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Human Relationships, Nature, and the Built Environment: Problems That Any General Ethics Must Be Able to Address

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In my book *A Theory of General Ethics* (Fox, 2006) I coin and define the term 'General Ethics' as referring to a single, integrated approach to ethics that encompasses the realms of interhuman ethics, the ethics of the natural environment, and the ethics of the human-constructed (or built) environment. A truly General Ethics would therefore constitute a 'Theory of Everything' in the domain of ethics. In this chapter, I want to outline no less than eighteen problems that confront any attempt to construct a General Ethics, which is also to say the range of ethical problems and that anyone seriously interested in environmental and society-related issues must be able to address. I will outline each of these problems according to the main approaches they relate to – interhuman ethics, animal welfare ethics, life-based ethics, ecosystem integrity ethics, and the ethics of the human-constructed environment. My own approach to these problems – my own General Ethics – can be found in *A Theory of General Ethics*. What you have here is, if you like, a map of the ethical terrain that those dealing with environmental and society-related issues are liable to encounter.

CENTRAL PROBLEMS RELATING TO INTERHUMAN ETHICS

Problem 1: 'Why are humans valuable?'

Although we tend to take it for granted that humans are extremely valuable when considered in their own right – as opposed to being merely 'human resources' that we can *use* – it is nevertheless important for any ethical theory to be able to give an adequate answer to this question. This is especially so given that the traditional secular and religious answers to this question have come under fire from a number of quarters. For example, the idea that humans are essentially and uniquely rational has been called into question by what we have learned not only from Freud and the panoply of developments in clinical psychiatry and psychology since Freud but also from human cognitive psychology, comparative psychology, and cognitive ethology. These studies suggest, in short, that humans are not as rational as we have traditionally liked to think and that nonhuman animals are not as irrational as we have traditionally liked to think. Similarly, the idea that humans are uniquely endowed with a soul has

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become entirely contentious. Moreover, insofar as the idea of a soul is linked to human consciousness, neuroscientific evidence clearly points to the conclusion that consciousness is entirely dependent on neural processes and thus ceases to exist when these neural processes cease.

As if this weren't enough, a number of thinkers – and most notably the animal welfare ethicist Peter Singer – have followed the lead of Jeremy Bentham (1748–1832), the founding father of utilitarianism, and asked what being rational or having a soul has to do with being deserving of moral consideration in the first place. That is, they have suggested that the traditional reasons that have been given for bestowing moral consideration uniquely upon humans are irrelevant! For these thinkers, the reason that we should not, say, torture a six-month-old baby is not because it is rational (or the sort of being that will become rational) and not because it has a soul (if it does) but because it would *suffer*, here and now. Thus, for these thinkers, as for Bentham, the essential moral question is not 'Can this being reason (or, for that matter, does it have a soul)?' but 'Can it suffer?' However, if that question is accepted as the litmus test of which beings are deserving of moral consideration, then we are into a whole new ethical ball game – one that extends to all sentient beings and not just humans.

We can see, then, that giving a decent answer to the 'Why are humans valuable?' question is not a simple matter, and much can rest on it in terms of further ethical implications, both within the human sphere (e.g. how should we respond to the issues of abortion and euthanasia?) and beyond the human sphere (e.g. should we stop eating other animals and all be vegetarian?).

Problem 2: Abortion; Problem 3: Euthanasia

In view of what I have just said in regard to problem 1, it ought to be fairly clear that how we answer the 'Why are humans valuable?' problem is of the first importance to how we should approach these two problems, which concern the beginnings and ends of human life, respectively. For example, if one regards any form of human life as sacred to God and considers that it is therefore a sin against God to take such life – irrespective of the quality of life that a fetus might go on to have or the quality of life that a patient with a terminal illness might now have – then clearly one has a straightforward answer to both of these problems, namely, one of implacable opposition to both abortion and euthanasia. However, given that there are many other views on these issues and that a great many people do in fact want and, where they can, exercise their freedom to make quite different choices in regard to them, it is easy to see why these issues have been sources of considerable contention – especially when considered in the context of the medical means that are now available to us both to support and terminate human life. Clearly, any adequate General Ethics must be able to address these two problems in a sensible and defensible way.

Problem 4: 'What are our obligations to other people?'

This question is one of the central questions for any form of interhuman ethics. What kinds of obligations do I have to others? Am I obliged simply not to harm others (and if so, why?) or are my obligations more extensive than that? For example, am I also obliged to offer what we might call 'saving help' to others even though I might be in no way responsible for the harm or distress that has befallen them? Am I obliged to go even further and offer other people ongoing supportive help rather than just limited forms of saving help? What about completely bonus forms of help? Where do my obligations to other people begin and end? And am I supposed to extend these obligations equally to all other people? That is, do I owe just as much to strangers as I do to my own nearest and dearest? For example, am I just as obliged – or perhaps even more obliged – to relieve suffering by donating to famine relief as I am to funding my children's education, or to taking my family on a holiday? The influential utilitarian philosopher Peter Singer argued in a famous and much reprinted 1972 paper entitled 'Famine, Affluence, and Morality' that we are so obliged, for 'if it is in our power to prevent something bad from happening, without thereby sacrificing anything of comparable moral importance, we ought, morally to do it' (Singer, 2002, p. 573). And, in Singer's view, this applies regardless of 'proximity or distance': 'If we accept any principle of impartiality, universalizability, equality, or whatever, we cannot discriminate against someone merely because he is far away from us' (Singer, 2002, p. 573). Thus, we are, in principle, just as obliged to help strangers as we are to help those to whom we are closest.

Any adequate General Ethics must be able to offer a sensible and defensible approach to all of these kinds of questions regarding our obligations to others. [However, it needn't be anything like Singer's approach to these particular questions. It is therefore worth noting in this regard that the approach I develop in *A Theory of General Ethics* (Fox, 2006) is far more sensitive to the various questions I have raised above than Singer's one-size-fits-all approach to ethics. Moreover, I argue that my approach is a far more defensible one than

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Singer's because it takes into account central features that pertain to any moral problem situation that Singer's approach fails to take into account.]

Problem 5: 'What is the best structural form of politics?'

It is easy to see from the above discussion that questions regarding our personal obligations to others can easily spread into overtly political questions. For example, to what extent do I *personally* owe saving help to faraway strangers who are experiencing famine or being persecuted in a war (and Singer, as we saw, believes that we owe a great deal at a *personal* level in these contexts) and to what extent might it be more morally reasonable – and not simply a 'cop-out' – to say that my *nation-state* has certain obligations in these contexts such that my personal obligations in respect of the above problems actually kick in at the level of my being obliged to support the kind of political system and government that will live up to these obligations (and draw on my taxes to do so)? Clearly, a truly General Ethics must be able to give us some guidance here.

However, the first form of guidance that we want from a General Ethics in regard to politics is guidance with respect to the *structural* form of politics that we ought to support. By this I mean that a General Ethics ought to be broad enough to endorse – and be able to explain why it endorses – one or more kinds of political structure (such as dictatorship, monarchy, aristocracy, plutocracy, oligarchy, democracy, or anarchy) over others. Now, as with the 'Why are humans valuable?' question, it is easy for most of us who live in democracies simply to assume the answer here for it seems just as obvious to most of us that democracy is the best structural form of politics as it does that people are extremely valuable. But a General Ethics really needs to provide an explicit answer here, just as it does for the previous questions.

Problem 6: "What is the best 'flavor' of politics?"

Essentially the same structural forms of politics can nevertheless take on very different 'flavors.' For example, a dictatorship (or any system in which power is overwhelmingly concentrated in the hands of a few and from whom that power cannot easily be removed) can, in theory, be brutal, benign, or benevolent; anarchy can, in theory, consist of 'mutual aid' or a 'war of all against all' that proceeds in the absence of any rule of law whatsoever; democracies can and typically are distinguished in terms of the extent to which they are socially oriented (and so taxed accordingly in order to fund socially oriented programs, including all the state administrative apparatus that these programs entail) as opposed to individualistically oriented (and so taxed accordingly in order to fund a more minimal state apparatus, including more minimal administrative and social services). Thus, whatever our answer to the 'What is the best structural form of politics?' question, we still want to know what 'flavor' this structural form of politics ought to have since (political) structure, by itself, does not determine (political) content. Indeed, this is precisely why we vote *within* a democratic *structure*: to determine the 'flavor' – or, in other terms, the *content* – we want that democratic structure to have (at least for the next few years!). Ideally, then, we want a truly General Ethics to provide an explicit answer to the question not only of the kind of political structure that we ought to endorse but also of the kind of 'flavor' that that political structure ought to have.

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The six questions that I have outlined here – the 'Why are humans valuable?' question, the abortion question, the euthanasia question, the 'What are our obligations to other people?' question, the 'What is the best structural form of politics?' question, and the "What is the best 'flavor' of politics?" question – arguably represent the six most central questions in interhuman ethics. A General Ethics needs to be able directly to address them all, to offer sensible and defensible answers to each of them, and also to address a wide range of ethical questions that run far, far beyond these questions, as we will see in what follows.

CENTRAL PROBLEMS RELATING TO ANIMAL WELFARE ETHICS

Problem 7: 'Why are sentient beings valuable?'

The best known and most influential answers to this question have been advanced by the utilitarian ethicist Peter Singer [1990 (1975)] and the rights-based ethicist Tom Regan (1983, 2003) under the names of 'animal liberation' and 'animal rights', respectively. Both of these approaches turn, in their different ways, on the basic idea that sentient beings in general (which, for Singer, includes anything more complex than mollusks) or some more specialized subset of sentient beings (such as mammals and birds in Regan's more recent expositions) have an experiential welfare that ought to be respected. Singer adopts the utilitarian approach of arguing that we ought to take the interests of other sentient beings into account in our actions by weighing these interests impartially against the interests of other sentient beings

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(including our own). Regan adopts the rights-based approach of arguing that the possession of an experiential welfare – at least an experiential welfare of a certain order, such that these beings constitute what Regan refers to (quite unclearly in my view) as 'subjects-of-a-life' – makes a being sufficiently 'inherently valuable' as to possess 'rights' to life and liberty. The possession of such 'rights' means that the being's interests in continued life and liberty cannot be 'traded off' against the interests of others, as in the utilitarian approach. Singer and Regan both argue that it is *speciesist* to recognize only the interests or rights to life and liberty of members of one's own species – and the parallel with the ideas of sexism and racism is quite deliberate here. [The term *speciesism* was coined by Richard Ryder who has himself more recently developed an as yet not very well known but nevertheless significant partial synthesis of Singer's and Regan's views, which he refers to as *painism* (Ryder, 2000, 2001). Basically, Ryder rejects Regan's emphasis on being the subject-of-a-life in favor of Singer's more straightforward emphasis on the moral importance of pain while also rejecting Singer's utilitarian preparedness to aggregate pleasures and pains across different beings in favor of Regan's rights-based opposition to such aggregation.]

In order to refer to the animal liberation and animal rights (and, for that matter, painism) approaches collectively – and without privileging one of these names over the other(s) – a number of commentators, including myself, find it convenient to refer to them as the *animal welfare approach* (or animal welfare approaches, depending on the degree of specificity intended) since these approaches proceed from some version of the idea that sentient beings are valuable because they have an experiential welfare such that they can fare better or worse. I have used this *animal welfare* terminology earlier in this chapter, as well as in the heading of this section, and will continue to do so as appropriate in what follows.

Although I would want to take issue with the details of Singer's and Regan's (and, by implication, Ryder's) basic arguments for their approaches in a longer discussion, it is sufficient for now to note the following. These approaches assign essentially the same level of moral status to all sentient beings or subjects-of-a-life – including humans. They consider that, other things being equal (such as the level of comfort or distress that a being is experiencing), our obligations in respect of nonhuman sentient beings are just as strong as our obligations in respect of other humans. Considered from the other side, these approaches flatly deny that we have any direct obligations in respect of *nonsentient* living things. Thus, there would be nothing wrong in principle in destroying nonsentient living things such as plants and trees simply because it was our pleasure to do so. As Singer says:

> If a being suffers, there can be no moral justification for disregarding that suffering, or for refusing to count it equally with the like suffering of any other being. But the converse of this is also true. If a being is not capable of suffering, or of enjoyment, there is nothing to take into account (1990, p. 171).

Now any General Ethics obviously needs to address the important question of why sentient beings are valuable – and to what extent they are valuable (e.g. even if we set anthropocentric prejudices aside, is it actually rationally defensible to assign the same general level of moral status to nonhuman sentient beings – or subjects-of-a-life – as to humans?). However, to the extent that we think that it is sensible to ask questions about the values we should live by – that is, ethical questions – in respect of a great many things that are not sentient, such as plants, trees, ecosystems, and buildings, and to the extent that we think that the proper answers to these questions cannot simply be reduced to the interests of sentient beings, then a General Ethics will clearly need directly to address a great many more issues than those addressed by the animal welfare approaches. Not only that, but any adequate General Ethics will need to address even the above 'Why are sentient beings valuable?' question within the context of a far more comprehensive theoretical framework than that offered by the animal welfare approaches that I have referred to here. The reasons for this can be seen from considering the problems that I will outline as problems 8 through 13 below.

Problem 8: Predation

The animal welfare approaches cannot adequately explain why we should, on the one hand, stop the suffering or rights violations of other animals in terms of our (human) predation upon them, but, on the other hand, not attempt to intervene to stop the suffering or rights violations of other animals in terms of their predation upon each other. The problem here, of course, is that from the point of view of the animal being torn apart, it does not necessarily make any difference whether it is a human or a nonhuman animal that is causing its suffering or violating its rights. (Indeed, a bullet through the brain might well be 'preferable' to being torn apart.) Why, then, stop at opposing human predation alone?

As Mark Sagoff (2001) asked in an influential paper, which carried the revealing title 'Animal

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Liberation and Environmental Ethics: Bad Marriage, Quick Divorce': if we accept any of the main versions of the animal welfare argument, then

> Where should society concentrate its efforts to provide for the basic welfare – the security and subsistence – of animals? Plainly, where animals most lack this security, when their basic rights, needs, or interests are most thwarted and where their suffering is most intense. Alas, this is in nature (2001, p. 91).

Arguing that animals typically die violently in nature through predation, starvation, disease, parasitism, and cold, that most do not live to maturity, and that very few die of old age, Sagoff (2001, p. 92) proceeds, with deliberately provocative intent, to suggest that if wild animals could themselves understand the conditions into which they are born, then they 'might reasonably prefer to be raised on a farm, where the chances of survival for a year or more would be good, and to escape from the wild, where they are negligible.' Thus, 'One may modestly propose the conversion of national wilderness areas, especially national parks, into farms in order to replace violent wild areas with more humane and managed environments' (Sagoff, 2001, p. 92).

Why not reduce suffering and rights violations by doing this? That way, prey could be killed humanely and fed to predators. Alternatively, we could follow the equally provocatively intended suggestion advanced by the influential ecocentric ethicist J. Baird Callicott in a devastating review of Tom Regan's *The Case for Animal Rights* and simply humanely eliminate all predators. Callicott (1985) argues that because Regan makes it clear that all subjects-of-a-life possess equally strong rights, demanding equally strong degrees of respect, it must follow that:

> If we ought to protect humans' rights not to be preyed on by both human and animal predators, then we ought to protect animals' rights not to be preyed upon by both human and animal predators. In short, then, Regan's theory of animal rights implies a policy of humane predator extermination, since predators, however innocently, violate the rights of their victims (1985, p. 371).

Singer and Regan have both attempted to resist these kinds of conclusions by arguing that we should not interfere with nature in these ways because there is a big difference between human predation upon nonhuman animals and nonhuman animals' predation upon each other: specifically, humans are moral agents and so can assess the rights and wrongs of their actions, whereas nonhuman animals are not moral agents and so cannot assess the rights and wrongs of their actions. But it just will not do to dismiss the problem of nonhuman predation by saying that nonhuman animals 'don't know any better,' therefore cannot be blamed for their actions, and *therefore* should be allowed to carry on with these actions. This is an entirely misplaced argument at best and an egregiously sophistical argument at worst: moral agents (i.e. normal mature humans) can reasonably be held responsible for *allowing* nonmoral agents (such as nonhuman predators) to cause harm or violate the rights of others. As both Steve Sapontzis (1998) and J. Baird Callicott (1985) have pointed out, respectively, we might not hold a young child who 'doesn't know any better' to be morally responsible for tormenting a rabbit, nor might we hold a brain-damaged sadist to be morally responsible for torturing a child, but this does nothing to lessen our responsibility *as* moral agents to stop the young child or the brain-damaged sadist from doing these things. As Sapontzis says:

> Young children cannot recognize moral rights and obligations; nonetheless, it is still wrong for them to torment and kill rabbits. Adults who see what the children are doing should step in to protect rabbits from being killed by the children. Similarly, humans can have an obligation to protect rabbits from being killed by foxes, even though the foxes cannot understand moral concepts (1998, p. 276).

Callicott drives the point home this way:

> Imagine the authorities explaining to the parents of a small child tortured and killed by a certifiably brain-damaged sadist that, even though he had a history of this sort of thing, he is not properly a moral agent and so can violate no-one's rights, and therefore has to be allowed to remain at large pursuing a course of action to which he is impelled by drives he cannot control (1985, p. 370).

Thus, Singer's and Regan's concern with the question of whether or not nonhuman predators are moral agents misses their own morally relevant point: the morally relevant question is not whether these *predators* are *moral agents* but whether their *prey* are *moral patients* (i.e. beings that we, as moral agents, have an obligation to protect from harm). And, according to both Singer's and Regan's versions of the animal welfare approach, there is a broad class of prey animals that fall into this category; thus, it must follow that their views imply that we should intervene where doing so is likely to lessen the overall amount of pain and suffering in the world or, if we adopt a rights-based approach, to stop the violation of the rights of prey (regardless of utilitarian

considerations regarding the total amount of pain and pleasure in the world).

If the animal welfarists conceded their shaky ground here and decided to prosecute a worldwide campaign to stop predation in nature generally, then (setting aside the likelihood of ecological meltdown for the sake of the argument!) they would effectively end up domesticating or otherwise taming what remains of wild nature. The animal welfare ethicists *say* that we should not do this, but the problem here is that they are not rationally *entitled* to say this in terms of the theoretical approaches to which they are committed. This means that while accusing human predators of applying a double standard, these ethicists are elsewhere applying a double standard of their own. On the one hand, they charge that human (meat-eating) predators think that we should not cause suffering or violate each other's rights by eating each other (i.e. engaging in cannibalism), but that it's OK to cause suffering or violate the rights of nonhumans by eating them. However, on the other hand, the animal welfarists are themselves saying that humans in general should not cause suffering or violate the rights of any sentient or rights-holding animals, but that it's OK for any other animals to cause suffering or violate the rights of any sentient or rights-holding animals. Thus, Tyler Cowen's (2003, p. 170) damaging, but I think correct, observation: 'Through casual conversation I have found that many believers in animal rights reject policing [of other animals with respect to predation] out of hand, though for no firm reasons, other than thinking that it does not sound right.'

Suppose, however, that animal welfarists agreed to apply their own arguments consistently, even though that would mean policing nature to the extent of totally domesticating or taming it. This raises the question 'What would be wrong with that in any case?,' which brings us to the next point.

(Note that from here on I will just refer to sentient animals, but you can substitute subjects-of-a-life/rights-holding animals as you wish, depending on your preferred version of the animal welfare approach. I will also take it as read – and so will not keep stating explicitly – that any General Ethics needs to be able to offer sensible and defensible responses not only to the predation problem but also to each of the following problems in regard to the animal welfare approach.)

Problem 9: The wild/domesticated problem

Because of their thoroughly individualistic foci, the animal welfare approaches imply that a *wild* sentient animal or a population of wild sentient animals is no more valuable or deserving of moral consideration than a *domesticated* sentient animal or a population of the same number of domesticated sentient animals of the same average level of sentience. (This is because, in both cases, one has just as many sentient animals with just as many total 'units of sentience'; or, substituting for the main alternative animal welfare view, just as many rights-holding animals.) This runs against the sense, shared by many reflective people, that – if we set the special case of companion animals (or 'pets') to one side – there is, somehow, 'something' that is ultimately more valuable about a wild sentient animal or a population of wild sentient animals than a domesticated sentient animal or a population of the same number of domesticated sentient animals of the same average level of sentience. As I have implied, people might well disagree with this statement if it is taken to include the special case of their companion animals, which can come to be seen as members of the household, with many of the status privileges – and even, to some extent, responsibilities – that being a member of the household brings with it. But this potential point of disagreement speaks of the special value of these animals *to us*; it does not speak to the value of these animals in more general, less obviously self-interested terms. If we therefore set the special case of companion animals to one side and consider the issue in terms of those domesticated animals with which we have no special relationship (such as the sheep, cows, pigs, chickens, and so on that we keep for instrumental reasons and that constitute the vast bulk of the domesticated animal population even if they are largely hidden from us), then we can get to the heart of the question being asked here: Are these domesticated-animals-in-general as valuable as wild animals? The animal welfare approaches are theoretically committed to saying that, in principle, they are. This, in turn, implies that a world of totally domesticated animals would, other things being equal, be just as good as a world of wild animals or a world containing a mixture of the two. In that case, then, why not domesticate the planet completely if it suits our purposes to do so?

Not only do the animal welfare approaches invite this question, but there are grounds for thinking that the advocates of these approaches ought to be enthusiastic about realizing such a world. After all, it would help us to sort out the previously discussed problem of nonhuman predation, for we could police nature much more effectively in a totally domesticated world. It would, for example, be much easier to exterminate all predators humanely or, alternatively, kill their prey humanely and then present it to the recalcitrant predators at feeding time. My cat – a skillful wildlife predator when left to her own devices – seems quite happy with

this arrangement, especially around 5:30 p.m. each evening when she gets fed what are, in fact, parts of another dead animal, out of a tin. Why wouldn't every other animal be happy with this arrangement?

Problem 10: Indigenous/introduced problem

Because of their thoroughly individualistic foci, the animal welfare approaches similarly imply that an *indigenous* sentient animal or a population of indigenous sentient animals is no more valuable or deserving of moral consideration than an *introduced* sentient animal or a population of the same number of introduced sentient animals of the same average level of sentience. This runs against the sense, shared by many reflective people (and certainly most nature reserve and wildlife management agencies), that there is, somehow, 'something' that is ultimately more valuable about an indigenous sentient animal or a population of indigenous sentient animals than an introduced – especially an *invasive* – sentient animal or a population of the same number of introduced sentient animals of the same average level of sentience. Yet the animal welfare approaches invite the question: Why not populate the world with whatever cute and fluffy, colorful, or otherwise interesting introduced sentient animals we like, even if this leads to a loss of biodiversity overall [which is exactly what it does since a certain percentage of introduced species will turn out to be invasive – although we often do not know which ones in advance – and invasive species represent, after habitat alteration, the second leading cause of loss of global biodiversity (Holmes, 1998; Bright, 1999)]? Why should it matter if a sentient animal isn't indigenous to a particular region? After all, who really cares about the standardization of our fauna and flora through the processes of ecological globalization? Home gardeners 'mix'n' match' all the time, using the world's flora as their palette to make pleasing gardens. Why shouldn't we do this to get whatever mix of sentient animals happens to please us?

Problem 11: Local diversity/monoculture

Because of their thoroughly individualistic foci, the animal welfare approaches likewise imply that a *diversity* of sentient animals is no more valuable or deserving of moral consideration than a *monoculture* (or something approaching a monoculture) of the same number of sentient animals of the same average level of sentience. Again, this runs against the sense, shared by many reflective people, that there is, somehow, 'something' that is more valuable about a diversity of sentient animals than a monoculture (or something approaching a monoculture) of the same number of sentient animals of the same average level of sentience. Yet the animal welfare approaches invite the question: Why not populate the world with monocultures of sentient animals, especially if it suits our purposes to do so? (It might seem unusual to think of non-human animals – rather than plants – in terms of monocultures, but that is effectively what, for example, vast herds of cattle are when the distinction is applied to sentient species.)

This problem can be taken as posing the question of diversity and monoculture on a case-by-case basis without reference to the overall amount of biodiversity in the world. This follows from the fact that we could at least imagine a world in which there are many, many small monocultures (or near monocultures) but monocultures that are sufficiently different from each other to add up to a world in which the overall diversity is just as great as another world in which there are mixtures of considerable (but not always dissimilar) diversity everywhere (and thus no monocultures at all). This means that the issue of diversity/monoculture at any given local level is conceptually distinct from the issue of biodiversity (or the preservation of a wide range of species) at a global level even if there is a strong relationship between the two at a practical level. With this in mind, we can now turn to consider the conceptually distinct but practically related question of the overall diversity of species globally.

Problem 12: Species (or global biodiversity)

Because of their thoroughly individualistic foci, the animal welfare approaches imply that the last remnants of a population of sentient animals are no more valuable or deserving of moral consideration than the same number of sentient animals of the same average level of sentience drawn at random from a population that exists in plague proportions. This also runs against the sense, shared by many reflective people, that there is, somehow, 'something' that is valuable about the preservation of a species as such, even though a species as such cannot feel and so has no 'experiential welfare' to be concerned about (only the individual flesh-and-blood *members* of a species can feel and thus possess an experiential welfare; a species as such is just an abstract category; it just refers to a *type* of entity not to token instances of that entity). The animal welfare approaches therefore invite the question: Why care about biodiversity at all? Why not populate the world with equal numbers of a relatively small range of those plants

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and nonhuman animals that are most useful to us or that simply most take our fancy?

Problem 13: Ecosystem integrity/preservation in zoos and farms

Because of their thoroughly individualistic foci, the animal welfare approaches imply that free-ranging sentient animals that actively participate in rich networks of ecosystemic processes, including food webs, are no more valuable or deserving of moral consideration than the same number of sentient animals of the same average level of sentience and experiencing the same average level of experiential satisfaction confined in a zoo or on a farm. This similarly runs against the sense, shared by many reflective people, that there is, somehow, 'something' that is more valuable about the former animals than the latter – or at least about the former *situation* than the latter. I add this rider because there is perhaps a sense in which we can generally agree that the value of a tiger considered in its own right, which is to say 'in isolation' from everything else, is whatever it is regardless of whether it is in the wild or in a zoo. However, the fact is that *nothing exists in isolation*. What we ultimately need to consider, then, is the overall value of the two situations: tiger in the wild and tiger in the zoo.

The problem for the animal welfare approaches, however, is that their thoroughly individualistic foci mean that they cannot 'see' contextual issues. All they are concerned about is the value of sentient animals as such (or, as I noted at the end of my discussion of problem 8, you can substitute 'rights-holding animals' here as you prefer). The very best they can do in accounting for contextual issues is to consider them in a second-order, derivative fashion and argue, for example, that a wild animal would be, say, happier in the wild, and that this would be a reason for preferring this situation to a zoo or a farm. But this argument is quickly countered: we can easily think of examples in which it is plausible to argue that an animal would have a longer and less stressed life living in some reasonable form of captivity than, as it were, taking its ecosystemic chances. [In this connection, recall Mark Sagoff's (2001, p. 92) sober assessment that animals typically die violently in nature through predation, starvation, disease, parasitism, and cold; that most do not live to maturity and that very few die of old age; and that many might 'reasonably prefer to be raised on a farm (or, we might add in this context, a good zoo), where the chances of survival for a year or more would be good, and to escape the wild, where they are negligible.'] In these cases, animal welfarists should see the zoo or farm scenario as preferable to that of the animal being left to the not-so-tender mercies of nature.

At the very least, the fact that animal welfare approaches are blind to contextual matters in anything other than a second-order, derivative way, means that they have no ultimate grounds for preferring happy or miserable animals in zoos to equally happy or miserable animals in nature. All that these approaches are equipped to 'see' are the sentient (or, to repeat, the rights-holding) animals in nature; they cannot 'see' or place value upon the more abstract, ecosystemic processes of nature that ultimately connect these animals. It is as if their moral vision allows them to see the individual sentient dots in the picture, but not to join them up. Thus, the long and the short of the ecosystem integrity problem for the animal welfare approaches is that their individualistic foci mean that they place no value on ecosystem integrity per se. Its value is purely derivative. Many reflective people think that that is not good enough. The difficult question remains, however, of explaining why it isn't good enough.

AU: Will 'this' be OK here?

CENTRAL PROBLEMS RELATING TO LIFE-BASED ETHICS

Problem 14: 'Why is life valuable?'

The standard argument that has been advanced by the main life-based ethicists – such as Albert Schweitzer (see Warren, 2000), Kenneth Goodpaster (2001), Robin Attfield (2002), Paul Taylor (1986), and Gary Varner (1998, 2002) – for the value of all living things, whether sentient or not, is that even a nonsentient living thing can be thought of as in some sense embodying a biologically based (but, of course, nonconscious) 'will to live' (Schweitzer), 'interests' (Goodpaster and Attfield), 'needs' (Varner and Attfield), or 'good of its own' (Taylor). But, alas, this general form of argument turns out to be seriously flawed in at least two respects. First, we simply cannot make proper sense of the argument that nonsentient living things can be said (literally rather than metaphorically) to have *wills*, *interests*, *needs*, or *goods of their own* – of any kind. Singer, a staunch defender of the view that the criterion of sentience is 'the only defensible boundary of concern for the interests of others' (Singer, 1990, p. 9), puts the point succinctly when he argues that the problem with the standard defenses offered by life-based ethicists is that

> [T]hey use language metaphorically and then argue as if what they had said was literally true. We may often talk about plants 'seeking' water or light so that they can survive, and this way of

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> thinking about plants makes it easier to accept talk of their 'will to live,' or of them 'pursuing' their own good. But once we stop to reflect on the fact that plants are not conscious and cannot engage in any intentional 'behaviour', it is clear that all this language is metaphorical; one might just as well say that a river is pursuing its own good and striving to reach the sea, or that the 'good' of a guided missile is to blow itself up along with its target. ... [In fact, however,] it is possible to give a purely physical explanation of what is happening; and in the absence of consciousness, there is no good reason why we should have greater respect for the physical processes that govern the growth and decay of living things than we have for those that govern non-living things (1993, p. 279).

We can easily *attribute* wills, interests, needs, and goods of their own to nonsentient living things, but we are doing so entirely from our own point of view, from our own ways of thinking about things in terms of ascribing intentions to them. We should not kid ourselves, however, that we can seriously – or, as Singer says, literally as opposed to metaphorically – claim that these features exist from the point of view of the nonsentient living thing under consideration, because *a nonsentient living thing doesn't have a point of view*. It is not *like* anything to be a nonsentient living thing; if it were, then, by definition, that thing would be sentient rather than nonsentient. Thus, it is quite misleading of Paul Taylor (1986, p. 63) to suggest, repeatedly, in respect of nonsentient living things that 'Things that happen to them can be judged, *from their standpoint*, to be favorable or unfavorable to them' (my emphasis), for we can no more judge benefits or harms 'from the standpoint' of a plant or a tree than we can judge these things 'from the standpoint' of a rock – and for the same reason. We can easily make these judgments in respect of plants or trees from *our* standpoint or point of view (and note here that *standpoint* literally refers to 'a physical or mental position from which things are viewed,' i.e. a point of view), but it is not literally possible to make such judgments from *their* standpoint or point of view because they do not have one. The attribution of nonconscious wills, interests, needs, or goods of their own to nonsentient living things is, in the final analysis, incoherent.

The second problem with the rational foundations of the standard argument for the life-based approach – and one that I am not aware of having been raised before – is that it is circular. Consider: it is simply not the case that every desire, interest, need, or good of one's own is automatically valuable; for example, someone might feel that they have an interest in, or a need to, or that it might further their own good to see someone dead, or have sex with someone by force if necessary, or lie badly to someone, and so on. It therefore becomes quite important to specify more precisely which interests, needs, or goods of their own are deemed to be valuable and which are not. For life-based ethicists, the interests, needs, or goods of their own that are deemed to be valuable are clearly those that are directed toward the maintenance of essential life processes, that is, those interests, needs, or goods of their own that make an entity an *autopoietic* system (literally, a *self-making* and, by extension, *self-remaking*, or *self-renewing* system). But in that case we can ask: 'Well, why do you think that these essential life processes – autopoietic processes – are valuable?' The answer that we will then get from the life-based ethicists is in terms of living processes being valuable because they embody (nonconscious) interests, needs, or goods of their own! And so the circle continues:

1. The standard life-based argument: living things are valuable because they embody (nonconscious) interests, needs, or goods of their own.
2. Critical question: but since not all interests, needs, or goods of their own are valuable (e.g., murder, rape, serious lying), what is it that makes these interests, needs, or goods of their own valuable?
3. Answer: the fact that they are directed toward the maintenance of living things.
4. Question: so what? What is so important about the maintenance of living things?
5. Answer: return to 1.

And so it goes. But circular reasoning offers no substantial reasons at all; it just chases its own tail instead of giving a solid answer to a problem.

We can note here that whatever the other strengths and weaknesses of the standard answers to the 'Why are humans valuable?' question and the 'Why are sentient beings valuable?' question, they are not circular. The standard kinds of answers we will get from the supporters of these approaches are answers like 'Because humans are rational,' or 'Because humans have a soul,' and 'Because sentient beings are capable of feeling and so can be benefited or harmed from their own point of view.' If we then ask, 'Well, are these features valuable in themselves?', the supporters of these approaches can easily say 'Yes' and proceed to tell us why in a noncircular way. For example, they can tell us that the possession of these features is what makes the possessor's life valuable *to them* – and then expound further why these beings should be respected on that account (just as we wish to be). But suppose we ask a life-based ethicist 'Why are even nonsentient living things

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valuable?' and they say 'Because nonsentient living things embody biologically based (but, of course, nonconscious) wills to live, interests, or goods of their own that are directed toward their own survival.' If we then ask, 'Well are these things valuable in themselves?', the supporters of this approach cannot give the same kind of answer as those we have just considered; that is, they cannot say 'Of course they are – these capacities are the very things that make the lives of nonsentient living things valuable *to them*' because it is not like anything to be a nonsentient living thing; nothing is valuable *to them*. Life-based ethicists must therefore reach for another answer, but, unfortunately for them, that answer is the circular answer outlined above.

In view of these problems, I would suggest that Gary Varner is on safer – albeit extremely vague – ground when he offers a second, nonstandard argument for a life-based approach to ethics. In this argument he asks us to imagine two worlds – one that is rich in nonsentient life-forms and one that is not. Then he asks us which world we think is more valuable. In answering his own question, he drops considerations relating to biologically based needs and so on altogether and simply appeals to our intuitive sense that 'the mere existence of nonconscious life adds *something* to the goodness of the world' (Varner, 2002, p. 114). Many of us would agree with that, as far as it goes, but the problem remains that Varner fails to tell us what this special 'something' is – and I am not aware of any other contributors to this approach who have been any more forthcoming; indeed, most do not even mention this second, more intuitively based argument. Even Varner (2002, p. 113) admits to deliberately omitting this argument from an earlier book because he 'doubted that it would be persuasive to anyone not already essentially convinced.' However, despite this, Varner (2002, p. 113) nevertheless thinks that 'this second argument expresses very clearly the most basic value assumption of the biocentric individualist [i.e. people who believe that all individual living things are valuable in their own right].'

But what Varner fails to see here is that this second argument – which serves to highlight an intuition rather than provide a detailed set of reasons for a conclusion – can be applied just as well to other comparisons. For example, imagine these two worlds: one that is rich in nonsentient life forms that are arranged in botanical gardens attended by robots and one that is rich in the same number of nonsentient life forms that exist in natural, ecosystemic arrangements; or imagine these two worlds: neither has any life forms at all, but one consists of nothing more than barren rock whereas the other is an abandoned world in which all life has died, but which still retains ruins of buildings and sculptures that would rival the finest you've ever seen. Could we not equally well argue that the second of the comparisons in each case is the intuitively preferable one, that 'the mere existence of ecosystems in the first example, or the mere existence of such highly organized architectural and sculptural complexity in the second example, adds *something* to the goodness of the world in both cases'? Yet if this is reasonable, then Varner's own form of argument undercuts his own biocentric individualist position. Varner does not wish to say that anything other than individual living things are valuable in their own right, yet his own intuitively based argument can easily be adapted to suggest that *holistic* systems (in this case ecosystems), rather than what he thinks of as *individual* living things, add something to the value of the world, and that certain formations of *nonliving* things can add something to the value of the world as well. Where, then, do these extensions of his own argument leave his biocentric individualist view that only *individual living* things can add something to the value of the world? Thus, it seems that even this second, nonstandard form of argument cannot be used to sustain a strictly biocentric individualist position.

[It is worth noting here that the approach that I develop in *A Theory of General Ethics* (Fox, 2006) tells us exactly what the mysterious 'something' is that is added to the goodness of the world in each of the 'two world' comparisons discussed above – Varner's and mine. However, although the approach I develop in *A Theory of General Ethics* embraces and explains what is right in Varner's intuitive demonstration, it is not limited to and can in no way be summed up as being simply or even primarily a 'life-based approach' to ethics.]

The life-based approach and Problems 8 through 13 revisited

Beyond these problems with their its rational foundations, the individualistically focused life-based approach recapitulates the same range of problems that afflicts the animal welfare approaches on the basis of their individualistic foci of interest. That is, the life-based approach suffers from *the wild/domesticated problem* (after all, wild and domesticated plants are just as alive and, therefore, just as valuable as each other); *the indigenous/introduced problem* (similarly, indigenous and introduced plants are just as alive and, therefore, just as valuable as each other); *the local diversity/monoculture problem* (considered at the local level and without reference to overall global biodiversity, we can have just as many living things and, therefore, just as much value whether the living things in question are extremely diverse

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or all much the same); *the species (or global biodiversity) problem* (the same reasoning applies with respect to overall global biodiversity: we can have just as many living things and, therefore, just as much value whether the living things in question are extremely diverse or all much the same); and *the ecosystem integrity/preservation in zoos and farms problem*, which we can now expand to read: *the ecosystem integrity/preservation in botanical gardens and zoos and farms problem* (e.g. we can put all the plants in an ecosystem into a botanical garden, look after them really well, and have just as much life and, therefore, just as much value in both cases).

The predation problem is a separate kind of problem to those linked to the individualistic foci of the life-based approaches as such; however, it also recapitulates the formulation of this problem for the sentience-based approach – with a vengeance. In this context, the problem is this: Does the recognition of the value of nonsentient living things mean that moral agents should not destroy (and that includes eat) any living things? If so, how are we to live? Moreover, does the recognition of the value of nonsentient living things mean that moral agents should intervene to stop other living things destroying (and that includes eating) any other living things? (We saw that the argument for doing this is much stronger than the argument against it with respect to the animal welfare approaches.) The life-based approach is clearly untenable at a practical level unless it is made compatible with some sensible kind of hierarchy of value that explains why the value of nonsentient living things can be trumped by the value of other living things – and especially other sentient animals – maintaining their own existence. The main life-based ethicists recognize this problem and have generally attempted to develop either a set of priority rules that kick in under different circumstances (e.g. by distinguishing between basic and nonbasic needs) or else explicit hierarchies of value, such that while the idea of something being valuable in its own right kicks in at the level of individual living things (and not before), the value hierarchy goes on to ascribe greater value to more complex kinds of living things, such as sentient beings in general (or certain of their interests) and humans in particular (or certain of their interests).

The fact that the predation question alone more or less forces life-based ethicists to develop priority rules or explicit hierarchies of value in order to give us a workable theory – one that allows us to eat, for a start – might lead some of us to reflect back on the animal welfare approaches and ask: If some sensible hierarchy of value is the only way to make any practical sense out of the life-based approach, then why should the hierarchy of value flatten out at the level of sentient animals? Is there not a sensible hierarchy of value to be found there too? But, if so, what are the implications of this for the best known animal welfare approaches?

A final point that I will mention in regard to the life-based approach is that it is, obviously enough, a *pro-life* approach, with all that that entails. Any argument for the value of nonsentient individual living things is, therefore, clearly a *prima facie* argument against both abortion and euthanasia. Life-based ethicists might be quite happy with this – or they might wish to call on their various priority rules or hierarchies of value in order to allow abortion and euthanasia in various circumstances. The problem is, they don't say. Even though their approach is a pro-life approach, we will generally search in vain for any mention, let alone real discussion, of abortion and euthanasia in their arguments. It is as if they haven't made the connection. Clearly, however, any life-based approach needs to address these issues since this kind of approach invites their discussion. And I have already noted earlier in this chapter that any General Ethics – by virtue of being a *general* ethics – must do the same (see my discussion of problems 2 and 3).

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CENTRAL PROBLEMS RELATING TO ECOSYSTEM INTEGRITY ETHICS

This brings us to the ecosystem integrity approaches. These seem to solve a number of the problems that confront the previous, individualistically focused approaches. For example, ecosystem integrity approaches dissolve *the predation problem* created by both the animal welfare approaches and (if adopted sufficiently zealously) the life-based approaches in that predation, in a great many forms at least, is seen as part and parcel *of* the maintenance of ecosystem integrity. Similarly, *the wild/domesticated problem* is cashed out primarily in terms of what contributes to or disrupts ecosystem integrity. I say 'primarily' here because ecosystem integrity is not the only kind of value under consideration if we are talking about an inclusive ecosystem integrity approach, that is, one that also recognizes the value of individual living things. However, I also say 'primarily' here because I take it that the point of an ecosystem integrity approach is to favor ecosystem integrity over the value of individual living things when and where these values come into conflict. Thus, the right balance with respect to *the wild/domesticated problem* is to be found in terms of humans meeting their own needs for domestication within the context of preserving ecosystem integrity. *The indigenous/introduced problem* is also cashed out in terms of this understanding of what contributes

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to or disrupts ecosystem integrity. This means favoring indigenous living things (whether wild or not) over introduced living things and especially over invasive living things. The same understanding applies to *the local diversity/monoculture problem*: the right balance here is that which maintains ecosystem integrity and thus the approach that favors characteristic diversity over an increase in diversity for its own sake or a reduction in that diversity. *The species (or global biodiversity) problem* is just the diversity/monoculture problem at the global or ecospheric level as opposed to the local ecosystemic level. Essentially the same answer therefore applies: the right balance is that which maintains ecospheric integrity overall and thus the approach that favors characteristic ecospheric diversity over an increase in diversity for its own sake or a significant reduction in that diversity. Finally, this approach cannot remotely be accused of being blind to *the ecosystem integrity problem* because a concern for ecosystem integrity is its *raison d'être*.

But all is not as rosy as it seems with the ecosystem integrity approach. In particular, this approach adds the following new problems to the list of problems that any General Ethics must be able to address.

Problem 15: 'Why is ecosystem integrity valuable?'

The prototype of an ecosystem integrity ethics was first advanced by the American forester, wildlife ecologist, and conservationist Aldo Leopold (1887–1948) in a now famous essay entitled 'The Land Ethic,' which forms the concluding section of his classic *A Sand County Almanac*, first published in 1949 (a date that is remarkably early relative to the development of environmental ethics as a formal field of inquiry only since the mid-to-late 1970s). Leopold (1981, pp. 224–225) famously asserted that we should expand our traditional notions of ethics to include the 'biotic community' by adding the following principle to our existing moral codes: 'A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise.' Unfortunately, Leopold named this principle the 'Land Ethic,' which is quite unhelpful given that it can be applied just as much to ecosystemic relationships in riverine, estuarine, marine, and, presumably, atmospheric environments as to terrestrial environments. Alas, the misleading 'Land Ethic' label has stuck, but we can think of his proposal as a – even *the* – prototypical form of ecosystem integrity ethics.

Another unfortunate aspect of Leopold's central maxim concerns his use of the term 'beauty.' Partly because this term can mean different things to different people and partly because Leopold provided no independent elaboration of and defense for his inclusion of this term, later commentators have either ignored this aspect of Leopold's formulation or rendered it in terms of 'ecological integrity' – or some roughly equivalent formulation. Thus, for example, James Heffernan (1982, p. 237) says that (i)'The characteristic structure of an ecosystem seems to be what Leopold means by its integrity,' and then suggests (ii) that we can equate the idea of the 'objective beauty' of an ecosystem with its characteristic structure [which, from (i), also means its integrity]. For Heffernan (1982, p. 237), then, "when Leopold talks of preserving the 'integrity, stability, and beauty of the biotic community' he is referring to preserving the characteristic structure of an ecosystem and its capacity to withstand change or stress." In consequence, Heffernan (1982, p. 247) drops any explicit reference to 'beauty' in his own suggested reformulation of Leopold's Land Ethic: 'A thing is right when it tends to preserve the characteristic diversity and stability of an ecosystem (or the biosphere). It is wrong when it tends otherwise.' J. Baird Callicott (1996, p. 372) likewise drops any reference to 'beauty' in his suggested reformulation of Leopold's Land Ethic: 'A thing is right when it tends to disturb the biotic community only at normal spatial and temporal scales. It is wrong when it tends otherwise.' Thus, Leopold's Land Ethic is generally understood to refer to matters concerning ecological integrity not to what we might ordinarily understand as aesthetic matters as such. This is probably just as well because one person's idea of a 'beautiful' landscape can be an ecologist's idea of a 'disaster area' – a landscape overrun with invasive species and so on; similarly, one person's idea of an ugly or uninteresting landscape – like a 'swamp' – can be an ecologist's idea of a precious 'wetland.'

Leopold's proposal bears a similar relationship to contemporary ecosystem integrity ethics (*à la* Heffernan and Callicott) as Schweitzer's prototypical 'reverence for life' approach does to contemporary life-based ethics. Specifically, neither Leopold nor Schweitzer were professionally trained philosophers, and this shows in the relative looseness of their arguments (as well as Leopold's name for his approach and even his formulation of the Land Ethic), but they did both pioneer ethical directions that later philosophers have been inspired by and have attempted to develop in more detailed and rigorous ways. Thus, notwithstanding the relative fame of Leopold's Land Ethic, the essay in which he advances this ethic, although pregnant with significant ideas, offers little in the way of anything that philosophers would recognize as a rigorously reasoned argument. Even so,

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we can discern the basic structure of an argument in Leopold's essay if we dig deep enough, and this is what it looks like: Leopold argues that ethics are not a fixed and firm thing but rather a 'product of social evolution'; that 'All ethics so far evolved rest upon a single premise: that the individual is a member of a community of interdependent parts'; that there are now both theoretical and practical reasons for extending our conception of what our community is – and, thus, what our ethical concerns should cover – from the human level to the ecological level; and that the 'mechanism of operation [for this social evolutionary development] is the same for any ethic: social approbation for right actions: social disapproval for wrong actions' (Leopold, 1981, pp. 225, 203, 225, respectively). What Leopold is suggesting, then, is that the next stage in the social evolution of our ethics needs to be one in which we collectively embrace the wider ecological context of which we are a part as part of our extended community and, thus, as falling within the scope of our moral concerns and sympathies.

J. Baird Callicott (1987, 1989, 1999) has, through a sustained and influential output over many years, done much to draw out the Humean and Darwinian roots of this kind of argument and to develop it further. These Humean and Darwinian roots are essentially as follows. David Hume (1978, pp. 575, 618) argued in his masterpiece *A Treatise of Human Nature* (first published in 1739–40) that ethics is grounded in the sympathies and antipathies that are part and parcel of human nature: 'The minds of all men are similar in their feeling and operations' and 'sympathy is the chief source of moral distinctions.' Thus, rather than our reasoning about ethics driving our feelings (or passions), our reasoning about ethics is, ought, and can only be, as Hume (1978, p. 415) famously said, 'the slave of the passions.' [Or should that be: 'as Hume infamously said'? Given that the general thrust of Western philosophical ethics has been and remains very much concerned with using human reason to channel and curb the acting out of our passions in various ways, we can see why Robert Arrington (1998, p. 234) describes Hume's claim as 'one of the most notorious claims in the literature of moral philosophy.'] For Hume, then, we express our moral sentiments when we express approval or disapproval for those things and actions that we find useful or agreeable to ourselves and others. Darwinian evolutionary thought, in turn, informs our understanding of human nature and, thus, how our natural sympathies and antipathies got to be the way they are. It also informs our understanding of ecology and, thus, the interdependent relationship we have with the rest of the natural world. Callicott argues that Leopold draws upon and contributes to this line of intellectual and moral development in suggesting that we as a human community should now learn to extend our concerns and sympathies to the wider ecological community of which we are a part.

But where does this get us? If we pursue this line of thinking, then it seems obvious, to me at least, that the natural sympathies we share on the basis of our evolutionary inheritance are such that we do and will continue to feel most strongly for our immediate kin and kith, followed by whatever we take our most immediate wider group to be, and then perhaps outward to our own species and so on, but that the wider 'natural world' or 'ecological community' will inevitably, when weighed in this kind of balance, remain a relatively distant concern in terms of our evolutionary endowed sympathies, passions, or just plain old gut feelings. It therefore seems 'natural' that people will keep clearing land or fishing their seas and lakes not only in order to feed their families in some subsistence sense but even, on grander scales, in order to allow their families to live in luxury – and this even when they are endangering or extirpating the remaining members of a particular species. Thus, Hume's moral sentiments as honed by Darwinian evolution would not appear to provide us with a sufficient degree of motivation to move to Leopold's proposed next stage of social evolution in anything beyond a token sense; that is, we effectively say: 'Sure, we are members of a wider ecological community, but the evolutionary distant members or aspects of this community matter much less to me than my immediate kin, kith, and kind.'

However, we also know that it doesn't have to be this way, at least not entirely. We know that, contra Hume, we can channel and curb our sentiments – including the natural priorities of these sentiments as they run from kin, kith, and kind to our wider ecological context – if we are given a sufficiently good reason to do so. But what would constitute a sufficiently good reason? Two obvious kinds of reasons suggest themselves. The first is that we should value our ecological contexts much more than we do because doing so is crucial to our own survival and well-being as well as that of our own kin, kith, and kind. This is completely compatible with a Humean and Darwinian account of value, but it pays the price of collapsing Leopold's celebrated Land Ethic into an *instrumental* (or *use*) value approach to the value of ecological integrity. Moreover, this argument is vulnerable to the charge that if our concerns with ecological integrity boil down to its usefulness to us, then these concerns will have to take their place alongside other self-interest-based arguments regarding the possible alternative uses of various natural areas for such things as dams for generating hydroelectricity,

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housing, farming, logging, mining, and so on. No change there then.

But all this would seem to be a far cry from what it appears that Leopold wanted to say (and is typically taken as saying) because Leopold (1981, p. 223) suggested in his essay that the Land Ethic involved valuing land 'in the philosophical sense,' which most philosophers have taken to mean on the basis of its *intrinsic* value, its value in its own right. This, then, brings us to the second kind of reason that might persuade us to override the natural priorities bestowed by our evolutionary endowed sentiments and value our ecological contexts much more than we do: specifically, we might accept that we should regard ecosystem integrity as valuable not only because of its usefulness to us but also because it is valuable in its own right and that 'such and such is the reason why.' This orientation to the problem leads us away from the kind of subjectivist approach to value that runs through the Hume–Darwin–Leopold line of thinking that Callicott endorses (an approach that locates the basis of our evaluations, as Hume [1978, p. 468] says, 'in [ourselves], not in the object [toward which these evaluations are directed]') and toward an objectively based reason that would explain why ecosystem integrity is valuable in its own right. But what might such a reason be?

The main objectively based reason that has been advanced in regard to the value of ecosystem integrity is that ecosystems are alive and living things are valuable in their own right. Leopold himself toyed with this idea in an essay written much earlier than his famous 'Land Ethic' but only published in 1979, and this approach has since been taken up by James Heffernan (1982) in his objectivist, distinctly non-Callicottian, interpretation of Leopold. But the problem with this kind of ecosystem integrity argument is that it just reduces to an expanded version of the life-based argument. Indeed, it is an even more controversial version of this argument than those that I have already considered above because, whereas we can at least all agree that, say, individual plants and trees are alive, it is simply not clear that the ecosphere is alive in anything like the same sense (although there is at least a sensible argument to be had here in terms of formal definitions of life and so on). This in turn means that this objectivist approach to the value of ecosystem integrity is just as flawed as the standard argument for the life-based approach because it is just the standard argument for the life-based approach extended to include ecosystems as living things, which just adds another shaky layer to an already incoherent and circular argument.

Perhaps we would do better simply to say, in the style of Varner, that 'the mere existence of ecosystem integrity – of longstanding, self-sustaining, complex webs of relationships between individual living things themselves and between them and their physical environments – adds *something* to the goodness of the world.' But what *is* that something? [As I have already indicated in my discussion of problem 14 – the 'Why is life valuable?' problem – the approach that I develop to General Ethics in *A Theory of General Ethics* (Fox, 2006) tells us exactly what that 'something' is.]

Problem 16: The subtraction and addition of ecologically benign species

This might be regarded as more of a worry than a serious problem, but then again .... The worry, or problem, is this: although the ecosystem integrity approach appears to give the right answers with respect to questions about diversity – that is, it supports the maintenance of characteristic diversity over an increase in diversity for its own sake or a significant reduction in that diversity – it is not at all clear that this approach genuinely entitles its advocates to object to *the subtraction and addition of ecologically benign species*. This is because this approach is concerned primarily with the maintenance of the ecological integrity – or self-sustaining capacity – of an ecosystem, and 'ecologically benign species' refers, by definition, to species whose loss or addition does not significantly disrupt this integrity or self-sustaining capacity. Of course there are two immediate points to be made here both for and against this concern. The pro-point is that it is just not the case that every species is vital to, or even has any great impact upon, the self-sustaining capacity of an ecosystem. Not every species is a *keystone* species – or anything like it. Ecosystems are not like a rug that unravels if a single thread is removed – unless of course it happens to be a 'keystone thread' (to thoroughly mix architectural and weaving metaphors). Neither will an ecosystem necessarily unravel if one more species is woven into it. The contra-point, however, is that the relationships in ecosystems are so complex that we often cannot know with any certainty what might happen if we do subtract or add a species that we think is ecologically benign. This, then, gives an advocate of the ecosystem integrity approach a *practical* way of responding to *the subtraction and addition of ecologically benign species problem*. They can simply say that we should not attempt to add or subtract species to or from an ecosystem, no matter how ecologically benign we think our actions are, because we can never be sure. We should therefore adopt the maintenance of characteristic diversity, which has been tried and tested through evolutionary processes, as our default position.

But consider, for the sake of the argument, the following rejoinder: 'Oh, I see, you think we should adopt the maintenance of characteristic diversity as our default position because you *aren't sure* what would happen to ecosystem integrity if we didn't. Well, have I got news for you! Through a complex procedure known as quantum–relativistic informational time tunneling, I've been able to download a program from an intergalactic civilization far in advance of ours that enables us simply to scan a geographical area (using the well-known Zooly–Mischoff scanning procedure) and then be able to tell *exactly* what will happen if we add or subtract any given species to that area. Now, c'mon, be honest, wouldn't you like to be able to add a bit more ecological diversity around here if it were ecologically benign? It'd make things more interesting, right? And wouldn't you like to be able to remove the odd species – especially those that get in your way one way or the other – if you knew that it wouldn't have any other ill-effects?'

You can say that this response is fanciful, but the point at issue is a serious one: if the ecological integrity approach is concerned primarily with the maintenance of the ecological integrity – or self-sustaining capacity – of an ecosystem, then this approach provides no grounds to object *in principle* to the subtraction or addition of ecologically benign species precisely because, by definition, this subtraction or addition makes no significant difference to the ecological integrity of the ecosystem. This means that advocates of this approach who want to object to the subtraction or addition of ecologically benign species have to fall back on 'What *might* happen if ...' kinds of arguments. Yet many informed judges in this area feel that there ought to be a way of objecting to the subtraction or addition of ecologically benign species in principle. But is there any good argument for this?

Problem 17: The (Catastrophic) way evolution works

A question also arises regarding the relationship of ecosystem integrity to evolutionary processes. Given that we now understand evolutionary processes to include the odd catastrophic cosmic collision between an asteroid and the Earth – and that such collisions have constituted a major structuring agent of the biosphere in which we ourselves have evolved; indeed, that they may even be responsible for our existence through seeing off the dinosaurs and allowing the spread and rise of mammals – then there would seem to be a tension between our normal understanding of ecosystem integrity, on the one hand, and evolutionary processes, broadly understood, on the other. How are we to reconcile this tension? If we lean too far in the direction of trying to maintain ecosystem integrity in the absence of evolutionary processes, then we are in danger of deep-freezing ecosystems and regarding any new evolutionary developments as bad. If we lean too far in the direction of embracing any and all evolutionary processes, then our response to the prospect of a catastrophic cosmic collision will be 'bring it on.'

Callicott (1996, p. 372) has suggested a middle way in his own reformulation of Aldo Leopold's Land Ethic. For Callicott, 'A thing is right when it tends to disturb the biotic community only at normal spatial and temporal scales. It is wrong when it tends otherwise.' But, even here, the tension remains, for it has in fact been 'normal' for cosmic collisions or other equally catastrophic factors to declare 'Game Over' for a tremendous number of species every hundred million years or so. This *is* the 'normal temporal scale' for catastrophic disturbances of the biotic community, and we owe our existence to it. So any ecological integrity approach that wants to embrace evolutionary processes at 'normal spatial and temporal scales' has to accept this normal temporal scale of catastrophe. These considerations therefore raise a significant question: Is there any way in which we can *consistently* embrace the more gradual kinds of evolutionary processes that we usually think in terms of (and, thus, avoid committing ourselves to 'deep-freezing' ecological processes) while also rejecting – and acting in whatever ways we can to prevent – catastrophic forms of evolutionary restructuring?

THE CENTRAL PROBLEM RELATING TO THE ETHICS OF THE HUMAN-CONSTRUCTED ENVIRONMENT

Problem 18: The human-constructed environment or comprehensiveness problem

Consider the following example: suppose we have two buildings, one of which, when considered purely at the level of design (i.e. when considered purely at the level of its built *form*), is contextually fitting with its natural environment and one of which is not. In other words, one of these buildings seems to blend in beautifully with its landscape while the other 'sticks out like a sore thumb,' is a 'blot upon the landscape,' and so on. But suppose also that neither building disrupts ecological integrity any more than the other (i.e. they are, for example, equally energy efficient and nonpolluting, or, for that matter, equally energy inefficient and polluting). We might personally *prefer* one building to the other on aesthetic grounds but the

fact remains that an *ethics* that is limited to concerns regarding ecological integrity is unable to offer any support for the view that, *prima facie*, it is wrong *in principle* to build in the contextually ill-fitting way (since neither building disrupts ecological integrity any more than the other). Moreover, it is not even clear that people's overall preferences in instances like this will necessarily follow the response that I am trying to motivate here. For example, many people might come to prefer or at least 'not really mind' the contextually *ill-fitting* building 'all things considered' because, whatever its faults, it is 'just so convenient,' or offers easier parking, or has stores that offer cheaper prices. (A look at the human-constructed environment around you might serve to confirm this suspicion.) If these reasons get sufficiently mixed together with whatever preferences people might (or, alas, might not) have in terms of architectural design, then the users of the contextually ill-fitting building can come to see it as not being particularly ugly – or perhaps just come not to *see* it in various ways, such as in terms of any wider contextual understanding.

Thus, if we are to address the question of the ethics of the human-constructed environment *directly* – at the level of *principle* – rather than *indirectly* via either human preferences (which might not go in the direction that we think they 'ought' to) or concerns about ecological integrity (which, again, might not go in the direction that we think they 'ought' to, since a contextually ill-fitting building can, for example, be just as energy efficient and nonpolluting – or even more energy efficient and nonpolluting – than a contextually fitting building), then we clearly need an ethics that can directly address concerns at the relatively intangible level of design. The problem is, however, that we do not presently have such an ethics. [For steps in the direction of developing such an ethics see my edited collection *Ethics and the Built Environment* (Fox, 2000). My introduction to that book also contains references to the few previous contributions that have been made in this direction.] If we did have some kind of ethics that was directly concerned with the human-constructed environment, then it is possible that the discussion of this ethical approach would have generated a range of problems that would enable me to list, say, four or six of the main problems in this area, much as I have done in regard to the interhuman, animal welfare, life-based, and ecosystem integrity ethical approaches discussed above. Instead, we simply have one big problem in regard to the ethics of the human-constructed environment, namely, the fact that there presently isn't one!

This lack of an ethics in respect of the human-constructed environment represents the lack of an ethics in respect of what we might think of as the third main realm of our existence, that is, the realm of material culture (which includes all the 'stuff' that humans intentionally make) as opposed to the biophysical realm (which includes ecosystems and the plants and animals that live in them) or the realm of symbolic culture (which is constituted by language-using human moral agents). It follows from this observation that any ethics that cannot directly address problems in this 'third realm' is not even a candidate for a truly General Ethics. Thus, we can think of this last, human-constructed environment problem as a test for the *comprehensiveness* of any approach that is already able to address problems in respect of the biophysical and symbolic cultural realms. For this reason, it is convenient to refer to this problem not only as *the human-constructed environment problem* but also as *the comprehensiveness problem*, which is what I have done in the heading for this section.

WHAT NOW?

The foregoing eighteen problems represent a survey of the central ethical problems that anyone seriously interested in the full range of environmental and society-related issues must be able to address. Moreover, the fact that complex interactive effects arise between many of these problems means that it is important that we eschew partial approaches to these problems (such as those that are pitched primarily or exclusively at the level of concerns regarding humans, animals in general, living things in general, or ecosystem integrity) and work toward the development of a single, integrated approach that cannot only directly address each of the problems I have outlined but also provide compelling reasons for prioritizing our recommendations when value conflicts occur (e.g. between concerns regarding animal welfare and ecosystem integrity, or human preferences and contextual fit). If we can do this, then we will have a General Ethics that is truly worthy of the name. (For the detailed development of such an ethics see Fox, 2006.)

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