Inegalitarian Biocentric Consequentialism, the Minimax Implication and Multidimensional Value Theory: A Brief Proposal for a New Direction in Environmental Ethics

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Perhaps the most impressive environmental ethic developed to date in any detail is Robin Attfield's biocentric consequentialism. Indeed, on first study, it appears sufficiently impressive that, before presenting any alternative theoretical approach, one would first need to establish why one should not simply embrace Attfield's. After outlining a seemingly decisive flaw in his theory, and then criticizing his response to it, this article adumbrates a very different theoretical basis for an environmental ethic: namely, a value-pluralist one. In so doing, it seeks to give due weight to anthropocentric, zoocentric, biocentric and ecocentric considerations, and argues that the various values involved require trading off. This can be accomplished by employing multidimensional indifference curves. Moreover, after considering a three-dimensional indifference plane superimposed upon a three-dimensional possibility frontier, it becomes apparent that a moral-pluralist environmental ethic is, contrary to widespread assumptions, capable, in principle at least, of providing determinate answers to moral questions.

I

Biocentrism – the view that living beings are morally considerable by virtue of their being alive – certainly enjoys a long history. Some forms of Buddhism and Hinduism, for example, have traditionally contained biocentric views. Within Western ethics, however, biocentrism did not gain much of a hearing until Albert Schweitzer coined the phrase 'reverence for life'.[1] While Schweitzer's ethic has often been ridiculed by mainstream ethical theorists, a number of environmental ethicists have found biocentrism attractive. Over the past thirty years or so, a process of extensionism has evolved within normative theory, and for several thinkers, the appropriate place for that process to stop is at the boundaries of life. Whereas Immanuel Kant argued that all rational beings deserve respect, Tom Regan famously extended Kantian

[1] See Albert Schweitzer, *Civilization and Ethics* (London, 1923).

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ethics to include all experiencing subjects of a life within the set that comprises those deserving of respect; thereby producing a rights-based form of zoocentrism.[2] Paul Taylor went further in extending Kantianism to include all teleological centres of a life within the set comprising the morally considerable;[3] and in so doing, provided a Kantian foundation for a Schweitzerian biocentric ethic.

A parallel process of moral extensionism has occurred within the utilitarian tradition. Whereas Jeremy Bentham seemed open to the inclusion of non-human animals within the set of those whose interests count,[4] Peter Singer has famously insisted that, on pain of arbitrariness (an arbitrariness that would undermine justifiable criticisms of racism and sexism), the interests of all sentient beings must be regarded as morally considerable; thereby producing a consequentialist form of zoocentrism.[5] Robin Attfield, in several works,[6] has extended utilitarian ethics further in advocating what he calls 'biocentric consequentialism'. However, it is worth noting that Attfield's is not the only form that biocentric consequentialism could take. Like Gary Varner's biocentrism,[7] for example, and unlike Taylor's, Attfield's is inegalitarian. And there is nothing to prevent one from arguing for a form of egalitarian biocentric consequentialism that paralleled Taylor's egalitarian deontological biocentrism. Nevertheless, Attfield's biocentrism is, to my mind, the most impressive attempt to date at developing a monistic environmental ethic. Indeed, it is, prima facie, so impressive that, before presenting any alternative theoretical approach, one would first need to establish why one should not simply embrace Attfield's.

Unfortunately, it does seem necessary to seek a very different, normative environmental theory to Attfield's particular brand of biocentric consequentialism. For his distinctive theoretical approach seems to generate an implication that is likely to strike many environmentalists as exceedingly worrying. This particular implication

[2] See Tom Regan, *The Case for Animal Rights* (Berkeley, 1983).

[3] See Paul Taylor, *Respect for Nature: A Theory of Environmental Ethics* (Princeton, NJ, 1986).

[4] See Jeremy Bentham, *The Principles of Morals and Legislation* (Amherst, 1988), p. 311n.

[5] See Peter Singer, *Animal Liberation: A New Ethics for our Treatment of Animals* (New York, 1977).

[6] Most notably in Robin Attfield, *Value, Obligation and Meta-ethics* (Atlanta and Amsterdam, 1995) and in Robin Attfield, *The Ethics of the Global Environment* (Edinburgh, 1999).

[7] Varner advocates what he calls 'biocentric individualism'. See Gary E. Varner, *In Nature's Interests? Interests, Animal Rights, and Environmental Ethics* (Oxford, 1998). For a critique, see Alan Carter, 'Review of Gary E. Varner, *In Nature's Interests?*', *Mind* 109/435 (2000).

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of his theory – what I have labelled the 'Minimax Implication'[8] – appears at first glance to result principally not from the theory's biocentrism nor from its consequentialism, but rather from its inegalitarianism.

In order to understand why Attfield's approach seems to generate the undesirable implication I have in mind, we first need to attend to certain of the core features of his normative theory. Attfield ascribes intrinsic value to the good of all living beings. But he does not do so equally. As he writes:

> For biocentric consequentialism, intrinsic value lies in the good or well-being of the bearers of moral standing. Following Aristotle, I take this good to consist in the development of the capacities essential to their kind, whether capacities for growth and reproduction (as in plants and animals alike), for mobility, perception and sentience (as in most animals), or for these plus capacities such as practical reason and autonomy, as in human beings. I also maintain that more complex and sophisticated capacities (such as that for autonomy) take precedence over simpler and less sophisticated ones, but only where both are at stake; no automatic priority belongs simply to membership of a sophisticated species, or simply to being human.[9]

This Aristotelian element within Attfield's inegalitarian biocentric consequentialism serves to remove the repugnance from the infamous Repugnant Conclusion.[10] A world where the capacities essential to one's kind have been developed to some degree is clearly less repugnant than countless billions of humans surviving solely on 'muzak and potatoes', as Derek Parfit vividly imagines.

So far so good. But Attfield feels compelled to argue not only that the good of living entities that do or will exist counts morally but also that the good of all potential living beings counts, as well. Why? Because Parfit's work raises not only the spectre of the Repugnant Conclusion but also the worry that the Non-identity Problem rules out all possibility of harming distant future living entities.[11] But the future harm that we might be responsible for by damaging the life-support systems of our planet is often played as a trump card by those wishing to preserve the natural environment. As the Non-identity Problem would

[8] See Alan Carter, 'Review of Robin Attfield, *The Ethics of the Global Environment*', *Mind* 110/437 (2001).

[9] Attfield, *Global Environment*, p. 39.

[10] For a clear statement of the Repugnant Conclusion, see Derek Parfit, 'Overpopulation and the Quality of Life', *Applied Ethics*, ed. Peter Singer (Oxford, 1986), p. 150.

[11] For seemingly compelling versions of the argument that we cannot harm distant future persons, see Thomas Schwartz, 'Obligations to Posterity', *Obligations to Future Generations*, ed. R. I. Sikora and Brian Barry (Philadelphia, 1978), and Thomas Schwartz, 'Welfare Judgments and Future Generations', *Theory and Decision* 11 (1979). For a rebuttal, see Alan Carter, 'Can We Harm Future People?', *Environmental Values* 10/4 (2001). Also see Alan Carter, 'On Harming Others', *Environmental Values* 11/1 (2002).

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appear to result from the Person-Affecting Principle,[12] its worrying implications may be avoided by rejecting any such principle. But that seems to require that the good of all possible persons (and of plants, too, given Attfield's biocentrism) would have to be included within our moral calculations, along with the good of existing persons and that of those who will, in fact, be actualized.

Attfield also appears to be committed to the view that more good flows from developing everyone's capacities to some degree than from maximally developing the same capacities of a minority at the expense of those of the majority.[13] Unfortunately, as I have previously argued,[14] what would seem to follow from all of the above is that, with regard to certain capacities, we ought, *ceteris paribus*, to bring about the lowest acceptable level for the greatest number of human beings. It is this that I refer to as 'the Minimax Implication'.[15] And it would further seem to follow that we ought, *ceteris paribus*, to bring about the lowest acceptable level of such capacities for the greatest number of human beings at the expense of other living entities.

Why? As a consequentialist, Attfield enjoins us to maximize the good. But recall that 'more complex and sophisticated capacities (such as that for autonomy) take precedence over simpler and less sophisticated ones'.[16] But more good will be obtained from the development of every human's complex and sophisticated capacities to some degree than by developing maximally those capacities of a minority of humans at the expense of those of other human beings. And the good of all potential humans counts as much as the good of existing ones. Hence, *ceteris paribus*, more good results from bringing into existence as many humans as possible so long as their capacities can be developed to some degree than by having a smaller human population with their capacities developed to a higher degree. And if humans have more

[12] The Person-Affecting Principle was first deployed by Jan Narveson in order to avoid concluding that we are morally obliged to bring future persons into existence. See Jan Narveson, 'Utilitarianism and New Generations', *Mind* 76 (1967), and Jan Narveson, 'Moral Problems of Population', *The Monist* 57 (1973).

[13] Attfield has acknowledged explicitly that his 'theory does imply that where . . . resources [for which there is competition] could be used either to satisfy hitherto unsatisfied basic needs, or to further develop the capacities of someone whose capacities are already well developed, and cannot be used for both purposes simultaneously, they should be devoted to the first rather than to the second purpose, for greater value is more likely to be delivered in this way' (Robin Attfield, 'Biocentric Consequentialism, Pluralism and "The Minimax Implication": A Reply to Alan Carter', *Utilitas* 15/1 (March 2003), p. 81).

[14] See Carter, 'Review of Attfield'.

[15] 'Strictly speaking, it would be preferable to construe "minimax" as "the lowest level for the best off". However, with regard to any capacity whose development is constrained by a limited resource, bringing about the lowest acceptable level for the greatest number of humans would itself imply minimising the level of the best off' (ibid., p. 151).

[16] Attfield, *Global Environment*, p. 39.

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sophisticated capacities than other species, then, *ceteris paribus*, we should develop the greater capacities of humans to some degree in preference to developing any of the capacities of the members of other species. In short, Attfield's inegalitarian biocentric consequentialism may well enjoin us to bring into existence billions and billions of humans with their capacities developed ever so slightly in preference to the existence of many other species – a bizarre conclusion indeed for a supposedly environmental ethic.

It might seem, therefore, that we should seek elsewhere for an adequate normative theory. But before the development of an alternative environmental ethic may be deemed a worthwhile endeavour, we would first need to see what resources Attfield's theory possesses for marshalling cogent responses to the objections levelled against it.

II

Attfield has not wasted any time in attempting to mount a response to my objections to his theory.[17] And his response is instructive in revealing how adequate are the resources contained in his theory for rebutting objections.

In responding to my claim that his work seems prey to the Minimax Implication, he accuses me of misidentifying the core premiss of his theory, which is, he insists, that 'we ought to maximize, whether through actions or through practices, the balance of foreseeable value over foreseeable disvalue'.[18] Yet Attfield, earlier in his reply, approvingly quotes me as describing his view as claiming that

> actions are right when they conform to practices whose general recognition would bring about the greatest overall good, or, where practices do not apply, when an action's foreseeable consequences would consist in the greatest overall balance of good over bad.[19]

So I do not appear to have misidentified his core premiss.[20] What I actually argued was that the Minimax Implication follows from Attfield's core *premisses*,[21] and not from his core premiss.[22] One of those premisses – a highly contentious one – is the moral considerability of possible persons along with actual ones.

[17] See Attfield, 'Biocentric Consequentialism'.
[18] Ibid., p. 80.
[19] Quoted in ibid., p. 77.
[20] Contrary to what Attfield asserts at ibid., p. 81.
[21] See Carter, 'Review of Attfield', pp. 151–2.
[22] See Attfield, 'Biocentric Consequentialism', pp. 80–1. Indeed, Attfield even quotes me as referring to his core premisses. See ibid., p. 80.

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Attfield also accuses me, when describing his attempt to draw the sting out of the Repugnant Conclusion, of neglecting to mention a number of his arguments: namely,

> that concerning the dependence of life worth living on intact ecosystems that would be undermined by overpopulation, that concerning the intrinsic value of future nonhuman creatures, whose habitats human population growth would occupy and foreclose, and that . . . concerning the serious likelihood of increases in human numbers removing some of the prerequisites of lives worth living such as privacy and the ability to get away from fellow-humans . . .[23]

Attfield asserts that each argument suggests that his theory does not 'mandate overpopulation'.[24] But the force of these kinds of arguments was, in effect, acknowledged later in my review of his work – when I deployed what he now refers to as the Every-Generation Challenge,[25] and when I explicitly wrote:

> Of course, in the real world, the implications of Attfield's ethical theory would never be so insufficiently environmentalist as to mean the extinction of a significant proportion of other species, because some form of ecosystem with some measure of biodiversity is a precondition for continued human existence. And maximizing the number of humans (which includes those living in the future) who have most of their essential capacities developed to some degree is best accomplished across time rather than within one generation, for far more can live into the indefinite future than can live at any one moment in time. Hence, Attfield's ethical theory certainly requires humans to live sustainably (on some construal of 'sustainably'). But even so, the Minimax Implication may well include the extinction of many inessential species, especially if their numbers (comparative to the humans who would live in their place) are not too great, and when eliminating them would allow the maximization of the number of humans whose basic needs can be satisfied. For example, even though Attfield explicitly argues against the human colonization of all wild places, the Minimax Implication could, nevertheless, justify humans encroaching upon the habitats of numerous inessential species even if so doing would lead to the latter's extinction. And most environmental ethicists would certainly regard that as insufficiently environmentalist.[26]

It was precisely because of such considerations that I qualified my claims with *ceteris paribus* clauses.

Now, it is true that in the passage above I did not mention the harm that human overpopulation would cause to non-human entities that possessed intrinsic value. But that omission makes no difference to how Attfield's theory should ultimately be evaluated. It is an inadequate environmental ethic because it generates the Minimax Implication. Moreover, as we have already noted, an implication of

[23] Ibid., p. 79.
[24] Ibid.
[25] See ibid., p. 86.
[26] Carter, 'Review of Attfield', p. 152.

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Attfield's premisses is that, *ceteris paribus*, we should develop the greater capacities of humans to some degree in preference to developing any of the capacities of the members of other species if humans have more sophisticated capacities than other species. And that implication is likely to lead to the undervaluing of non-human interests. Hence, pointing out that certain actions may harm humans is likely to carry greater weight than pointing out that they may also harm non-humans. And if the harm to humans is sufficient to reject the harmful actions, then adding that the actions also harm non-humans does little, if any, work. Consequently, I do not regard my omission in the above passage of the harm that human overpopulation would cause to non-human entities as of any great significance.

But let us set such quibbles aside. For what is of greater importance is a pair of related objections to Attfield's theory that seem to be decisive: (1) his core premisses appear to generate the Minimax Implication – 'with regard to any capacity whose development is constrained by a limited resource', we should bring 'about the lowest acceptable level for the greatest number of humans'[27] – which is an exceedingly counter-intuitive injunction;[28] and (2)

> maximising the number of humans who have most of their essential capacities developed to some degree should be accomplished at the expense of all creatures which lack the greater interests possessed by humans (such as in self-consciousness and autonomy) when this would be the most practicable means of achieving that goal[29]

– which seems insufficiently environmentalist for any adequate environmental ethic. Specifically with regard to (1), Attfield responds:

> While the generation of an additional person would be implied for some circumstances in which attention to the further development of an existing person whose basic needs had already been satisfied might on occasion have to be neglected in consequence (as often happens for a while to the first child in a family when the second child is born), this would not be implied for all circumstances in general.[30]

[27] Ibid., p. 151.

[28] Attfield is correct in arguing that my first objection would have been better stated if I had referred to resources for which there is competition rather than merely to limited resources. See Attfield, 'Biocentric Consequentialism', p. 81. But the basic objection still stands: There are certain capacities the development of which is constrained by limited resources – some being resources for which there is competition – and Attfield's theory appears to imply that we should bring more people into the world who would have those capacities developed to a slight degree than restrict human numbers so as to have the capacities in question developed further by all existing and future humans. And that seems highly counter-intuitive.

[29] Carter, 'Review of Attfield', p. 151.

[30] Attfield, 'Biocentric Consequentialism', p. 82.

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But this is far too weak a reply. For the generation of additional people does not have to be 'implied for all circumstances in general' for it to count as a counter-intuitive implication that threatens his theory. A single, highly unintuitive result may suffice to pose enough of a problem to any moral theory that implies it.

Moreover, the generation of additional people might well be implied in far more circumstances than Attfield seems to realize. Plants have capacities for growth and reproduction that are essential to their kind. Most animals, he notes, have capacities for mobility, perception and sentience that are essential to their kind. And two of the capacities essential to human beings that he explicitly draws attention to are the capacities for practical reason and autonomy. *Ceteris paribus*, we should maximize the development of the latter two capacities. Attfield seems to think that there is no serious problem in doing so, for he claims that 'advocacy of the lowest acceptable level for the greatest number of human beings would seldom if ever maximize the balance of foreseeable value over foreseeable disvalue'.[31] But this claim seems to depend upon what he takes to be the low resource cost of developing essential human capacities. And as he further writes, 'the limited resources that constrain the development of some capacities (e.g. the availability of light and of sound for different modalities of perception) often cannot be removed from one person and supplied to another'.[32]

However, it seems to me that it would be a mistake to assume that the development of essential human capacities either carries a low resource cost or depends solely upon non-redistributable resources. For just as animals share with plants capacities for growth and reproduction, so do humans (being animals). Moreover, humans also share with animals capacities for mobility, perception and sentience. If, as Attfield claims,[33] animals' capacities for growth and reproduction are essential to their kind, then not only are humans' capacities for practical reason and autonomy essential to their kind but so too are their capacities for mobility, perception, sentience, growth and reproduction. Furthermore, a precondition for the development of humans' capacities for practical reason and autonomy is the development of their capacities for mobility, perception, sentience, growth and reproduction. And most significantly,

[31] Ibid.

[32] Ibid. I should mention that this strikes me as questionable. In overpopulated areas, some people have insufficient light because the buildings occupied by others are blocking their sunlight, and some have insufficient quiet (i.e. suffer from too much sound) because of the noise made by others. Distributions can often easily be reversed simply by individuals swapping apartments! If a person living next to a noisy highway were to exchange apartments with a person living in a basement four blocks away, then light would be removed from one person and supplied to the other, as would quiet.

[33] Attfield, *Global Environment*, p. 39.

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none of these can be developed without food. But food is precisely a limited resource;[34] and, what is more, a resource for which there is great competition. Yet it constrains both the number of humans that can exist at any one time and the extent to which they can develop the capacities essential to their kind, for malnutrition stunts both bodily and intellectual growth. Hence, autonomy, which is dependent in part upon intellectual development, is 'endangered' if humans receive too little food. If one simply focuses upon this single limited resource, then it becomes immediately apparent just how much of a challenge the Minimax Implication poses to Attfield's environmental ethic.

In an effort to make this clear, consider, on a world with similar food resources to Earth, a choice between (a) retaining a human population of 1 billion or (b) actualizing 25 billion people, who would then all be living at one time. If one chose (a), then all humans could develop their capacities greatly. If one chose (b), then, given that the imagined world, unlike ours, is highly egalitarian, all humans would develop their essential capacities slightly, but their intellectual growth would have been stunted by malnutrition. This is because the malnutrition in the imagined scenario is not the kind that is so great that basic needs go unmet, but rather the kind of sustained, but not life-threatening, malnutrition that can limit the development of one's (especially intellectual) capacities. Choice (b) would be an instantiation of the Minimax Implication. And the core premisses of Attfield's theory would appear to entail that we ought to prefer (b) over (a), which is counter-intuitive in the extreme.

Now consider (2): namely, that

> maximising the number of humans who have most of their essential capacities developed to some degree should be accomplished at the expense of all creatures which lack the greater interests possessed by humans (such as in self-consciousness and autonomy) when this would be the most practicable means of achieving that goal.[35]

If, on the alternative world currently being considered, 25 billion people could survive and continually reproduce themselves without destroying the life-support systems of their planet, then whatever other environmental losses would result from their numbers would, given the core premisses of Attfield's theory, be a price that would have to be paid. For example, they might lose many species of rare, beautiful plants. But the development of an aesthetic capacity to a slight degree does not require the preservation of such species. And for

[34] See Alan Carter, *A Radical Green Political Theory* (London and New York, 1999), ch. 1.

[35] Carter, 'Review of Attfield', p. 151.

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that capacity to be developed to a greater extent through encounters with such plants would, *ex hypothesi*, rule out so many individual humans being actualized. And the plants themselves clearly lack the higher capacities that are developed slightly in 25 billion humans, and whose slight development supposedly takes precedence. Moreover, the same goes for rare species of non-human animals that lack the higher capacities that could be developed slightly in 25 billion humans, for the slight development of the latter is, on Attfield's theory, supposed to take precedence.

Attfield would no doubt be correct in replying that 25 billion people could not live on our planet without destroying its life-support mechanisms. Hence, this imagined counterexample could not obtain in the real world, which is the world to which consequentialist theories were designed to apply. But any such reply lacks sensitivity to the actual nature of this sort of objection. Consequentialists may be able to provide reasons for why their theory does not, in fact, entail some counter-intuitive outcome in the world in which we happen to live. But in relying on some contingent feature of the world, their theory, when it rules out such counter-intuitive outcomes, does so for the wrong reason.[36] And that it does so for the wrong reason is revealed when, in some thought experiment, the theory fails to rule out morally unacceptable outcomes which any adequate moral theory would successfully prohibit.

Yet Attfield, in response to my criticisms, places a great deal of weight on the world being such that counter-intuitive consequences would not, in fact, obtain. For example, he claims that

> the colonization of the surface of the planet . . . by humanity . . . would guarantee the extinction of numerous species, and . . . would also obliterate all that would have been intrinsically valuable in the lives of all the countless members of the extinguished species that could have lived and thriven across the full extent of future time. Since this would very often involve a net loss of value, it should not be done.[37]

[36] Elsewhere, in an article cited by Attfield, I have mentioned the following objection to certain varieties of consequentialist theories: '[A]dvocates of human rights justifiably criticize [classical utilitarians] for not having safeguards at the very core of their theory which would protect individuals against their possible sacrifice for the pleasures of the majority' (Alan Carter, 'Moral Theory and Global Population', *Proceedings of the Aristotelian Society* 99/3 (1999), p. 300). Of course, as I added: 'Classical utilitarians can respond that happiness would not, in fact, be increased by sacrificing individuals, because everyone would feel insecure in a society that was prepared to act in such a way' (ibid., n.). But most relevant for our present purposes is the remark that immediately follows, that any such 'reply indicates that any safeguards rely on contingent factors, rather than the theory recognising the inherent value of each individual' (ibid., n.).

[37] Attfield, 'Biocentric Consequentialism', pp. 85–6.

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Yet, apparently following in the wake of Kenneth Goodpaster,[38] Attfield has earlier informed us that

> moral standing is not moral significance, and bearing moral standing does not imply having equal significance with other such bearers. The moral significance of many creatures could be so slight as to be insignificant, except where the survival of large numbers (in the present or the future) is at issue, and even then their interests are outweighed when the vital interests of creatures with more sophisticated interests are at stake.[39]

But if this is the case, then the degree of value lost by human colonization is very contingent indeed, and may conceivably be exceeded by the gain in value resulting from having more humans.

But what of the value of the good of future members of non-human species? Previously, I pointed out that

> it will not suffice as a response to argue that the loss of future members of certain inessential species would outweigh the basic needs of the present-day humans whose invasion of their habitats threatens those species with extinction. For if the basic needs of present-day humans outweigh those of the present-day members of the endangered species, then, at any future time, the basic needs of the humans then occupying the land in question will likely outweigh the interests of the members of the presently endangered species who would have lived at that future time had their species not earlier been driven to extinction.[40]

It is this response that Attfield now refers to as the Every-Generation Challenge. His reply is essentially that humans could go extinct long before the species that we are driving to extinction would otherwise themselves be extinguished, and if the latter were not to become extinct, then there would be countless billions of generations of them to be factored into the moral calculus. But note how contingent this is. For they might, in fact, not have been able to remain in existence long after humans had disappeared from the face of the Earth. Moreover, even if, as Attfield argues, humans are likely to go extinct before many other species, extinct species have often given rise to other species that have evolved out of them. Our ancestors were primates who are now extinct. It is most likely that we possess greater intellectual capacities than they did. When *Homo sapiens* has become extinct there could conceivably be left another species descended from us with capacities the development of which possesses greater intrinsic value than that possessed by the development of our capacities. If they are factored in, then human colonization could easily be morally required, given

[38] See Kenneth E. Goodpaster, 'On Being Morally Considerable', *The Journal of Philosophy* 75 (1978).
[39] Attfield, *Global Environment*, p. 39.
[40] Carter, 'Review of Attfield', pp. 152–3.

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Attfield's premisses. In a word, it would seem to indicate that a moral theory is inadequate when its responses to strongly counter-intuitive implications must rest on highly contingent features of the world.

However, Attfield has another kind of response at hand. One of his claims is that 'where greater interests, such as interests in self-consciousness and autonomy, are endangered and conflict with lesser interests, they take priority'.[41] But he now insists that this should not be taken to imply the generating of 'additional human beings at the expense of non-human creatures', for 'interests can only be endangered if they and the creature to which they belong exist already'.[42] Yet Attfield has already informed us that, '[f]or biocentric consequentialism, intrinsic value lies in the good or wellbeing of the bearers of moral standing',[43] and that the development of capacities essential to a creature's kind, such as autonomy in the case of human beings, constitutes such a good.[44] And we know that, for Attfield, the good of all potential living beings is to be counted equally in the moral calculus with that of existing beings. Moreover, Attfield has also informed us that 'more complex and sophisticated capacities (such as that for autonomy) take precedence over simpler and less sophisticated ones'.[45] Now add to this his 'core premiss' – namely, that 'we ought to maximize, whether through actions or through practices, the balance of foreseeable value over foreseeable disvalue'.[46] So, a greater foreseeable intrinsic value than that possessed by the development of the capacities of plants, say, is that possessed by the development of autonomy in humans, and we are to maximize foreseeable value. But, we are now told, autonomy is only to be prioritized when it and the creature to which it belongs already exist.[47] This, in effect, means that lesser values are to be counted at their full value in the moral calculus when they attach to potential living beings, but greater values are not. Any such defence seems *ad hoc* to the point of pure arbitrariness, and appears to remove much of the plausibility that Attfield's inegalitarian biocentric consequentialism previously enjoyed. Indeed, Attfield's recent clarification of what he meant by 'endangered'

[41] Attfield, *Global Environment*, p. 159.
[42] Attfield, 'Biocentric Consequentialism', p. 85.
[43] Attfield, *Global Environment*, p. 39.
[44] See ibid.
[45] Ibid.
[46] Attfield, 'Biocentric Consequentialism', p. 80.
[47] For recall that Attfield explicitly states that 'where greater interests, such as interests in self-consciousness and autonomy, are endangered and conflict with lesser interests, they take priority' (Attfield, *Global Environment*, p. 159), and that 'interests can only be endangered if they and the creature to which they belong exist already' (Attfield, 'Biocentric Consequentialism', p. 85).

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seems symptomatic of a 'degenerating problem shift',[48] which would indicate that it is now time to seek a new theoretical approach.

III

Not content with defending his theory against my criticisms of it, Attfield has gone on the offensive by attacking what he takes to be my own approach. He does so by rejecting moral pluralism on what he describes as similar grounds to those presented by J. Baird Callicott.[49] Callicott's attack on moral pluralism is specifically directed against Christopher Stone, who writes:

> the Moral Pluralist holds that a public representative, a senator, for example, might rightly embrace utilitarianism when it comes to legislating a general rule for social conduct . . . Yet, this same representative need not be principally utilitarian, or even a consequentialist of any style, in arranging his personal affairs among kin or friends, or deciding whether it is right to poke out the eyes of pigeons.[50]

Thus, Callicott 'crudely' parodies moral pluralism as inviting

> us to adopt one theory to steer a course in our relations with friends and neighbors, another to define our obligations to fellow citizens, a third to clarify our duties to more distantly related people, a fourth to express the concern we feel for future generations, a fifth to govern our relationship with nonhuman animals, a sixth to bring plants within the purview of morals, a seventh to tell us how to treat the elemental environment, an eighth to cover species, ecosystems, and other environmental collectives, and perhaps a ninth to explain our obligations to the planet . . . [51]

Not surprisingly, given such a characterization, one major problem that Callicott detects in moral pluralism is its seeming incoherence. As he observes: 'Attempting to *act* upon inconsistent or mutually contradictory ethical principles results in frustration of action altogether or in actions that are either incoherent or mutually canceling.'[52] And Attfield adds that a pluralist 'theory will often make one and the same action both right and wrong, and may even make one and the same action both obligatory and forbidden'.[53]

[48] See Imre Lakatos, 'Falsification and the Methodology of Scientific Research Programmes', *Criticism and the Growth of Knowledge*, ed. Imre Lakatos and Alan Musgrave (Cambridge, 1970).
[49] See Attfield, 'Biocentric Consequentialism', p. 90n.
[50] Christopher D. Stone, *Earth and other Ethics: The Case for Moral Pluralism* (New York, 1988), p. 118.
[51] J. Baird Callicott, 'The Case against Moral Pluralism', *Environmental Ethics* 12/2 (Summer 1990), p. 104.
[52] Ibid., p. 110.
[53] Attfield, 'Biocentric Consequentialism', p. 90.

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Both Attfield and Callicott provide a useful service in stating clearly the principal challenge that moral pluralism must overcome. Note, however, that there are two views which Callicott lumps together under the rubric 'moral pluralism', and Attfield follows him in similarly so doing: namely, (i) subscribing to a plurality of normative theories, and (ii) subscribing to a plurality of ethical principles. But there is a third position that also constitutes a variety of moral pluralism: namely, (iii) subscribing to a plurality of values. Regardless of whether or nor (i) and (ii) are subject to Callicott's and Attfield's criticisms, (iii) is certainly not. Yet it is (iii), not (i) or (ii), that I subscribe to. Let us call (i) 'theory pluralism', (ii) 'principle pluralism' and (iii) 'value pluralism'. Theory pluralism, principle pluralism and value pluralism are all types of moral pluralism. But it would be a category mistake to think that because principle pluralism, say, is subject to some decisive criticism, then moral pluralism necessarily fails. For there may be some form of moral pluralism that is immune to that particular criticism. It is equally mistaken to think that because principle pluralism is subject to some decisive criticism, then value pluralism must necessarily fail, too, given that they are both instances of moral pluralism. Callicott's and Attfield's criticisms apply, if they apply at all, to theory pluralism and to principle pluralism. But it is value pluralism that I advocate. Hence, Attfield has, in effect, launched an anti-aircraft missile at my newly emerged butterfly, and missed.[54]

But let us see how the kind of value pluralism I subscribe to might be employed as the basis of an environmental ethic. I have argued elsewhere that each of the major normative theories can be regarded as seeking to maximize one respective value, and that in so doing, each generates some counter-intuitive implication or other by flouting one or more of the other values we hold.[55] In order to avoid all such counter-intuitive implications, we would need to give due consideration to each value. It is highly unlikely that we could do so coherently by combining incompatible moral theories. Moreover, each moral principle emphasized in the various traditions within moral philosophy is embedded within a particular moral theory. Combining principles derived from incompatible theories also seems likely to have a high probability of generating incoherence. Furthermore, the likely result will be the application of one principle in one circumstance and another in some other situation. But in applying one principle, we will

[54] For a critique of Callicott's own attempt to deal with a plurality of considerations, see the Appendix, below.

[55] See Alan Carter, 'Value-Pluralist Egalitarianism', *Journal of Philosophy* 99/11 (2002); and Carter, 'Moral Theory and Global Population'.

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be advancing the value underpinning it at the expense of the other values that are dear to us.

Instead, what appears to be required is the recognition that each value continually exercises its pull. But the various values that we hold cannot all be maximally satisfied simultaneously.[56] Hence, we will need to trade them off. This can be formalized by means of multidimensional indifference curves. An adequate environmental ethic might need to consider the way in which we value certain human features, aspirations and projects. Attfield, for example, accords considerable value to autonomy. Let us, purely for convenience, indiscriminately lump together all such values within the category of 'anthropocentric values'. But many moralists also value, and have been persuaded to value, the interests of all sentient beings. Let us, for convenience, indiscriminately lump together all such values within the category of 'zoocentric values'. But a growing number have also come to value the interests of all living beings. For convenience's sake, let us indiscriminately lump together all such values within the category of 'biocentric values'. Finally, some prefer to value the integrity, stability and beauty of the so-called biotic community.[57] A number also value species over and above their members.[58] Let us, for convenience, indiscriminately lump together all such values within the category of 'ecocentric values'.

As several ecocentrists have shown,[59] there appear to be insuperable difficulties in maximally satisfying zoocentric and ecocentric values simultaneously. But it might be thought that anthropocentric and zoocentric values are merely a subset of biocentric ones, and that satisfying them simultaneously should therefore pose less of a problem. However, it seems to me that thinking so would be a mistake. For whereas humans are a subset of sentient animals, and sentient animals are a subset of living beings, what it is that we especially value in an entity because it is human is not a subset of what it is that we especially value in an entity merely because it is sentient, and neither are a subset of what it is that we especially value in an entity simply because it is alive. And anthropocentric, zoocentric and biocentric values are certainly not a subset of ecocentric ones, for the latter tend to be collectivist, while the others are individualistic. Thus, as

[56] See, for example, Carter, 'Value-Pluralist Egalitarianism'.

[57] See, as an arguable instance, Aldo Leopold, *A Sand County Almanac, with Essays on Conservation from Round River* (New York, 1970).

[58] See, for example, Holmes Rolston, III, 'Duties to Endangered Species', *Environmental Ethics*, ed. R. Elliot (Oxford, 1995).

[59] See, as the most famous (or infamous) instance, J. Baird Callicott, 'Animal Liberation: A Triangular Affair', *Environmental Ethics* 2 (1980). Also see Mark Sagoff, 'Animal Liberation and Environmental Ethics: Bad Marriage, Quick Divorce', *Earth Ethics: Environmental Ethics, Animal Rights, and Practical Applications*, ed. J. P. Sterba (Englewood Cliffs, NJ, 1995).

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one moves from anthropocentric to zoocentric to biocentric and then to ecocentric values, one might be tempted to think that one is moving from one subset to another and finally to the most encompassing set; nevertheless there is good reason for thinking that this would be an inappropriate way of viewing how these values relate to each other.

How, then, might we best view trade-offs between these various, distinct values? First consider how we might trade off potatoes and grapes.[60] Imagine that I want my potatoes for my main course, and grapes for my dessert. Imagine that I have three potatoes and no grapes. Say I will accept an offer of five grapes for one potato. It could not be assumed that I would take five grapes for a second potato. I might well require twenty if I am to part with it. But I might well refuse any number of grapes in place of my last potato. For I do not want to be left with dessert only. In the first case, five grapes are preferable to one potato, but in the third case, one potato is preferable to any number of grapes. In short, our preference rankings are more complex than might initially be presumed.

Deep reflection upon the conflicts within our thinking about environmental issues would seem to reveal that the same is true with respect to trade-offs between anthropocentric and biocentric values, between anthropocentric and zoocentric ones, between zoocentric and biocentric values, and between ecocentric values and each of the other kinds. For example, there is a possible loss of natural ecosystems – an ecocentric disvalue – that many environmentalists would regard as inacapable of being compensated by any increase in anthropocentric value. Yet many of the very same environmentalists would equally feel that there is a possible loss of anthropocentric value for which no increase in ecocentric value would compensate. In other words, if anthropocentric values were to be measured along one axis of a two-dimensional graph and ecocentric values were to be measured along the other, then each indifference curve we might plot in order to display the trade-offs we would sanction between anthropocentric and ecocentric values would be asymptotic.[61] And although non-linear ways of trading off our various values are alien to the majority of ethical theories, they seem to be extremely common in everyday modes of evaluation. This suggests that we possess a far more complex capacity for making judgements than ethical theorists appear willing to acknowledge when devising their normative systems.

[60] The example is taken from Brian Barry, *Political Argument* (London, 1965), p. 5.

[61] The asymptotic feature of certain indifference curves can provide a solution to the Repugnant Conclusion, while simultaneously avoiding the pitfalls of average utilitarianism. See Carter, 'Moral Theory and Global Population'.

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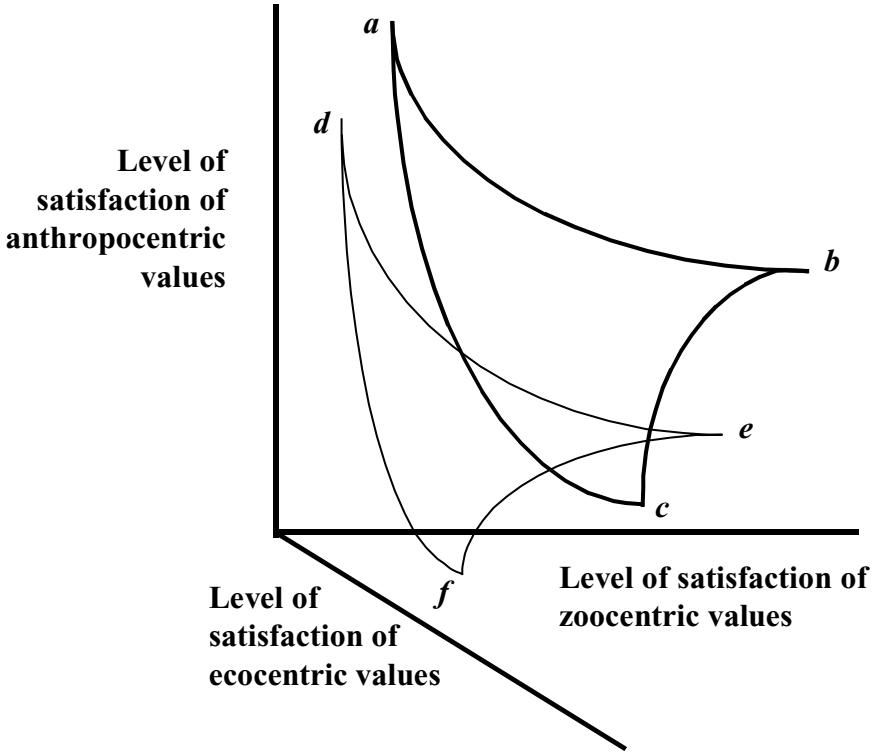


Figure 1: Three-dimensional indifference planes.

I have suggested that one way in which we can get a grip on such evaluational complexity is by plotting our value trade-offs multidimensionally. A more complete environmental ethic than the one I shall briefly hint at in what follows would require at least four dimensions; each dimension displaying a metric for anthropocentric, zoocentric, biocentric and ecocentric values, respectively. But because of the inherent difficulty in pictorially representing four dimensions, I shall, purely for ease of argument, confine the following account to three: anthropocentric, zoocentric and ecocentric values. So, let us measure anthropocentric values along one axis, zoocentric values along another, and ecocentric values along the third axis of a three-dimensional graph. Figure 1 represents the manner in which we might be indifferent between all points falling on plane '*abc*', and between all points falling on plane '*def*'. But we would prefer all points falling on '*abc*' to any point falling on '*def*', for our values are better satisfied at any point on '*abc*' than on '*def*', given that all points on the latter plane are closer to the origin than any point on the former.

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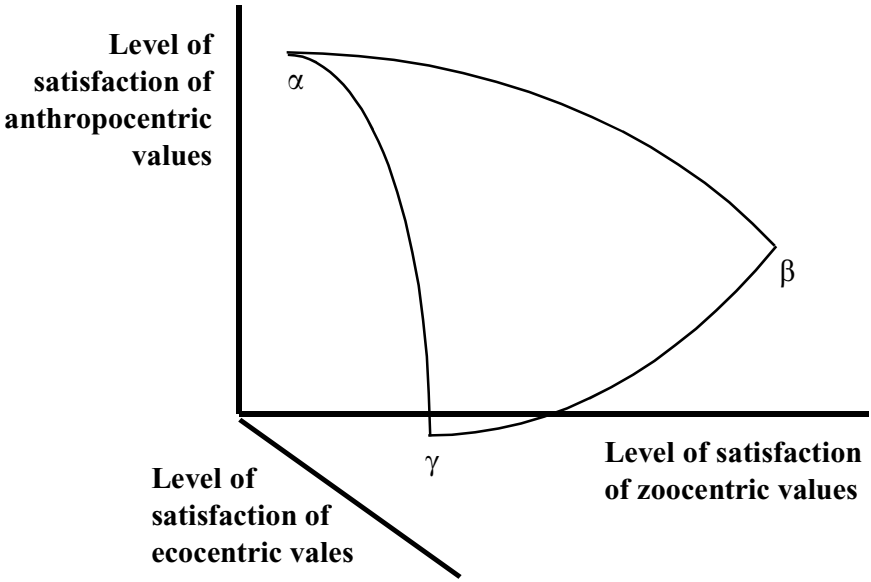


Figure 2: A three-dimensional possibility plane.

However, this is not to say that all points on either plane '*abc*' or plane '*def*' represent possible outcomes. Rather, the frontier of all possible outcomes is constituted by plane '*αβγ*' in Figure 2. If we now superimpose part of Figure 1 on Figure 2, we obtain Figure 3. Point '*T*' is where planes '*abc*' and '*αβγ*' touch. Any other point on '*αβγ*' would fall on an indifference plane, such as '*def*' in Figure 1, that is closer to the origin. But as any point on '*abc*' is preferable to any point on '*def*', never mind to any point on an indifference plane even closer to the origin (imagine plane '*xyz*', for example), then point '*T*' in Figure 3 represents the best possible outcome, given the various values held, and given the ways in which we might be prepared to trade them off. In other words, as any other possible outcome would be deemed undesirable from the standpoint of '*T*' (which is a practicable outcome), then '*T*' is the outcome that we ought to aim for. Consequently, attempting to bring about the outcome represented by point '*T*' in Figure 3 is most certainly not, *contra* Attfield, both right and wrong, nor both obligatory and forbidden. Rather, it is, on the moral theory I am proposing, unmistakeably the right thing to do. Put another way, contrary to widespread assumptions ranging from those of Isaiah Berlin all the way to those of David Wiggins, moral pluralism (so long as it takes the form of value pluralism canvassed here) can generate determinate moral answers.

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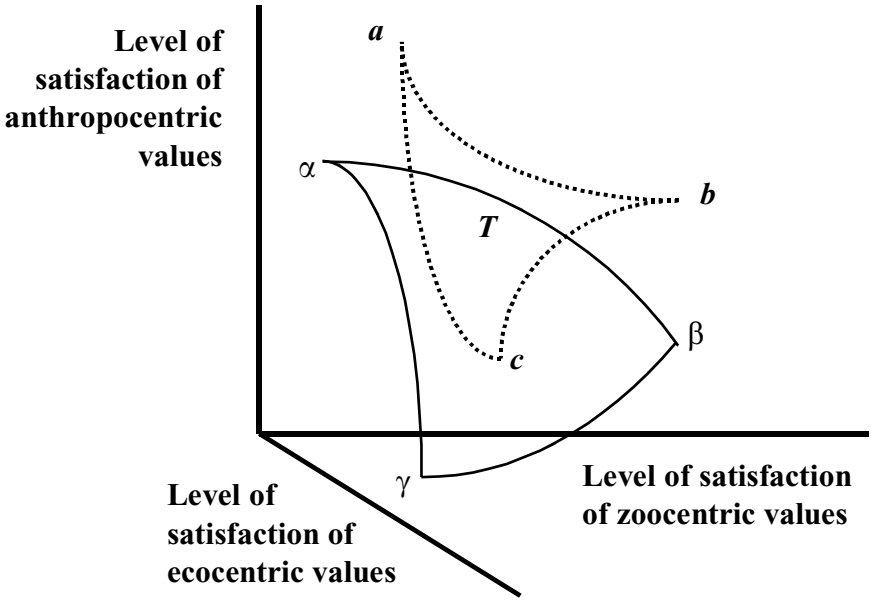


Figure 3: A determinate moral outcome.

It is also worth noting that any point on '$\alpha\beta\gamma$' in Figure 3 that falls close to either of the three axes would also fall on an indifference plane much closer to the origin than '*abc*'. Hence, it would be an undesirable outcome, given the practicability of obtaining the outcome represented by '*T*'. But the outcome enjoined by any monistic theory, in maximizing one value regardless of the rest of the values we hold, will be represented by a point on '$\alpha\beta\gamma$' that is close to one of the axes. Hence, the outcomes enjoined by monistic theories are bound to strike anyone with a richer set of values as morally unacceptable, given the practicability of obtaining an outcome that better satisfies her particular combination of values,[62] such as that represented by point '*T*'. Rawls's theory[63] is not, of course, monistic. But in lexically ordering the satisfaction of more than one value, it fails to enjoin outcome '*T*'. For the lexically prior value will inevitably pull the outcome enjoined by any Rawlsian approach towards the axis measuring that value, and hence onto an indifference plane closer to the origin than '*abc*'.

[62] It would be a mistake to assume that I hold all values as simply given. See Alan Carter, 'Humean Nature', *Environmental Values* 9/1 (2000), and Alan Carter, 'Projectivism and the Last Person Argument', *The American Philosophical Quarterly* 41/1 (2004).

[63] See John Rawls, *A Theory of Justice* (Cambridge, Mass., 1971).

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The approach presented here thus looks, at first glance, quite unlike any other familiar moral theory, given how monistic the more familiar moral theories tend to be. But interestingly, it is possible to construe it as bearing some similarity to one view. Aristotle talks of the morally wise person: the *phronimos*. The *phronimos* takes everything into account, and arrives at the mean. The form of multidimensionality outlined here could perhaps be regarded as a formalization of what an environmentally aware *phronimos* would arrive at intuitively.

I have all too briefly indicated what a more adequate environmental ethic might require. And recall that, while I have pictorially represented three sets of values, at least four would be needed. In short, anthropocentric, zoocentric, biocentric and ecocentric theories, along with their respective moral principles, are all inadequate because, in being monistic, they maximize only one set of values. A fully adequate environmental ethic would need to incorporate what is of value in each theory – namely, the values each prioritizes – and successfully combine them. But there are a host of other trade-offs that I have not mentioned: for example, between rights violations and the numbers of beings with interests who stand to benefit greatly from them[64] (and it is this aspect that makes my own view not purely consequentialist, for certain means can be disvalued along with certain ends), or between the average level of welfare of beings with interests and its distribution[65] (and a focus upon such trade-offs can lead to an environmental ethic taking a more egalitarian form). I should also mention that including the valuing of a high average level of welfare would armour a pluralist theory against falling prey to the Minimax Implication. But perhaps I have said enough to indicate why I think that all monistic theories are inevitably bound to be inadequate, and why a truly acceptable environmental ethic, as with any acceptable moral theory, will need to be a pluralist one.

APPENDIX

We have noted that Callicott launched an attack on moral pluralism. But how well does his own approach fare? In responding to the charge of 'environmental fascism' that has been levelled against his earlier views, Callicott has been at pains to insist that the Leopoldian land ethic to which he subscribes does not replace our earlier moral obligations but,

[64] Although I do say something about it in Carter, 'Moral Theory and Global Population'.

[65] Although I do say something about it in Carter, 'Value-Pluralist Egalitarianism'.

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rather, adds to them.[66] In general, the nearer and more interior the 'social-ethical circle', the more pressing its demands:

> If ethics evolve as means to social cohesion and stability, then the precepts of ethics should reflect the organization of the societies to which each is correlative. Extended families and tribes are different kinds of social institutions, although the former are embedded in the latter. Hence our duties to our fellow tribespersons are not the same as our duties to members of our own families. We are obliged to support family members, for example, in their infancy and old age, but we have no such obligations – at least, none so categorical – in respect to our fellow citizens. And our duties to the members of our own nation-states are different from those we owe to human beings of other countries. We pay taxes to defend our fellow citizens against military aggression, for example, but we usually feel compelled to offer only moral support to citizens of other nation-states when they are threatened – as the inaction of the United States and other military powers in the recent central Asian and African ethnic conflicts indicates.[67]

But our obligations to citizens of other nation-states concern a more 'interior social-ethical circle' – an earlier 'accretion' – than our obligations to other species in general. Consequently, the preservation of other species would surely require less of us than whatever is required of us to preserve the lives of citizens of other nation-states. But if we need 'offer only moral support to citizens of other nation-states' – if, in effect, we need do no more than cheer them on from the sidelines, as it were – then we need do so little to preserve other species that it is difficult to see how Callicott's version of the land ethic would constitute an environmentalist ethic at all. In short, in seeking to avoid the charge of environmental fascism, Callicott would seem, in effect, to have abandoned environmentalism.

However, Callicott has very recently offered what might appear a more promising attempt at evading the charge of environmental fascism, while retaining a serious environmentalist position. He offers two 'second-order principles' that he believes would enable us to decide when obligations deriving from a more 'interior social-ethical circle' take priority, and when they can be outweighed by obligations deriving from a wider one, such as the biotic community as a whole. The first second-order principle, 'SOP-1', holds 'that obligations generated by membership in more venerable and intimate communities take precedence over those generated in more recently emerged and

[66] See J. Baird Callicott, 'The Conceptual Foundations of the Land Ethic', *Environmental Philosophy: From Animal Rights to Radical Ecology*, ed. M. E. Zimmerman, J. B. Callicott, G. Sessions, K. J. Warren and J. Clark, 2nd edn. (Upper Saddle River, NJ, 1998).

[67] J. Baird Callicott, *Earth's Insights: A Multicultural Survey of Ecological Ethics from the Mediterranean Basin to the Australian Outback* (Berkeley, 1997), p. 204.

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impersonal communities';[68] while the second second-order principle, 'SOP-2', holds 'that stronger interests . . . generate duties that take precedence over duties generated by weaker interests'.[69] Thus Callicott defends the land ethic against the charge of ecofascism by arguing that the wider (in this case, biotic) community does not always take precedence. In a nutshell, we are to give priority to those within a nearer community, except when the interests of the wider community are greater. In such a case, the interests of the wider community are to be given priority.

But it is far from obvious how all this is to be cashed out. The major example that Callicott provides concerns the logging of old-growth forests, which threatens the northern spotted owl. He writes:

> The spotted owl is threatened with preventable anthropogenic extinction – threatened with biocide, in a word – and the old-growth forest biotic communities of the Pacific Northwest are threatened with destruction. These threats are the environmental-ethical equivalent of genocide and holocaust. The loggers, on the other hand, are threatened with economic losses, for which they can be compensated dollar for dollar. More important to the loggers, I am told, their lifestyle is threatened. But livelihood and lifestyle, for both of which adequate substitutes can be found, is a lesser interest than life itself.[70]

So, SOP-2 requires the loggers' interests to be subordinate to those of the wider biotic circle, for the latter are greater.

But the passage quoted above seems more than a little confused. For it is not necessarily the life of any individual, existing spotted owl that is threatened. A species of bird can go extinct because its members cease breeding as a result of habitat loss. Extinction does not necessarily entail the premature loss of life of any individual, existing bird. Rather, it might be thought that it is a *type* that is lost when a species becomes extinct – in this case the type 'northern spotted owl'. But it is equally true that the type 'Pacific Northwest logger' will be lost if logging ceases, even though no individual, existing logger may thereby die prematurely. On the other hand, if it is the community that Callicott is really concerned with, why does he ignore the logging community? It is not merely that the loggers' lifestyle will be lost, but so too will be their communities. Why isn't the loss of their community a greater interest? And to the loggers it is a nearer community than that of the forest as a whole – in other words, the loggers' community constitutes, in Callicott's sense, a more 'interior social-ethical circle',

[68] J. Baird Callicott, 'Holistic Environmental Ethics and the Problem of Ecofascism', *Environmental Philosophy: From Animal Rights to Radical Ecology*, ed. M. E. Zimmerman, J. B. Callicott, G. Sessions, K. J. Warren and J. Clark, 3rd edn. (Upper Saddle River, NJ, 2001), p. 122.

[69] Ibid.

[70] Ibid., pp. 123–4.

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and therefore, *ceteris paribus*, takes priority. And to the rest of us, it is also within a more 'interior social-ethical circle' than the wider biotic community ostensibly constitutes. I am not, of course, uncritically defending the logging of old-growth forests; I am merely pointing out that Callicott's reasoning seems completely arbitrary.

Thus, it seems to me that Callicott's theoretical approach signally fails to justify as environmentalist an answer as the one he seeks to proffer. And the main reason for its failure, I would contend, is that his two second-order principles serve, in effect, to create a lexical ordering, although at different times different things will be lexically prior. The problem is compounded when it is then noted that there are grounds for regarding the interests of the logging community as lexically prior, which would be tantamount to discounting ecocentric values. The form of moral pluralism I advocate, on the other hand, rules out all ecofascist approaches because it incorporates egalitarian anthropocentric values while simultaneously refusing to discount ecocentric ones.

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