

SOME PROBLEMS WITH SUSTAINABILITY

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Michael Redclift comments of sustainability that, like motherhood and God, it is difficult not to approve of it. It is difficult not to reply that this rather depends on how they are conceived – and much the same could, I think, be said of sustainability.¹

The language of sustainability, and derivative concepts such as sustainable development, sustainable use and sustainable growth have become commonplace in recent political and economic discourse and are increasingly used in Christian ethical discourse, perhaps most notably in publications by the World Council of Churches. The centrality of the concept of sustainability at the 1992 Rio Summit was just its most recent appearance in a line of influential documents, from the 1980 *World Conservation Strategy* onwards, including the Brundtland Report *Our Common Future* in 1987. Sustainability, and in particular, sustainable development are virtually passwords to much international political debate.

But the degree of consensus, and the apparent clarity which surrounds the language and conceptuality of sustainability is deceptive. Sustainability is a concept capable of many nuances and interpretations. Indeed, it is certainly arguable that the very vagueness of the term sustainability has enabled its rise to popularity. When I began thinking about this paper I thought I would aim to clarify some of the issues surrounding sustainability. However, it rather seems as if what I have actually been doing is the opposite – muddying apparently clear waters.

Sustainability is usually defined as the ability to keep on going indefinitely, or at least for an extensive period of time. When speaking of sustainability in the political context, it is usually the sustainability of *human society* which is being referred to. Thus, the aim at sustainability is, broadly, the aim at a human society which can keep

¹ Michael Redclift, *Sustainable Development: Needs, Values, Rights* *Environmental Values* 2 Vol 1. Spring 1993 p.3.

on going indefinitely. Sustainable *use* is a subset of sustainability in general, referring to the need to ensure the use of resources in such a way as to permit human society to be sustainable.

Sustainable growth and sustainable development present greater difficulties of definition because of the contentious nature of the terms development and growth in themselves – and the widespread tendency to use them synonymously, or to assume that one requires, or is generated by, the other. If development is used to mean ‘economic development’ this synonymity may be justified. But in principle, to ‘grow’ and to ‘develop’ are very different concepts. Growth is usually used to describe an increase in size, while development generally carries the sense of bringing out what is latent, of working out potentialities.²

Thus, while ‘growth’ in a political or economic context, almost without exception, means economic growth, measured as an increase in the size of GNP or GDP, development can refer not to economic development in the sense of economic growth, but rather to the unfolding of potentialities, both of human societies and human individuals. Thus their potential differences in meaning become clear: it is not necessary, after all, to grow in order to develop; nor is it necessary to develop in order to grow. Indeed, in the case of human society, growth in economic activity – or indeed, in human population – may inhibit development, if the effect of the increased growth is greater pollution or fewer per capita resources.

Thus, according to the way in which it is used, sustainability has a variety of nuances. In its most general sense, it refers to human society as a whole; more specifically it refers to components contributing to the sustainability of society, that is: population, consumption, resource use and pollution. These four factors are often regarded as the linchpins of sustainability. A sharp upward movement in any one of these might threaten the sustainability of human society in the long term.

I use the word ‘might’ with considerable care here, since at this point the apparent consensus surrounding sustainability breaks down still further. While it is widely accepted that population, consumption, resource use and pollution are, broadly, the linchpins of sustainability, there is considerable debate concerning whether or not an increase in any one of these factors would, in fact, threaten the sustainability of human society. This becomes clear if we look more closely at just one of these factors, and indeed, one which might be considered to be less controversial, resource use.

Firstly, it is vital to point out that there are several relevantly different kinds of resources. A resource can be renewable or non-

² A point made by Hermann Daly ‘The Role of the Multilateral Lending Agency’ in J. Tulchin with A. Rudman *Economic Development and Environmental Protection in Latin America* Lynne Rienner 1991, quoted by Phil O’Brian in ‘Sustainability: A New Paradigm?’ (Unpublished 1992).

renewable: a forest is a renewable resource which can be replanted; coal is a non-renewable resource which can be exhausted. Provided that consumption remains constant, there is no reason why a renewable resource should ever be exhausted. However, every time a non-renewable resource is used, there is less of it; it moves nearer to exhaustion. A further, similar distinction, can be drawn between living and non-living resources. While living resources are usually renewable, they are also destructible. An ecosystem, for instance, can be irreparably damaged or a species made extinct; this forms a contrast between living and nonliving resources. A third, important distinction is that between manmade and natural resources. Although, of course, ultimately all manmade resources (other than human skills and knowledge, if they are to be included in this context)³ originate in natural materials, the significance here is in 'value-added' and in substitutability. Iron is, of course of natural origin; but when made into complex productive machinery, its resource significance lies in what humans have done with it, its 'value-added'. Humans can also substitute a manmade resource for a natural one. Synthetic fibre, for instance, has substituted for some natural fibres such as wool and cotton; synthetic rubber substitutes for latex tapped from rubber trees.

Indeed, the question is inevitably raised whether, if sufficient technology were to exist, all natural resources could be substituted by manmade ones, a question of some significance where environmental ethics is concerned. The economist Robert Solow, for instance, is unconcerned about the exhaustion of natural resources where substitutes can be found: 'If it is very easy to substitute other factors for natural resources then there is in principle, no problem. The world can, in effect, get by without natural resources, so exhaustion is just an event, not a catastrophe'.⁴

Finally, it is important to consider resource-needs over time. Many currently vital resources were in the past not resources at all, either due to the lack of extractive technology, or because technology for utilisation failed to exist. Conversely, some resources which were vital in the past no longer have great economic significance: horses were crucial to the nineteenth century, while uranium was unknown; now horses have little economic significance through wide swathes of the world, whereas uranium is of considerable importance.

This consideration of resources may seem to have strayed far from the question of sustainability, but actually these differentiations lie at its heart. The sustainable use of resources is necessary for society to be sustainable; but the above distinctions indicate that what might be

³ As in the Pearce Report *Blueprint for a Green Economy* (London: Earthscan 1989), p. 34.

⁴ Solow, quoted p. 9 Phil O'Brian (op. cit.).

meant by sustainable use of resources is unclear. If one resource can be used perfectly satisfactorily to replace another, does it matter if the former resource is exhausted? If renewable forms of energy production can replace coal, does it matter if coal is exhausted? If cars can replace horses, does it matter if horses become extinct? If artificial flowers virtually indistinguishable from living flowers can be mass produced, does it matter if living ones decline into scarcity?

Several important questions about what is meant by resources are raised here, and I shall return to these later. The specific point which I am making here is that it is not known either what level, nor what kind, of resource use is sustainable. Technological innovation may render one resource precious and another useless. Advances in toxicology may suggest that some commonly used resource is poisonous and could undermine the sustainability of human society; whilst discovering antidotes to other long known toxins.

This doubt about what it would be for human beings to live sustainably applies to each of the four areas I outlined above viz. resource use, population, consumption and pollution. It is not known to what extent deep sea algae may be able to absorb excess CO₂ generated by industry and agriculture. It is not known how large a human population could be supported on how many resources of which kind. It is not agreed whether economic growth is essential for or deadly to sustainable development. Debate over these questions – vital for any implementation of policies of sustainability – rages behind the scenes of international consensus.

It would however, be perfectly possible here to point out that these difficulties are all practical ones, and that there is little or no dispute about the underlying aims of sustainability, or, one might say, the ethical undergirding on which the practical policy disputes are based. It is broadly accepted that a sustainable society would be a good thing, and that it is something towards which humans should aim. Indeed, the very reason for the rise in the use of the language of sustainability is the increase in fear that the actions of contemporary human beings are undermining the ability of future human beings to live, or at any rate, to live well.

This concern for the existence and welfare of future human beings is the primary ethical thrust of sustainability; what is frequently referred to as ‘intergenerational justice’. Indeed, without this focus, the concept of sustainability – as an ethical imperative at least – would be incoherent. Such an emphasis was classically expressed in the 1987 Brundtland Report:

Humanity has the ability to make development sustainable – to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs ...⁵

⁵ Ed. Gro Brundtland, *Our Common Future*, Commission on Environment and Development Report 1987, p. 8.

But even taking this definition (recently endorsed by this Government in a paper on sustainable development), a whole series of problems about relationships to future generations are generated. The background to these problems is the curiously asymmetric relationship which present generations have towards future generations. Short of some kind of Jurassic Park style genetic engineering, or an intergenerational heaven, we will never meet members of future generations beyond our own immediate offspring; we will never have any relationship with them or know anything about them (although they will know a great deal about us). As Martin Golding puts it, we cannot share a common life with them.⁶ Conversely, however, while our existence is necessarily independent of theirs, theirs is necessarily dependent on ours: both absolutely with regard to their being future individuals at all, and relatively, with regard to which future individuals there are.

This raises a number of central ethical questions. Do we have obligations to produce future people? Assuming their existence, do we owe future people obligations, and if so, what obligations? When we say that society should be sustainable for the benefit of future people, what do we mean?

Looking briefly at the first of these questions, I would suggest that it is by no means obvious that there is an obligation to produce future generations at all.⁷ Supposing that, by some amazing chance, we were all voluntarily to decide that we should be celibate or be sterilised, would any wrong have been done? After all, it could certainly be argued that in such an event, no-one – no individual, that is – would have been harmed. Many ethicists – including, perhaps, Christian ethicists, not to mention utilitarians – would argue in response that not to produce future generations would be to commit a wrong, even though no particular individual would be harmed (and, I think one would have to add, even though no particular individual who decided to be celibate or sterilised would be committing a wrong). I do not intend to argue this point here, but merely to suggest that the assumption that there is an ethical obligation to produce future generations is not an indisputable one.

If, however, we assume, as is overwhelmingly likely, the presence of future generations, difficult questions still remain concerning obligations towards them. Firstly, of course, many ethicists find it difficult to account for ethical obligations towards no-yet-existing people at all – contractarian philosophers for instance. Even in such a sophisticated version as Rawls' *Theory of Justice* the individuals behind

⁶ Martin Golding, *Obligations to Future Generations*, *Monist*, 58, 1972, p. 86.

⁷ A view shared by Golding *op. cit.* and by Edwin Delattre in *Rights, Responsibilities and Future Persons*, *Ethics*, 82 1971–2, p. 255.

Rawls' veil of ignorance are all contemporaries. Rawls makes some concessions towards intergenerational justice, by allowing these ignorant individuals to be 'tied by sentiment' to their offspring and hence concerned for their welfare. He also argues that each generation should provide sufficient capital for the succeeding one to finance the necessities of a just society. However, this is hardly a developed concern for intergenerational justice.⁸ Rawls' position could only support concern for a sustainable society into the very near future.⁹ Furthermore, he only accounts for resource use and the passing on of sufficient capital to a future generation; he does not take into consideration the potentially crippling effects of a legacy of pollution.

Other schools of thought find it equally problematic to account for moral obligations to future generations. Since no identifiable future individuals yet exist, rights theorists find it difficult to ascribe rights to individuals in future generations; a difficulty compounded by the fact that our very actions will determine which future individuals come into existence at all.¹⁰ The rights theorist Richard de George goes so far as to say that 'we owe future (people) nothing and they have no legitimate claims on us, for the simple reason that they do not exist'.¹¹ While other theorists such as Joel Feinberg and Robert Elliot have argued that it is at least coherent to speak of individuals of future generations as having rights which could constrain our behaviour in the present, the question is by no means resolved.¹²

Utilitarians face other problems. While it is not difficult for utilitarians to account for some obligations to the future, two major problems present themselves.¹³ The first concerns whether the aim is at greatest total or average happiness (however happiness may be interpreted in this context). The second concerns the possibility, stated very clearly by Narveson, that a utilitarian may end up owing the future everything:

⁸ See Rawls, p. 292, *A Theory of Justice* (Oxford: OUP 1972). For further comments on this, see Robin Attfield, *A Theory of Value and Obligation* (New York: Croom Helm 1987), p. 9 and Stephen Bickham, *Future Generations and Contemporary Ethical Theory*, *Journal of Value Inquiry*, 15, 1981, p. 172-4.

⁹ Although as Attfield points out, these children are concerned with their children and so on - but again as Attfield indicates, they do not have moral standing, Attfield, *op. cit.*

¹⁰ See Brian Norton, *Environmental Ethics and the Rights of Future Generations*, *Environmental Ethics*, 4, 1982, p. 320.

¹¹ Richard de George, p. 95, *The Environment, Rights and Future Generations* in Goodpaster and Sayre (eds.), *Ethics and Problems of the 21st Century* (Notre Dame: Notre Dame University Press 1979).

¹² Joel Feinberg, *The Rights of Animals and Unborn Generations* in Ernest Partridge (ed.), *Responsibilities to Future Generations* (Prometheus 1980); Robert Elliot, *The Rights of Future People*, *Journal of Applied Philosophy*, 6, no. 2, 1989, 159-169.

¹³ See Derek Parfit, *Reasons and Persons* (Oxford: Clarendon Press 1984), Jan Narveson, *Morality and Utility* (Baltimore: Johns Hopkins University Press 1967 and *Future People and Us* in Sikora and Barry (eds.) *Obligations to Future Generations* (Philadelphia: Temple University Press 1978), 38-60.

Reflection may end up driving us towards the conclusion (that we owe future generations everything). For presumably, there is a vast number of generations to come, perhaps an infinite number. Surely if we make vast sacrifices now, we can leave a heritage which will make a non-trivial contribution to the wellbeing of all future generations; if this is so, then because there are so many, this benefit summed over time will outweigh any possible sacrifice. So what we owe to the future is everything.¹⁴

In fact such a position may well also be implied by those who ascribe rights to future individuals, since the number of future rightsbearers will presumably be vastly greater than the number of present rightsbearers. It would also seem likely that a Christian ethicist upholding the view that all are equal in the sight of God (of whatever generation) would share this view. All these positions, utilitarian and deontological alike, seem to imply a strong 'bias to the future'. Even if these positions were modified to insist that at least the basic needs of the present generation should be met, these ethical positions invert the Brundtland definition of sustainable development. Rather than sustainable development as development which 'meets the needs of the present without compromising the ability of future generations to meet their own needs' the reverse would be the case: sustainable development on such an account would mean meeting the needs of the future without compromising the ability of the present to meet its own needs. This inversion, while appearing to be only a subtle change of emphasis, would have important implications for policy, in particular, one might assume, for resource consumption. Of vital significance would be what was considered to be a 'need' – a subject which has already generated a substantial philosophical literature.

I have been suggesting so far, then, that the concept of sustainability is far more complex than it initially appears. Firstly, it can be used in different ways and in different contexts. Secondly, it is not at all clear, practically, what constitute sustainable policies. Thirdly, the exact nature of the main ethical thrust of sustainability – that is, moral obligations to future generations – is much disputed and highly contentious, in particular with regard to how much weight we give the claims of the future alongside those of the present.

But assuming, for now, that we concede all these difficulties, and accept the coherence of sustainability, the practicality of identifying policies which would lead to a sustainable society, and the significance of a balanced ethical thrust into the future. It seems to me that there are still two problems, or perhaps one reservation and one problem which remain.

¹⁴ Jan Narveson, *Future People and Us*, op. cit.

The first concerns that of justice. The primary ethical focus of sustainability, as we have seen, is intergenerational justice, and indeed, without such an ethical basis the concept would be incoherent. But this says nothing about intragenerational justice – justice between contemporaries. As Ronald Preston points out, meeting sustainability could fall far short of what would be regarded as just.¹⁵ Sustainability has no logical relation to justice, either in the form of the alleviation of poverty or an oppressive state. A sustainable society could be one with islands of affluence in the midst of a sea of poverty (a view associated with Garrett Hardin's lifeboat ethics) or one where an oppressive dictatorship imposed sustainable practices on the members of society. The chilling vision of Orwell's 1984 is of a society with built in sustainability – the sustainability of 'a boot stamping on a human face forever'.¹⁶

This is not, of course, a critique of sustainability per se, but rather emphasises that alongside sustainability – especially sustainability interpreted with a strong bias to the future – there must be a consideration of justice. The Brundtland Report, of course, accounted for this by prioritising the needs of all humans – both those impoverished in the present, and those yet to exist in the future, thus binding intragenerational and intergenerational justice together. Such a connection is surely essential. The importance of holding justice and sustainability together – as indeed the World Council of Churches always has – cannot be underestimated.

Having explained this reservation about sustainability, I now want to consider, in more detail, the problem with it, a problem in the context of environmental ethics. I have not mentioned the environment, except in the context of resources or pollution so far in this paper. This is because it seems to me that these are really the only ways in which sustainability (used in the sense I have described) and the environment interlink.

Sustainability and environmental conservation are frequently connected because a healthy natural environment is usually thought to be vital for the wellbeing of future humans. A polluted ocean, for instance, could be bad for future humans in many respects. Firstly, it would reduce fish stocks, a vital food resource. Secondly, the fish that were eaten could be so polluted that they were damaging to human health; if the pollution were radioactive it might damage human genetic makeup and hence threaten the sustainability of human society. To this extent, pollution could threaten the basic needs of a sustainable society. It could also impose limits on future society. For

¹⁵ Ronald Preston, p. 52, *Christianity and a Just and Sustainable Society*, lecture 3 in his series *Religion and the Persistence of Capitalism* (London: SCM 1979).

¹⁶ George Orwell, *1984* (1949; 38th ed., 1984, Harmondsworth: Penguin), p. 230.

instance, if a considerable number of marine organisms were to become extinct, the possibilities of research into new medicines, food stuffs, fuels and fibres would be restricted. Beyond this, such a polluted sea would limit the pleasures available to future generations. They would no longer be able to observe many species rendered extinct – especially if that included marine mammals. They would no longer be able to enjoy swimming in the sea or watersports such as scuba diving, windsurfing or waterskiing. Thus, conservation of marine life and the protection of the sea from pollution would appear to be central concerns to sustainability.

But let's suppose for a minute that the resource-use of the sea – at least as far as fundamental nutritional needs were concerned – was substitutable. Suppose a protein full micro-organism – perhaps the great granddaughter of Quorn – were to be developed, with all the nutritional value of fish, with no side effects, available in a variety of fishy flavours, easy to grow, could be cultivated by local communities etc. The sea, then, was no longer needed for food. In addition, a huge amount of waste chemicals and other pollutants was building up on land, and damaging the health of individuals who lived around it. These chemicals could be dumped at sea, possibly causing serious pollution, but pollution that would remain within the sea, and not damage the health of those on land, while having deleterious effects on marine organisms. What would be wrong with doing this? After all, the requirements of sustainability have been met, the needs of present generations and future generations catered for. Of course, there will be some loss in research options to future generations, but there are, after all, plenty of land organisms to research into; and some loss in pleasure from water based activities, but artificial lakes could satisfy the demand for many of these. In exchange for these less significant losses, the health damaging chemicals are no longer threatening present and future people.

Any number of difficulties could, of course, be thrown up against such a story. Destruction of marine organisms could be indirectly damaging to humans through food chains or climate change; or one might argue that the problem was that such dangerous chemicals had been generated in the first place. But the point I am trying to make is that if nonhuman nature is a resource, as it appears to be on the current estimate of sustainability, then substituting another manmade resource in its place is perfectly acceptable. Thus my earlier point about cars instead of horses, artificial flowers instead of real ones. If the function of the natural world is to ensure that the needs of present and future generations are met, then so long as those needs are met the treatment of the nonhuman is ethically irrelevant. In other words, sustainability supports a kind of total use hypothesis: the total use of the earth, if thereby the sustainability of human society is advanced.

It is precisely this resource-based approach to the nonhuman

natural world which is most widely attacked within the current debate in environmental ethics since – and perhaps before – Arne Naess' seminal paper 'The Shallow and the Deep Long Range Ecology Movement' in *Inquiry* 1973. Here, such a resource-based approach is characterised as shallow environmentalism and is contrasted with a 'deeper' approach to ecological questions where the value of living organisms, ecosystems and species independent of their resource or instrumental value for human beings is affirmed.

I do not wish here to examine Naess' views, or even those of the deep ecology movement more generally. Naess is, rather, a representative voice, questioning the adequacy of this concept of sustainability, not only for the construction of an environmental ethic, but within the framework of an environmental ethic at all. With its focus on the welfare of present and future humans, it is difficult to see how the value, for instance, of untouched wilderness could be maintained, apart from the benefits such a wilderness might offer to human beings. It was just such a concern that prompted Holmes Rolston, one of the best known environmental ethicists, to comment 'Let's face it, sustainable development is irredeemably anthropocentric'.¹⁷

It seems to me that there are several possible responses which one might make here. A radical environmental ethicist may choose to reject sustainability and all its derivatives. An anthropocentrist, if I may use such a word, might choose to reject any kind of environmental ethic which affirms value in the natural world outside of use or instrumental value to present or future human beings. But there are two possible compromises, or perhaps inclusive paths which might be taken.

The first is to attempt to extend the use of the word sustainability, so that it refers not merely to human society, but to the ecosystems and ecological processes which lie beyond; and furthermore, asserts that it is of value that these ecological, evolutionary and ecosystemic processes are sustained, whether or not they are of benefit to present or future human society. This is hardly an invalid use of sustainability, since as Michael Redclift points out, sustainability is a concept which was originally derived from ecology, relating to successional changes in plant communities.¹⁸ While having the benefit, to an environmental ethicist, of being able to acknowledge values outside human society, such a reinterpretation would, however, embrace inner conflict. Subsuming the future of human society and the continuance of wild processes into one concept – sustainability – could act as a conceptual

¹⁷ Holmes Rolston, *The Wilderness Idea Affirmed, The Environmental Professional*, 13, 1991, p. 370–377.

¹⁸ Michael Redclift, op. cit., p. 10.

suppression of the potential conflicts between them. It is possible that for human society to be sustainable with increasing population levels more wild ecological processes would have to be disrupted; and thus the sustainability of one may conflict with the sustainability of the other.

Thus the second possibility is to confine sustainability to the human context, and to insist that, as with justice, some other term must be used alongside it in order to emphasise the value of nonhuman nature. Indeed, yet again, the World Council of Churches seems to have got in before me by suggesting the integrity of creation. There may be occasions where the integrity of creation conflicts with sustainability, or justice; or where sustainability conflicts with justice; and I do not of course have time here to think about guiding principles for such conflicts. But the affirmation of a third principle, of value for nonhuman nature independent of human use, would balance, without overwhelming, the human focused principles of justice and sustainability.

I have, then, in this paper been considering some of the practical and conceptual difficulties of sustainability, and I have, I hope suggested some ways of making sustainability more sensitive to environmental ethics. But while like motherhood and God, sustainability may be difficult to disapprove of also like motherhood and God, actualising one's belief in it could be a very painful affair.