would be wrong not to do for them. We may be said to have a duty or an obligation to do things that it is wrong to do, though this entails taking the words outside their natural homes in, respectively, institutionally generated roles and constraints imposed within rule-governed activities (e.g. legal obligations or promissory obligations).

Another family of terms that fits in somewhere here is the one made up of 'just', 'unjust', 'justice', and 'injustice'. A broad conception would make 'unjust' roughly equivalent to 'wrong' or 'morally impermissible'. John Stuart Mill proposed a broad use in chapter 5 of *Utilitarianism*,¹ and I have myself employed a similarly broad conception of justice in a recent book.² However, we would not in normal usage describe murder or assault as unjust, even though they are paradigmatically wrong. Rather, we reserve terms from the 'justice' family for cases in which some distributive consideration comes into play. For the present purpose, it will make little difference whether we choose the broader or the narrower conception of justice. This is because the questions about intergenerational justice that are liable to create distinctive moral problems are very likely to be issues of justice in the narrow sense: cases where there is (or is believed to be) an intergenerational conflict of interest. Thus, suppose we could provide a benefit or avoid a loss to people in the future at some cost to ourselves, are we morally required to do it? This inter-temporal distributive question falls within the scope of justice in the narrow sense. It is quite true that we can also damage people in the future without benefiting ourselves. But such actions will normally be wrong in relation to contemporaries or at the very least recklessly imprudent. Thus, if the people living at a certain time devastate a large part of the world by fighting a nuclear war, that will obviously be bad for

later generations (assuming that human life is not entirely wiped out). But its inflicting immense evils on subsequent people is of a piece, as it were, with its devastating effect on those alive at the time.

I qualified my equation of injustice and wrongness in the broad sense by saying only that they are roughly equivalent. I had in mind two ways in which we can behave wrongly but not unjustly. First, I take it to be uncontroversial that we can act wrongly in relation to non-human animals. It is, of course, controversial whether or not certain practices such as using them in medical experiments or raising them for food are wrong. But scarcely anybody would deny that some acts (e.g. torturing them for fun) are wrong. We can, I think, stretch 'duty' and 'obligation' further beyond their core applications to enable us to talk about duties or obligations to non-human animals. (Even here, though, the core applications exert a pull: we are especially liable to use the vocabulary of duty where a role-related responsibility is at issue.) In contrast, it does not seem to me that the concept of justice can be deployed intelligibly outside the context of relations between human beings. The reason for this is, I suggest, that justice and injustice can be predicated only of relations among creatures who are regarded as moral equals in the sense that they weigh equally in the moral scales.

The second way in which wrongness and injustice come apart is that it is possible to behave wrongly even where the interests of sentient beings are not involved. Here, it is controversial that there are really any cases in which we can treat 'nature' wrongly unless the interests of sentient beings are somehow affected. I shall defend the claim below (section 5) though I shall there argue that the common move of appealing to the 'independent value of nature' is a mistaken one. For the present purpose, however, I can bracket the validity of the claim. Let me simply say that *if* it is in some circumstances wrong to behave in a certain way in relation to 'nature', there is no entity that can properly be described as a victim of *injustice*.³ I also believe, incidentally, that talking about duties or obligations to 'nature' is misguided. My reason for holding this will, I hope, become apparent when I

explain the sense in which I think we can behave wrongly in relation to 'nature'.

To sum up the discussion this far, behaving unjustly to future generations is wrong but (even in the broad conception of justice) it is not the only thing that those currently alive can do in relation to the distant future that is wrong. Injustice is, however, such a manifestly important aspect of wrongness that it is well worth the amount of attention it gets from political philosophers. Further, if we define 'distributive justice' to correspond to the narrow conception of justice, which focuses on conflicts of interest, we may say that questions about intergenerational justice are characteristically questions about intergenerational distributive justice.

With that by way of preamble, I can now set out very quickly what I see as the question to be asked about the ethical status of sustainability. This is as follows: Is sustainability (however we understand the term) either a necessary or a sufficient condition of intergenerational distributive justice?

2. Distributive Justice

In accordance with the methodological maxim that I laid down at the beginning, I shall approach the question of the demands of intergenerational justice via the question of the demands of distributive justice among contemporaries. The premiss from which I start is one of the fundamental equality of human beings. (It is precisely because this premiss does not make moral standing depend on the time at which people live that principles of justice valid for contemporaries are *prima facie* valid for intergenerational justice too.) Fundamental equality is, as John Stuart Mill said, 'the first principle of morals'. 'Bentham's dictum, "everybody to count for one, nobody for more than one"' is, as he noted, a specific application of it to the utilitarian calculus, telling us that pains and pleasures of equal intensity are to be given the same value in the calculus, regardless of the identity of the person to whom they belong.⁴ An application that is not tied to utilitarianism is that different treatments of different people must be justified by

adducing some morally relevant ground for different treatment. This is, of course, not saying a great deal until we know what are to count as morally relevant reasons. But even if we simply say that they are grounds which we ought reasonably to expect the person affected to accept freely, we shall rule out many historically prominent forms of domination and systematic inequality of rights, which have rested on nothing but the power of the beneficiaries to impose them.'

I do not know of any way of providing a justification for the premiss of fundamental equality: its status is that of an axiom. I will point out, however, that it is very widely accepted, at least in theory, and attempts to provide a rationale for unequal treatment at least pay lip service to the obligation to square it with the premiss of fundamental equality. Moreover, it seems to me that there is a good reason for this in that it is very hard to imagine any remotely plausible basis for rejecting the premiss. In any case, it is presupposed in what follows.

In brief compass, then, I shall propose four principles which are, I claim, theorems of the premiss of fundamental equality. These are as follows:

1. *Equal rights*. *Prima facie*, civil and political rights must be equal. Exceptions can be justified only if they would receive the well-informed assent of those who would be allocated diminished rights compared with others.

2. *Responsibility*. A legitimate origin of different outcomes for different people is that they have made different voluntary choices. (However, this principle comes into operation fully only against a background of a just system of rights, resources and opportunities.) The obverse of the principle is that bad outcomes for which somebody is not responsible provide a *prima-facie* case for compensation.

3. *Vital interests*. There are certain objective requirements for human beings to be able to live healthy lives, raise families, work at full capacity, and take a part in social and political life. Justice requires that a higher priority should be given to ensuring that all human beings have the means to satisfy these vital interest than to satisfying other desires.

4. *Mutual advantage*. A secondary principle of justice is that, if everyone stands *ex ante* to gain from a departure from a state of affairs produced by the implementation of the above three principles, it is compatible with justice to make the change. (However, it is not unjust not to.)

What implications do these principles of justice have for justice between generations? Let me take them in turn.

1. *Equal rights*. I cannot see that this principle has any direct intergenerational application. For it would seem to me absurd to say, e.g. that it is unfair for a woman to have more rights in Britain now than a century ago, or unfair that a woman had fewer rights then. Surely, the principle of equal rights applies to contemporaries and only to contemporaries. However, the present generation may be able to affect the likelihood that there will be equal rights in the future. Thus, it seems to be a robust generalization that rights suffer at times when large challenges to a system demand rapid and co-ordinated responses. (To offer a relatively modest example, I would guess that all individual university teachers and departments have lost autonomy in the last twenty years.) The more environmental stress we leave our successors to cope with, therefore, the poorer prospects for equal rights.

2. *Responsibility*. This principle will clearly apply among people who are contemporaries in the future, as it does among people who are contemporaries today, to justify inequalities of outcome that arise from choice. But what place, if any, does it have in relations between different generations? People in the future can scarcely be held responsible for the physical conditions they inherit, so it would seem that it is unjust if people in future are worse off in this respect than we are. (This, of course, leaves open the question of what is the relevant criterion of being well off, and I shall take that up in the next section.) What future people may be held responsible for, however, is how many of them there are at any given time.

Clearly, if we take the view that the principle of responsibility applies to population size, it will have highly significant implications for the requirements of intergenerational justice. I shall pursue this further in section 4.

3. *Vital interests*. The fundamental idea that location in space and time do not in themselves affect legitimate claims has the immediate implication that the vital interests of people in the future have the same priority as the vital interests of people in the present. I shall take up the implications of this in section 4.

4. *Mutual advantage*. In theory, it would be possible for the principle of mutual advantage to have cross-generational implications. That is to say, it could be that there are intertemporally Paretian improvements to be made in comparison with a baseline constituted by the outcomes of the other principles working together. However, I think it quite implausible that there are. The scope of the principle in relation to the distant future is particularly limited because it is explicitly stated in terms of preferences, and the further into the future we look the less confidence we can have about the preferences that people will have.

An objection commonly made against a universalist theory of justice such as this one is that it does not provide an adequate account of motivation to conform to its demands. It is certainly true that it leaves a gap in a way that 'communitarian' accounts do not. Consider, for example, Avner de-Shalit's book *Why Posterity Matters*.⁶ It seems to me that his account closes the gap only too successfully. For in essence what he is saying is that concern for people in the future is something we naturally have, to the extent that we see them as carrying on with projects that are dear to us, because that gives depth and meaning to our own lives. This is doubtless true to some degree, though it would seem more for some than for others, but (except to the extent that it can generate intragenerational obligations arising from the 'principle of fair play') it does not tell people that they have to do what they are not inclined to do anyway. Moreover, because it is a cross-generational form of communitarianism, it cannot offer any reason for people in rich countries to cut back so as to improve the prospects of future people in other communities. Yet that is, as it seems to me, the most important thing for a conception of intergenerational justice to deliver.

In almost all the world, there is discrimination against women: they have fewer legal rights than men, are poorly protected by the law, and even more by its administration, against domestic violence, they have restricted educational and occupational opportunities, and so on. In most countries there are (*de facto* or *de jure*) different grades of membership based on race, ethnicity, language, religion, or some other characteristic. Such practices have powerful beneficiaries and it might be said (and is by so-called communitarian political philosophers) that it is 'no use' applying universalistic criteria of justice and pointing out that according to these criteria practices such as these are unjust. The only 'useful' criticism is 'connected' criticism, which deploys already accepted ideas. But this means that criticism cannot get a foothold so long as those who discriminate on the basis of gender or ethnicity have an internally coherent rationale. Meanwhile, it remains none the less true that such practices are unjust. And even if that thought does not have any motivating effect on those within a country who are in a position to change things, it may motivate people outside to organize boycotts and lead international organizations to exclude such countries from the benefits of international trade and aid.

I believe that the core idea of universalism—that place and time do not provide a morally relevant basis on which to differentiate the weight to be given to the interests of different people—has an immense rational appeal. Its corollaries—the illegitimacy of slavery and the impermissibility of assigning women an inferior legal status, for example—have been acted on for the past two centuries in a significant part of the world, despite strongly entrenched interests and beliefs in opposition to them. In the past fifty years, concern for people who are distant in place and time has grown in a quite unprecedented way. The great question for the future is whether or not that concern will grow sufficiently to induce action of the kind called for by the demands of justice. But I can see no reason for supposing that those demands should be scaled back to match pessimistic predictions about the way in which that question will be answered, even if we believe pessimism to be a reasonable response to the evidence so far.

3. Sustainability

Many people who have thought seriously about the matter have reached the conclusion that the concept of sustainability is inherently incapable of carrying the burden it would have to bear if it were to constitute a basic building block in a theory of intergenerational justice. With due diffidence, as a non-expert, I should like to make two observations on the literature that I have read. I first note a tendency to elide an important distinction. I have in mind here on the one hand the problem of producing a definition of sustainability that is coherent and comprehensible, and on the other hand the problem of drawing out concrete policy implications from any such definition. It seems to me that the problem of application is undeniably enormous, but that this should not be allowed too readily to impugn the possibility of achieving a definition of the concept.

The other point that occurs to me about the pessimists is their propensity to cite disagreement about the concept of sustainability as a basis for dismissing it. But we need not despair so long as the disagreements reflect substantive differences of viewpoint. Thus, let us suppose that concern about sustainability takes its origins from the suspicion that I articulated at the beginning: the suspicion that we are shortchanging our successors. If we then take this to mean that we should not act in such a way as to leave them with less of what matters than we enjoy, and call that sustainability, it is clear that the content of sustainability will depend crucially on what we think matters. For example, one writer may assume that what matters is utility, understood as want-satisfaction. (Such a writer is unlikely to be anything other than an economist, but economists loom quite large in the literature of sustainability.) Others will disagree and propose some alternative. There is nothing either mysterious or discreditable about this. It is, in fact, exactly what we should expect.

The core concept of sustainability is, I suggest, that there is some X whose value should be maintained, in as far as it lies within our power to do so, into the indefinite future. This leaves it open for dispute what the content of X should be. I have already

mentioned one candidate: utility, understood (as is orthodox in economics) as the satisfaction of wants or, as they are usually called, preferences. The obvious objection to this criterion is that wants are (quite reasonably) dependent on what is, or is expected to be, available. Perhaps people in the future might learn to find satisfaction in totally artificial landscapes, walking on the astroturf amid the plastic trees while the electronic birds sing overhead. But we cannot but believe that something horrible would have happened to human beings if they did not miss real grass, trees, and birds.

The want-satisfaction criterion does not enable us to explain what would be wrong with such a world. This sheds light on the oft-noted tendency of economists to be disproportionately located at the 'brown' end of the spectrum on environmental issues. For economists are also, as I have already noted, the most significant adherents of the want-satisfaction criterion. Combine that criterion with a faith in the adaptability of human preferences and you have a formula that can easily generate optimism about the future. For it will seem plausible that almost any environmental degradation that does not actually undermine productive capacity will be compensable by advances in technology that we can safely assume will continue to occur.

If I am right that substantive disputes about the concept of sustainability reflect disagreements about what matters, we can begin to see why what appear superficially to be technical questions of definition are so intractable. Consider especially the arguments in the literature about the status of 'natural capital'. For someone who adopts want-satisfaction as a criterion, all resources are in principle fungible: if plastic trees are as satisfying as real ones, there is no reason for worrying about the destruction of the world's trees so long as the resources exist to enable plastic replacements to be manufactured in sufficient numbers. Those who insist that 'natural capital' must be preserved are in effect denying the complete fungibility of all capital. But what is this disagreement actually about? On the interpretation I wish to offer, this is not a disagreement that turns on some matter of fact. It would be quite possible to agree with everything that might be said in favour of fungibility and still deny that it amounts to a case

against the special status of 'natural capital'. For the case in favour of giving the preservation of nature an independent value is that it is important in its own right. If future people are to have access to what matters, and unspoilt nature is an essential part of what matters, then it follows that loss of 'natural capital' cannot be traded off against any amount of additional productive capacity (I leave until section 5 the idea that nature might have value independently of its contribution to human interests, broadly conceived.)

What helps to obscure the point at issue is the terminology of 'capital' itself. For this naturally suggests that what is going on is a technical dispute about the conditions of production. On this understanding of the matter, the proponents of 'natural capital' are insisting that production has a natural base that cannot be run down beyond a certain point without putting future production in jeopardy. But the 'fungibility' school are not committed to denying this. They insist on fungibility in principle; whether or not everything can be substituted for *in practice* is a matter of fact on which they do not have to be dogmatic. But if I am right the real dispute is at the level of principle, and is not perspicuously represented in terms of the properties of different kinds of capital.

'Capital' is a term that is inherently located within economic discourse. A mountain is, in the first instance, just a mountain. To bring it under the category of 'capital'-of any kind-is to look at it in a certain light, as an economic asset of some description. But if I want to insist that we should leave future generations mountains that have not been strip-mined, quarried, despoiled by ski-slopes, or otherwise tampered with to make somebody a profit, my point will be better made by eschewing talk about 'capital' altogether.

Let us dismiss the hypothesis that X is want-satisfaction. What, then, is it? On the strength of the objection urged against want-satisfaction, it might appear that what should be maintained for future generations is their chance to live a good life as we conceive it. But even if 'we' agreed on what that is (which is manifestly not the case), this would surely be an objectionable criterion for 'what matters'. For one of the defining characteristics of human beings is

their ability to form their own conceptions of the good life. It would be presumptuous-and unfair-of us to pre-empt their choices in the future. (This is what is wrong with all utopias). We must respect the creativity of people in the future. What this suggests is that the requirement is to provide future generations with the opportunity to live good lives according to their conception of what constitutes a good life. This should surely include their being able to live good lives according to our conception but should leave other options open to them.

This thought leads me to the suggestion (for which I claim no originality) that X needs to be read as some notion of equal opportunity across generations. Unfortunately, however, the concept of equal opportunity is notoriously treacherous. Although, therefore, I do believe this to be the right answer, I have to confess that saying this is not doing a lot more than set out an agenda for further study.

To summarize an extensive and in places technical literature with desperate brevity, there are two natural approaches to the measurement of opportunity, both of which rapidly turn out to be dead ends. One is to count opportunities. This has the obvious drawback that three options that are very similar (three apples of the same variety) will have to be said to give more opportunity than two more dissimilar options (an apple and an orange). But why is a greater range more valuable? A natural response might be that a choice between a number of apples is fine if you are an apple-lover but leaves you out of luck otherwise, whereas a choice between an apple and an orange gives you two shots at getting something you like. We might be tempted to move from this to the conclusion that what makes a range of options valuable is the want-satisfying property of the most preferred item in it. From there it is a short step to identifying the value of a set of opportunities with the utility of the most preferred option in it.

Notice, however, that if we follow this path we shall have insensibly changed the subject. We began by asking for a measure of the *amount* of opportunity provided by a set of options. What we have now done is come up with a measure of the value of the opportunities provided by a set of options. Even if we concede that the value of the most preferred element is for certain

purposes an appropriate measure of the value of a set of options, it is strikingly counterintuitive as a measure of the amount of opportunity offered by a set of options. Thus, for example, it entails that opportunity is not increased by adding any number of desirable options to a singleton choice set, so long as none of those added comes as far up the agent's preference scale as the one option with which we began.

Another way of seeing the inadequacy of this measure of opportunity is to note that it takes preferences as given. But the whole reason for our taking opportunities to be constitutive of X was that we could not accept utility based on given preferences as the criterion of X. If preferences in the future are such that plastic trees (the only kind, let us suppose, that are available) give as much satisfaction to people then as real trees do now to us, the amount of opportunity in the future is not diminished. Thus, if we embrace the measure of opportunity that equates it with the utility of the most preferred item in the choice set, we shall simply be back at utility as the criterion of X. All that will have happened is that it will have been relabelled 'opportunity'.

The notion of a range of opportunity cannot be reduced either to the sheer number of opportunities or to the utility of the most preferred option. We must define it in a way that tracks our reasons for wishing to make it our criterion of X in the first place. That means taking seriously the idea that conditions must be such as to sustain a range of possible conceptions of the good life. In the nature of the case, we cannot imagine in any detail what may be thought of a good life in the future. But we can be quite confident that it will not include the violation of what I have called vital interests: adequate nutrition, clean drinking-water, clothing and housing, health care and education, for example. We can, in addition, at the very least leave open to people in the future the possibility of living in a world in which nature is not utterly subordinated to the pursuit of consumer satisfaction.

More work, as they say, needs to be done, but I cannot hope to undertake it within the bounds of this chapter. The most important contention that I have tried to establish in this section is that the concept of sustainability is irreducibly normative. so that disputes about its definition Will inevitably reflect differing values.

If, as I maintain, the **root idea** of sustainability is the conservation of what matters for future generations, its definition is inescapably bound up with one's conception of what matters.

4. Sustainability *and* Intergenerational Justice

Having said something about intergenerational justice and something about sustainability, it is time to bring them together. We can be encouraged about the prospect of a connection if I am correct in my contention that sustainability is as much a normative concept as is justice. And I believe that there is indeed a close connection. It may be recalled that the question that I formulated at the end of section 1 asked if sustainability was either a **necessary** or a sufficient condition of intergenerational justice. It appears that sustainability is at least a necessary condition of justice. For the principle of responsibility says that, unless people in the future can be held responsible for the situation that they find themselves in, they should not be worse off than we are. And no generation can be held responsible for the state of the planet it inherits.

This suggests that we should at any rate leave people in the future with the possibility of not falling below our level. We cannot, of course, guarantee that our doing this will actually provide people in the further future with what we make possible. The next generation may, for all we can know, go on a gigantic spree and leave their successors relatively impoverished; The potential for sustaining the same level of X as we enjoy depends on each successive generation playing its part. All we can do is leave open the possibility, and that is what we are obliged by justice to do.

An objection sometimes raised to the notion that it would be unjust to let future generations fall below our standard (of whatever is to count as X) is that there is something arbitrary about taking the current position as the baseline (see Beckerman Ch. 3 in this volume). We are, it is argued, better off materially than our ancestors. Suppose we were to pursue policies that ran down

resources to such an extent that people in future would be no better off than our ancestors were a hundred years (or two hundred years) ago. Why would that be unjust? What is so special about the present as the point of comparison? In reply, it must be conceded that the expression 'intergenerational justice' is potentially misleading-though perhaps it actually misleads only those who are determined to be misled. It is a sort of shorthand for 'justice between the present generation and future generations'. Because of time's arrow, we cannot do anything to make people in the past better off than they actually were, so it is absurd to say that our relations to them could be either just or unjust. 'Ought' implies 'can', and the only people whose fate we can affect are those living now and in the future. Taking the present as our reference point is arbitrary only in some cosmic sense in which it might be said to be arbitrary that now is now and not some other time. It is important, however, to understand that 'now' means 'now' in the timeless sense, not '**1998**'. Wilfred Beckerman suggested in a presentation to the seminar from which this chapter arose (see Beckerman in this volume) that there was something arbitrary in privileging 1998 from all dates in history as the benchmark of sustainability. So there would be. But in 1999 the benchmark will be **1999**, and in 2099 it will be **2099**. There are, as I have explained, excellent reasons for starting from now, whenever 'now' may be. But just as 'here' does not mean my flat (though that is where I am as I write this) so in the sentence 'We start from now' the meaning of 'now' is not rigidly designated.

We now have to face a question of interpretation so far left aside. This is: How are we to deal with population size? On one quite natural interpretation of the concept of sustainability, the X whose value is to be maintained is to be defined over individuals. The demands of justice will then be more stringent the larger we predict the future population to be. Suppose we were simply to extrapolate into the indefinite future growth rates of the order of those seen in past decades. On the hypothesis that numbers double every forty years or so, we shall have a world population after two centuries of around a hundred and fifty billion and in a further two centuries a population of five thousand billion. If the increase were spread evenly round the world, this would imply a

population for the UK more than ten times the size of the whole current world population.

It is surely obvious that no degree of self-immiseration that those currently alive could engage in would be capable of providing the possibility of an equal level of X per head even that far inside the future. This would be so on any remotely plausible definition of X. (Indeed, we can be certain that some cataclysm would have occurred long before these numbers were reached.) But even far more modest increases in population would make it impossible to maintain X, if X is taken to include the preservation of so-called 'natural capital'.

This is worth emphasizing because the 'cornucopian' school of optimists about population, such as Julian Simon, cite in support of their ideas the alleged failures of early neo-Malthusians (from the mid-nineteenth century onward) to predict correctly the course of events. But I believe that the pessimists have already been proved right on a central point: the deleterious impact on the quality of life of sheer numbers. Thus, John Stuart Mill's forebodings a century and a half ago (in 1848 to be precise) have, it seems to me, proved quite uncannily prescient. All that he feared has already in large measure come to pass, and every bit of future population increase will make things that much worse.

Mill was quite prepared to grant the 'cornucopian' premiss that material conditions might be able to keep up with a greatly expanded population (or even more than keep up with it). But he still insisted that the population increase should be regretted. 'A population may be crowded, though all be amply supplied with food and raiment . . . A world from which solitude is extirpated, is a very poor ideal . . . Nor is there much satisfaction in contemplating the world with nothing left to the spontaneous activity of nature; with every rood of land brought into cultivation, which is capable of growing food for human beings; every flowery waste or natural pasture ploughed up, all quadrupeds or birds which are not domesticated for man's use exterminated as his rivals for food, every hedgerow or superfluous tree rooted out, and scarcely a place left where a wild shrub or flower could grow without being eradicated as a weed in the name of improved agriculture. (6)

Treating future population as parametric is in effect assuming it to be beyond human control. But any such assumption is obviously false. I suggest, therefore, that the size of future population should be brought within the scope of the principle of responsibility. We must define intergenerational justice on the assumption that 'the increase of mankind shall be under the guidance of judicious foresight', as Mill put it.⁸ If future people choose to let population increase, or by default permit it to increase, that is to be at their own cost. There is no reason in justice for our having any obligation to accommodate their profligacy. Concretely, then, the conception of sustainability that makes it appropriate as a necessary condition of intergenerational justice may be formulated as follows: Sustainability requires at any point in time that the value of some X per head of population should be capable of being maintained into the indefinite future, on the assumption that the size of the future population is no greater than the size of the present population.

It is worth emphasizing again that we always start from now, and ask what sustainability requires. The question is: What amount of X could be maintained into the indefinite future, given things as they are now, on the assumption that future population will be the same then as now? The way in which 'now' is always moving would not matter if (a) the demands of sustainability were correctly assessed in 1998; (b) sustainability were achieved in **1998** and maintained thereafter; and (c) the assumption of stable population control were in fact accurate. If all these conditions were met, we could substitute '1998' for 'now', but not otherwise.

We know that stabilization of population is perfectly possible as a result of voluntary choices made by individuals because a number of Western countries have already arrived at the position at which the (non-immigrant) population is only barely replacing itself, if that. Although they stumbled into it without any particular foresight, the formula is now known and can be applied elsewhere. Women have to be educated and to have a possibility of pursuing rewarding occupations outside the home while at the same time compulsory full-time education and stringent **child-labour** laws make children an economic burden rather than a benefit.

Unfortunately, however, many countries have such a large proportion of their **population** below the age of fifteen that their numbers would double before stabilizing even if every female now alive had only two children. Stabilizing population at its current level in these countries can be achieved only if women have only one child. So long as a policy restricting women to one child is operated consistently across the board, it does not contravene any principle of intragenerational justice, and is a requirement of intragenerational justice. Combined, as it has been in China, with a focus on medical care and education for children, there can be no question that it offers the next generation the best chance of living satisfactory lives, and removes a huge burden on future generations.

At this point, however, we must expect the response, already anticipated in general terms, that whether or not this is just it simply conflicts too strongly with religious objections to contraception and abortion and to powerful pronatalist norms, especially in many parts of the world where great importance is attached to having a male heir. If we are impressed by this, we shall have to say that justice demands more of people than they can reasonably be expected to perform. But what follows from that? At this point, it seems to me unavoidable to enter into the question that I have so far left on one side: the concrete implications of any criterion of sustainability. Suppose we believed that it would be fairly easy to provide the conditions in which X (e.g. some conception of equal opportunity) could be maintained into the indefinite future for a population twice the existing one. We might then treat as parametric the predicted doubling of world population and redefine sustainability accordingly. But my own conjecture is that the criterion of sustainability already proposed is extremely stringent, and that there is little chance of its demands being met. If I am right about this, all we can do is get as close to that as we can, which means doing everything possible to reduce population growth as well as everything possible to conserve resources and reduce depletion.

What then about the future? Suppose that the demographers' (relatively optimistic) projection for world population is correct, so that it stabilizes some time in the next century at double its

current size. If we stick to the proposition that intragenerational justice is always a problem for the current generation (because they are the only people in a position to do anything about it), the implication is that sustainability should be redefined by each generation as the indefinite continuation of the level of X over the existing population, whatever it is. Whether people in the past have behaved justly or not is irrelevant. But if I am right in thinking that we are going to fall short of maintaining sustainability even on the basis of the continuation of current population size, it seems highly unlikely that people in the future will achieve it on the basis of a population twice as large. The only ray of light is that getting from a stable population to a gently declining one would not be difficult (nothing like as difficult as stabilizing a rapidly expanding population), and that the power of compound interest means that even a gradual decline in numbers would suffice to bring world population back well below current levels over a matter of a few centuries.

My conclusion, after this vertiginous speculation, is that we would be doing very well to meet the criterion of sustainability that I originally proposed. The more we fail, and the more that world population is not checked in coming decades, the worse things will be in the future and the smaller the population at which it will be possible to maintain tolerable living conditions. Perhaps the right way to look at the matter is to think of population and resources (in the largest sense) as the two variables that enter into sustainability: we might then say that sustainability is a function of both. Realistically, any given generation can make only a limited impact on either. But what can at least then be said is that if some generation is failing to meet the condition of sustainability (defined in the standard way over a fixed population), it can at least be more just than otherwise towards its successors by ensuring that the dwindling resources will have to spread around over fewer people.

Interpreted on some such lines as these, sustainability is, I suggest, adequate as a necessary condition of intergenerational justice. Is it also a sufficient condition? I feel strongly inclined to say that it is: if we were to satisfy it, we would be doing very well, and it is hard to see that we could reasonably be expected to do

more. My only hesitation arises from the application of the vital interests. (I noted in section 2 that this needed later discussion.) Obviously, if we give the principle of vital interests priority over the principle of responsibility, we are liable to be back at a version of the absurd idea that we are obliged to immiserate ourselves to a level capable of sustaining a hugely larger population if we predict there will be one. For if we predict an enormously greater number of people in the future, meeting their vital interests trumps any objective we might have. I have not specified priority relations among the principles, and I do not think this can be done across the board. The principles are guides to thinking, not a piece of machinery that can be cranked to grind out conclusions. However, in this case it seems to me that giving the principle of vital interests priority produces such absurd results that this cannot possibly be the right thing to do.

Even if we make the principle of vital interests subordinate to the principle of responsibility, there is still a feature of the principle of vital interests that is worth attention. So far 'generations' have been treated as collective entities: the question has been posed as one of justice between the present generation as a whole and future generations as wholes. But the principle of vital interests forces us to focus on the fates of individuals. Suppose we leave future generations as collectivities with 'enough' between them to satisfy the criterion of sustainability, but it is distributed in such a way that the vital interests of many will predictably fail to be met? Does this possibility suggest that the criterion of sustainability has to be supplemented in order to count as a sufficient condition of intergenerational justice?

What I think it shows is that the distinction between intergenerational and intragenerational justice cannot be made absolute. I pointed out in section 1 that some things that would be wrong in relation to people in the future (e.g. fighting a nuclear war) would in the first instance be wrong among those alive at the time. Similarly, the primary reason for our being able to predict that the vital interests of many people in the world will not be met in the future is that they are not being met in the present. Formally, I suggest we have to say that maldistribution in the future is intragenerational injustice in the future. But we must

recognize that intragenerational injustice in the future is the almost inevitable consequence of intragenerational injustice in the present.

5. *Beyond* Justice

If the current generation meets the demands of justice, is that enough? In the broad sense of justice, we would not be doing wrong in relation to human beings if we met the demands of justice. But we can (as I said in section 1) behave wrongly in relation to non-human animals even though this does not fall within the scope of justice. If we factor this in, what difference does it make? As far as I can see, its main effect is to reinforce the importance of keeping the lid on population, since the pressure on the habitats of the remaining wild non-human animals are already being encroached on at an alarming rate as a consequence of the growth of population that has already occurred.

The remaining question is the one that divides environmentalists into those for whom the significance of the environment lies solely in its contribution to human (or if you like animal) welfare from those for whom the environment has some significance beyond that. (Perhaps talking about 'the environment' is itself prejudicial since it suggests something in the background to another thing that is more important. But I take it that the distinction is familiar enough in a variety of descriptions.) I have to confess that I cannot quite decide what I think about this question because I find it hard to focus on the question when it is put, as it often^r is, as one about the 'independent value of nature'. Let me explain. ✓

In *Principia Ethica*, G. E. Moore sought to discredit Sidgwick's claim that nothing can be said to be good 'out of relation to human existence, or at least to some consciousness or feeling'. To this end, he asked his reader to consider

the following case. Let us imagine one world exceedingly beautiful. Imagine it as beautiful as you can; put into it whatever on this earth

you most admire—mountains, rivers, the sea, trees, and sunsets, stars and moon. Imagine these all combined in the most exquisite proportions so that no one thing jars against another but each contributes to increase the beauty of the whole. And then imagine the ugliest world you can possibly conceive. Imagine it simply one heap of filth, containing everything that is most disgusting to us, for whatever reason, and the whole, as far as maybe, without one redeeming feature. Such a pair of worlds we are entitled to compare: they fall within Prof. Sidgwick's meaning, and the comparison is highly relevant to it. The only thing we are not entitled to imagine is that any human being ever has or ever, by any possibility, can, live in either, can ever see and enjoy the beauty of the one or hate the foulness of the other. Well, even so, supposing them quite apart from any possible contemplation by human beings; still, is it irrational to hold that it is better that the beautiful world should exist, than the one that is ugly?¹⁰

It is surely obvious that the question is loaded, because the two worlds are already unavoidably being visited by us, at least in imagination. It requires a self-conscious effort to avoid being affected by that. But if I make that effort conscientiously, I have to say that the whole question strikes me as ridiculous. In what possible sense could the universe be a better or a worse place on one supposition rather than the other? It seems to me an abuse of our language to assume that the word 'good' still has application when applied to such a context.

If adherence to the 'deep ecological' or 'dark green' position entails giving Moore the answer he wanted about the two worlds, I have to be counted out. But I wonder if all (or even many) of those who wish to endorse such a position feel thereby committed to attaching an intrinsic value to nature in the sense suggested by Moore. And, quite apart from that biographical question, there is the philosophical question: is there any way of being 'dark green' that does not entail being committed to Moore's preferred answer about the two worlds?

I am inclined to think that there is an attitude (which I share) that is distinguishable from the first position but is perhaps misleadingly expressed in terms of the intrinsic value of nature. This is that it is inappropriate—cosmically unfitting, in some sense—regard nature as nothing more than something to be exploited for

the benefit of human beings—or other sentient creatures, if it comes to that. There is an obvious sense in which this is still somehow human-centred, because it is about the right way for human beings to think about nature. But the content of that thought could be expressed by talking about the intrinsic value of nature.

It is important to observe that what I am saying here is not to be equated with the kind of environmental utilitarianism put forward by Robert Goodin in his *Green Political Theory*.¹¹ According to this, we do as a matter of fact care about unspoiled nature—for example, even the most carefully restored site of open-cast mining is 'not the same' as the original, any more than a perfect copy of a statue is 'the same' as the original. A sophisticated utilitarianism will therefore take our concerns about nature into account and set more stringent limits on the exploitation of the environment than would be set by our merely regarding the environment as a factor of production. This enables us to press 'green' concerns but still within a framework that makes human interests the measure of all things.

What I am saying is quite different from this. For it is a purely contingent matter whether or not people have the attitude to nature attributed to them by Goodin or, if they do, how far it weighs in their utility function compared with, say, cheap hamburgers from the cattle raised on pasture created from the ravaged Brazilian rain forest. The view that I am proposing says bluntly that people behave wrongly if they act out of a wrong attitude to nature. Although this is in a sense a human-centred proposition, it cannot be captured in any utilitarian calculus, however extensive its conception of human well-being.

6. Conclusion

I want to conclude by saying that I can understand and indeed sympathize with the impatience that will undoubtedly be felt by any environmental activist into whose hands this might fall. (Jonathon Porritt eloquently expressed such sentiments—and not

only in relation to my contribution-during the final session of the Keele seminars on social justice and sustainability.) What the activist wants is ammunition that can be used in the fight for greater ecological awareness and responsibility. Fine-drawn analyses of sustainability such as those offered here are hardly the stuff to give the troops. But is it reasonable to expect them to be?

Let me make what may at first sight seem an eccentric suggestion. This is that it is not terribly difficult to know what needs to be done, though it is of course immensely difficult to get the relevant actors (governmental and other) to do it. I do not deny that there are large areas of scientific uncertainty, and probably always will be (e.g. about global warming), since the interacting processes involved are so complex. But what I am claiming is that virtually everybody who has made a serious study of the situation and whose objectivity is not compromised by either religious beliefs or being in the pay of some multinational corporation has reached the conclusion that the most elementary concern for people in the future demands big changes in the way we do things. These could start with the implementation by all signatories of what was agreed on at the Rio Conference.

Moreover, whatever is actually going to get done in, say, the next decade, to move towards a sustainable balance of population and resources is going to be so pathetically inadequate that it really does not matter how far it falls short. We know the direction in which change is required, and we know that there is absolutely no risk that we shall find ourselves doing more than required. It really does not make any practical difference whether we think a certain given effort represents **10** per cent of what needs to be done, or whether we think it is as much as **20** per cent. Either way, we have good reason to push for more. If I am right about this, it explains the feeling among practitioners that philosophical analyses have little relevance to their concerns. For whether we make the demands of justice more or less stringent, it is going to demand more than is likely to get done in the foreseeable future. What then is the use of pursuing these questions?

One obvious answer is that as political philosophers we are concerned to discover the truth, and that is an adequate **justifica-**

tion for our work. The agenda of a scholarly discipline has its own integrity, which is worthy of respect. Distributive justice among contemporaries and within the boundaries of a state has been at the centre of the dramatic revival of political philosophy in the last quarter century. Extending the inquiry into the **nature of** distributive justice beyond these limits is a natural and inevitable development. But I think that there is also something to offer to those who are not interested in pursuing these questions for their own sake. It is surely at least something to be able to assure those who spend their days trying to gain support for measures intended to improve the prospects of future generations that such measures do not represent optional benevolence on our part but are demanded by elementary considerations of justice. What I have aimed to do here is show that the application of ideas about justice that are quite familiar in other contexts have radical implications when applied to intergenerational justice, and that there is no reason why they should not be.