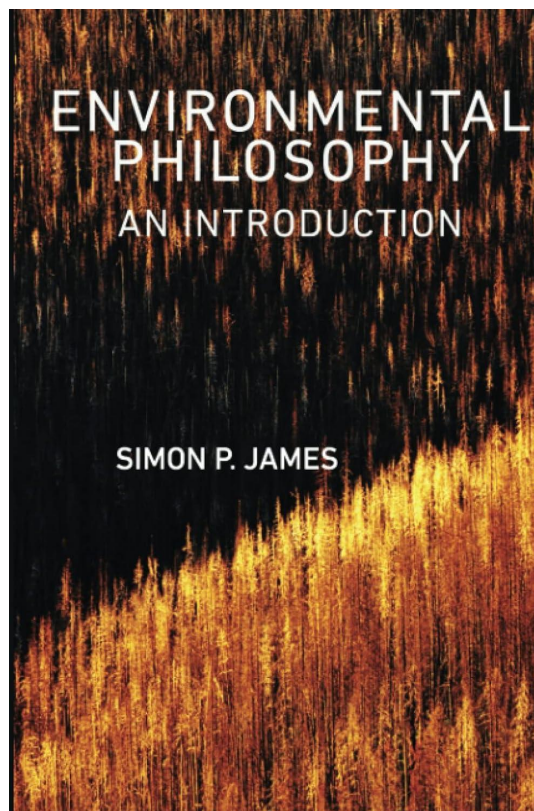


Environmental Philosophy

An Introduction

Simon P. James



27 Mar. 2015

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Climate change, habitat loss, rising extinction rates – such problems call for more than just new policies and practices. They raise fundamental questions about the world and our place in it. What, for instance, is the natural world? Do we humans belong to it? Which parts of it are we morally obliged to protect?

Drawing on an exceptionally wide range of sources, from virtue ethics to Buddhism, leading environmental philosopher Simon P. James sets out to answer these vitally important questions.

The book begins with a discussion of animal minds, before moving on to explore our moral relations with nonhuman organisms, ecosystems and the earth as a whole. James then considers environmental aesthetics, humanity's place in the natural world and the question of what it means to be wild. In the concluding chapter, he applies his findings to the topic of global climate change, building a strong moral case for urgent action.

This accessible, entertainingly written book will be essential reading for students of the environment across the humanities and social sciences. It will, moreover, be an ideal guide for anyone keen to deepen their understanding of environmental issues.

“Environmental Philosophy is an extremely readable introduction to the field. Clearly written and carefully argued, its discussion of recent philosophical approaches is admirably broad. It draws on a rich set of real-world cases and shows a keen awareness of contemporary environmental issues such as animal ethics, climate change, and ecosystem services.”

Emily Brady, Professor of Environment and Philosophy, University of Edinburgh

‘Simon James has written an engaging book that covers many of the most important philosophical questions raised by environmental issues, and is well suited to serve as a text for a course in environmental philosophy.’

Peter Singer, AC, Princeton University

‘Addressing a subject both diffuse and urgent, James’s account concentrates on a well-chosen handful of its most essential challenges. He also ensures that theory, no matter how complex, is grounded in practice. The result is the most comprehensive and accessible introduction to environmental philosophy I know.’

Patrick Curry, University of Wales Trinity St David

Environmental Philosophy: An Introduction

Simon P. James

polity

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Dedication

For Helen

Acknowledgements

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Introduction: What is Environmental Philosophy?

Scientists, economists, politicians and lawyers are not professionally qualified to address all the questions raised by environmental issues. Take the clearing of rainforest to provide open land for cattle ranching. Ecologists can explain the effects of this practice on rainforest ecosystems; economists, politicians and lawyers can assess its financial, political and legal ramifications. But various questions remain: are we *morally* obliged to protect the rainforests? If so, *why* are we so obliged? Because they are more useful to us if they are left unfelled? Because they are wild (or at least, wilder than urban parks and botanic gardens)? Because they harbour so many endangered species? Because we owe it to ourselves not to permit such destruction?

These sorts of questions cannot be answered using the methods of science or economics. They cannot be left to politicians and lawyers. It might seem that they could be addressed using the research methods of the social sciences, and it is true that one could use such methods to find out how most people would answer them. But empirical approaches are not enough. For although surveys and the like can tell us what people *believe* to be right or wrong, they cannot tell us what really is right or what really is wrong. To determine that – or at least to do so in a systematic and critical way – one needs philosophy. (Granted, one could object that when it comes to morality there are no absolute standards and that rightness and wrongness in such contexts are merely matters of opinion. But that is itself a philosophical claim – a statement of moral subjectivism – and in order to assess whether it is true one must, again, do some philosophy.)

So the questions set out above are philosophical questions. They are the sorts of questions that moral philosophers – more precisely, environmental ethicists – try to answer. Yet not all the philosophical questions raised by environmental issues fall into the category of moral philosophy. Just as people's views about morality are to some extent a function of their views about other aspects of the world, so reflections on the subject of environmental ethics tend to raise issues that are also of concern in other philosophical fields, such as aesthetics, epistemology and metaphysics. Environmental ethics, that is, tends to merge into the broader discipline of environmental philosophy. For example, it has been argued that when people think it morally permissible to use nature in any way they see fit, they often do so not (or not just) because they have chosen to adopt certain moral principles, but because they take an unjustifiably human-centred or *anthropocentric* view of reality. Consider the belief that human be-

ings are distinguished from the rest of creation by virtue of their possession of souls or minds. A number of writers have argued that this dualistic belief encourages the notion that humans are essentially *superior* to the rest of creation, and that this notion, when supplemented by certain assumptions about the permissibility of lording it over ‘lowerorder’ entities, encourages the conclusion that humans are *morally entitled* to use nature in any way they see fit (see, e.g., Warren 1990). If these writers are correct – and we will assess whether they are later on – then dualism, a thesis about the nature of *reality*, tends to encourage a peculiarly anthropocentric conception of *morality*.

Assessing the plausibility of dualism and other philosophical theses frequently requires one to consider the results of science. But one cannot rely on science alone. The claim that minds are essentially nonphysical, for example, can be neither proved nor disproved by the methods of science. The same may be said of the proposition that biological species are not real entities but merely artefacts of the classificatory conventions of biologists. Such claims are to some extent philosophical rather than scientific. So whether or not those who wish to investigate them will need to consider the results of scientific inquiries, they will certainly need to engage with philosophy.

Nature

Although environmental issues raise questions that are best addressed using philosophical approaches, ‘environmental philosophy’ is an unsatisfactory term in at least three respects. First, much of the research in the discipline focuses not on environments so much as their constituents. For instance, discussions of our moral duties to nonhuman animals are typically grouped under the heading ‘environmental philosophy’. Yet it is often thought that if we have any duties to nonhuman animals, then this will be because the animals in question have certain morally relevant properties in themselves, independently of their environments. Thus Peter Singer – a prominent Australian moral philosopher of whom we will hear more below – would argue that we have moral duties to giant pandas not because of the roles they play in the environments they inhabit, but simply because individual pandas have interests (notably, an interest in not suffering) that we are morally obliged to consider when our actions are likely to affect pandas.

Second, the term ‘environmental’ can encourage the notion that the nonhuman world is merely the backdrop for the main show – the drama of human life. However, as writers such as Patrick Curry (2011: 7–8) have argued, that peculiarly anthropocentric picture of reality is hard to square with some sorts of moral concern for the nonhuman – or, if you like, more-than-human – world. How, for example, could one value forests, mountains and rivers for what they are in themselves, if one sees them as nothing more than *context*?

A third problem with the phrase ‘environmental philosophy’ is that ‘environmental’ is too general and vague a word to convey what the discipline is about. To what

environments is it meant to refer? In one sense, each and every organism – from wombats to hookworms – has an environment, a milieu within which it operates. It may be replied that environmental philosophers typically focus their attention on the sorts of environments with which we human beings tend to be familiar – woods, wetlands and rocky shores, rather than hydrothermal vents, say, or the insides of mammalian intestines. Yet even talk of human environments remains vague. To indicate just one problem: as I write, my environment includes a sofa, a television set and a bookcase filled with books, maps and DVDs. But of course environmental philosophers are not primarily concerned with such mass-produced artefacts. Their main concern is with *nature* or *the natural world* (terms I shall use interchangeably).

‘Nature’, in this context, does not denote everything that falls outside the realm of the supernatural (if any such realm exists). It is true that environmental philosophers do not focus their attention on supernatural entities such as angels and demons, yet in this respect they are no different from the practitioners of most other academic disciplines. To say that they are primarily concerned with nature is, rather, to say that their main interest is in those parts of the world whose current states are not, for the most part, the intended products of human actions. Flicking through a journal dedicated to environmental philosophy, one would not be surprised to find papers devoted to the topics of wilderness preservation, the aesthetic qualities of wetlands or our moral relations with biological species. But discussions of, say, multi-storey car-parks and combustion engines will be less numerous.¹

So environmental philosophy tends to be about nature, where nature may be conceived – albeit roughly and provisionally – as the nonhuman part of the biosphere. This, however, should not be taken to mean that something only counts as natural if it has been *entirely* unaffected by human beings. This is just as well, since entities, places, processes and events that meet this criterion will be difficult – if Bill McKibben (1990) is correct, impossible – to find. In view of this, I will, like many environmental philosophers, adopt a broad conception of what is natural in this book, one that includes some parts of the biosphere that have been extensively shaped by human beings. So, although nature, on my account, will not include car-parks and combustion engines, it will include reservoirs, hedgerows and heaths.

We will return to the question of what nature is in later chapters. In chapter 7, in particular, we will consider some objections to the proposal that what is natural can be contrasted with what is human. But I will not say more about these matters here. If we refuse to move on until we come up with a watertight account of what nature is, we’ll never get round to considering all the other interesting issues that fall under the heading of environmental philosophy.

¹ In recent years, an increasing number of moral philosophers have turned their attention to our moral relations with built environments (see, e.g., Fox 2006). Nonetheless, such inquiries have not traditionally been conducted by environmental ethicists, most of whom have shown more interest in our moral relations with what I have referred to as nature.

Theory and practice

One such issue needs to be addressed straight away: the practical relevance of the discipline. For even if one accepts that environmental issues raise all sorts of interesting philosophical questions, one might nonetheless wonder whether philosophers can do anything to help to resolve any of the world's pressing environmental problems.

Some will have their doubts. In many cases, these doubts will be premised on the notion that philosophy in general is a high-flown and abstract subject which has had very little effect on the world. Yet history shows that notion to be false. Think of the connections between John Locke's work and the American Revolution, for example, or of the role Jean-Jacques Rousseau's writings played in its French counterpart a few years later. Or consider Karl Marx's influence on today's world. Indeed, whether or not we are aware of the fact, what we nowadays take to be the platitudes of common sense are very often the crystallized products of old philosophical debates.

But can philosophy have an impact on *environmental* issues? It can – and in three ways.

First, it can do so as *applied* philosophy. On this model, the philosopher's job is to bring abstract principles to bear upon practical environmental problems. This can involve a philosopher applying already-existing principles or ones of her own invention. So, for instance, one environmental philosopher might apply John Stuart Mill's utilitarianism to the question of what we should do in response to global climate change. Another might bring an original theory of moral rights to bear upon the public controversy concerning the UK government's proposal to cull badgers in order to reduce the spread of bovine tuberculosis. In all such cases, however, the order of proceedings is clear: theory first, then application.

A second option is that of *practical philosophy* (and its close relative *pragmatism*).² Those who take this approach typically believe that philosophers – in this context, environmental philosophers – have done little to solve practical problems. In their view, contributors to journals such as *Environmental Ethics* or *Environmental Values* have tended to become preoccupied with theoretical issues that have very little bearing on such problems, creating the impression, as Robert Frodeman once put it, of 'a thousand articulate voices whose combined effect is white noise' (2006: 19). Practical philosophers often add that those philosophers who *have* sought to engage with those issues have misguidedly chosen the path of applied philosophy – a top-down approach to problem solving which, in their opinion, has rarely borne fruit.

The practical philosopher, in contrast, begins not by reflecting on abstract philosophical questions, but by paying close attention to the scientific, economic and socio-

² The relations between environmental pragmatism and the philosophical tradition of classical pragmatism are complex. For one thing, not all environmental pragmatists explicitly appeal to the works of classical pragmatists such as John Dewey and William James. In the following, I use the phrase 'practical philosophy' to denote an emphasis on practice and policy which can be found in the works of environmental pragmatists and practical philosophers alike.

political dimensions of real cases. Then, having considered these various factors, she adds her voice to those of the scientists, economists, managers and policymakers who are seeking to solve the practical problem in question. As Bryan Norton explains:

a practical philosopher will not use specific controversies as case studies for examining moral principles; a practical philosopher will consider it a challenge to reduce the distance between the two sides in the controversy by finding a general policy direction that can achieve consensus and define a range of actions that are morally acceptable to a wide range of worldviews. (Norton and Hargrove 1994: 239)

Practical philosophers have had an impact on practical environmental issues. Norton, for instance, has done a great deal of useful work for the US Environmental Protection Agency. Andrew Light, another practical philosopher, frequently advises US government agencies such as the State Department and the National Atmospheric and Oceanic Administration. As I write, he is serving as a senior adviser to the Special Envoy on Climate Change in the US Department of State. Yet, as its advocates are aware, practical philosophy has its dangers. There is, in particular, a risk that working too closely alongside managers and policymakers might blunt philosophy's critical edge. For one of the main functions of philosophy is to question what is taken for granted – either what is taken for granted by a certain constituency (theists, for instance, or economists) or what is taken for granted by just about everyone (the existence of the external world, for example). That's why philosophers are typically amongst the first in line for the firing squads in totalitarian regimes. However, in light of this, one might wonder to what extent a practical philosopher could challenge the basic assumptions of the managers and policymakers with whom she works. Wouldn't she rather have to accept those assumptions (or at least keep her scepticism to herself) if she is to help in the search for what Norton calls 'a general policy direction that can achieve consensus'?³

Certainly, some environmental philosophers have made more radical recommendations. One example would be the Norwegian philosopher Arne Naess, who, in a series of influential works in the 1970s and 1980s, distinguished between what he called 'shallow' and 'deep' approaches to the environmental crisis. Shallow ecology, on his account, focuses on nature's usefulness – and potential usefulness – for human beings. *Deep ecology* is harder to pin down, in part because deep ecologists form a very diverse set. They can draw inspiration from political activism (such as Mahatma Gandhi's

³ See Robyn Eckersley's defence of the claim that 'environmentalpragmatism runs the risk of being too accommodating of the existing constellation of social forces that drive environmental degradation' (2002: 55). See also Piers H. G. Stephens's review of Norton (2005). According to Stephens, Norton's managementfocused version of environmental pragmatism fails to capture the 'wider visionary elements' of classical pragmatism and so is unlikely to inspire 'political transformation' (Stephens 2007: 390–1). Kelvin J. Booth (2012) defends Norton's approach from these sorts of charges.

nonviolent resistance to British rule), religious sources (such as Christianity or Buddhism) or indigenous worldviews (such as those of Native Americans). Their views on environmental issues can, alternatively, be rooted in philosophical positions such as the metaphysics of Spinoza or the later thought of Martin Heidegger. However, Naess claimed that all deep ecologists stand as one in their basic commitments to, amongst other things, the basic unity of humans and the rest of nature, the ‘equal right to live and blossom’ of all living things, and political decentralization (2001 [1973]: 147–9).

Despite Naess’s efforts, not all of those environmental writers and practitioners who advocate revolution rather than reform consider themselves deep ecologists. In particular, many have complained that effusive deep ecological claims about our ‘oneness’ with nature obscure the fundamental social causes of environmental problems. Thus Murray Bookchin, the founder of *social ecology*, argues that to understand environmental problems one must look not to vague claims about the basic unity of humans and the rest of nature, but to the historical emergence of social phenomena such as ‘trade for profit, industrial expansion, and the identification of “progress” with corporate self-interest’ (2010 [1993]: 269). Similarly, *ecofeminists* have maintained that deep ecologists pay too little attention to – and thus inadvertently perpetuate – the patriarchal assumptions that lie at the root of the world’s environmental crises. In their view, any adequate environmental philosophy must account for the historical and conceptual connections between the domination of women and the domination of nature (cf. Warren 1990: 143). Still, all of these writers – deep ecologists, social ecologists and ecofeminists – share the belief that environmental philosophy can make a practical difference: not just by helping to solve certain specific practical environmental problems, but by inspiring us to rethink the environmental mess we’re in and to take action on the basis of our new understanding. This, I would suggest, is a third way that environmental philosophy can have a practical impact.

Outline of chapters

To do environmental philosophy one must do more than just philosophy. One must also engage with work in other fields, such as biology, economics, management science and literary criticism. Trying to cover all of that vast multi-disciplinary terrain in one go would make for a long read and an arm-strainingly heavy book. Still, the topics I have chosen to cover should give a good sense of the state of the field as a whole.

I begin by considering those parts of nature which are most like us – namely, nonhuman animals (hereafter ‘animals’). After a brief discussion of the topic of animal minds, I move on to ask whether we can have moral duties to any of our furred, feathered or scaly evolutionary relatives. In other words, I ask whether any animals have *moral standing*. Peter Singer, for one, argues that many do. In his view, indeed, each and every entity that is capable of suffering, whether human or nonhuman, has moral standing. In chapter 2, I examine five objections to Singer’s argument. Doing this gives me

an opportunity to consider some very different conceptions of our moral relations with nonhuman animals, from writers such as Tom Regan, Martha Nussbaum and Clare Palmer. In chapter 3, I ask whether any entities other than animals have moral standing, beginning with non-sentient organisms, such as plants and fungi, before moving on to consider ecosystems and biological species.

In chapter 4, the focus shifts from the concept of moral standing to that of *value*. I begin by considering the popular notion that nature is of instrumental value to us human beings since it provides us with various ‘ecosystem services’. That, I suggest, captures only part of the truth. Not only is nature of value to nonhuman beings too, but in many of those cases in which it is of value to humans, it is not of instrumental value to them. In the chapter’s second section, I address some questions about the source of the values we find in the natural world. Does nature have value only because it is *valued*? Or is it *valuable* in itself? Drawing on work in the field of metaethics, I reject both options.

If we are to understand our moral relations with nonhuman entities, we will need to consider what those entities are like. In chapter 5, I examine the virtue ethical proposal that we will also need to reflect on what it means for a human being to live a good life, one exemplifying certain virtues of character. I examine three candidate ‘environmental virtues’: (a) the *compassion* for nonhuman beings that is praised in Buddhist traditions, (b) the *humility* that some people believe we should exhibit in our dealings with nature, and (c) the finely tuned *attention* to natural phenomena which one finds expressed in, say, the works of the best nature writers. Discussing (c) gives me a chance to consider the views of those thinkers, such as Val Plumwood and Anthony Weston, who maintain that a preoccupation with assessing which sorts of entities have moral standing reflects a lack of attention to nature.

Chapters 1 to 5 focus on environmental ethics. But not all environmental issues are primarily ethical issues. In chapter 6 we move beyond the domain of moral philosophy to consider a set of philosophical issues concerning the *aesthetic* qualities of natural things, organisms, processes, places and events – not just their beauty, but also their ugliness, elegance, prettiness, majesty, grace and so forth. I begin by examining Arnold Berleant’s argument that appreciating nature’s aesthetic qualities involves not detachment and disinterested contemplation, but immersion, participation and engagement. After discussing the pros and cons of Berleant’s case, I move on to consider the role of knowledge in the aesthetic appreciation of nature. Here I pay special attention to Allen Carlson’s proposal that one cannot properly appreciate the aesthetic qualities of a natural object unless one has a sufficient amount of scientific knowledge about it. I draw the chapter to a close with a discussion of pollution-caused sunsets and enthralling bullfights – two examples which serve to illustrate the complex relations between environmental aesthetics and environmental ethics.

In chapter 7, I return to a topic briefly addressed in the Introduction – that of nature. It has been argued that either *everything* or *nothing* is natural, and that talk of a natural as opposed to a human world is therefore both confused and confusing.

But such objections are not, I contend, decisive: though it needs to be handled with care, the concept of a natural as opposed to a human world ought not to be abandoned. The topic of wilderness raises a distinct yet connected set of issues. For instance, some argue that it is morally and politically suspect to suppose that the biosphere contains any truly wild places. After discussing that sort of concern and the related topic of wildness, I move on to consider whether – and, if so, when and how – it is permissible to restore environments which have been damaged by human actions. In so doing, I focus on Robert Elliot’s interesting claim that such restorations typically involve a loss of value, since the restored environments lack the value-adding property of being natural.

In chapter 8, the themes of the previous chapters are brought together in a discussion of global climate change. I begin by identifying the issues of justice raised by the fact that those who bear primary responsibility for causing climate change are socially and temporally distanced from those who suffer (or, in the case of future generations, *will* suffer) its worst effects. That done, I address a number of related questions: whether we as individuals are obliged to change our lifestyles in order to mitigate climate change; whether present generations ought to make sacrifices on behalf of those future people who are likely to suffer as a result of climate change; whether combating climate change requires us to curb the growth of the human population; and whether it forces us to reconsider what we are trying to achieve in conserving, managing or more generally taking care of the natural world.

Further reading

- Callicott, J. B., R. Frodeman, S. M. Gardner et al. (2007). ‘Commentary on the Future of Environmental Philosophy’, *Ethics and the Environment* 12 (2): 117–50. Brief forecasts from fifteen leading environmental philosophers.
- Keller, D. R. (ed.) (2010). *Environmental Ethics: The Big Questions* (Oxford: Wiley-Blackwell). One of several first-rate anthologies devoted to environmental philosophy. Others are: L. P. Pojman (ed.) (2001) *Environmental Ethics: Readings in Theory and Application*, 3rd edn (Belmont, CA: Wadsworth); and A. Light and H. Rolston III (eds.) (2003) *Environmental Ethics: An Anthology* (Oxford: Blackwell).
- McShane, K. (2009). ‘Environmental Ethics: An Overview’, *Philosophy Compass* 4 (3): 407–20. A clear and succinct survey of the field.

1. Animal Suffering, and Why it Matters

Eating without pleasure, crying without pain

Nature, in the sense sketched in the Introduction, encompasses a great deal, from London's Hyde Park to the Okavango delta in Botswana. So, in thinking about it, where is one to start? One option would be to begin with those of its parts that seem to be most like us – namely, nonhuman animals (hereafter 'animals'). But that topic is still unmanageably large. For with which animals should one begin? Talk of animals in general can suggest, implausibly, that there are no significant differences between different kinds of animal – between, say, a Sumatran rhino and a spiny-headed worm. It can, moreover, obscure the fact that there are sometimes huge differences between animals belonging to the same phyla (for instance, octopuses are much smarter than oysters, though both are molluscs). Even references to the characteristics of a particular species conceal the variation that exists amongst the individual members of that species.

Nonetheless, philosophers through the ages have made a number of sweeping claims about animals, for which they are only partly excused by their ignorance of modern biology. And, as we shall see, many of these claims are directly relevant to environmental philosophy.

Let's begin with one of the most notorious of these claims, courtesy of the early modern French thinker Nicholas Malebranche (1638–1715):

Thus in animals there is neither intelligence nor souls as ordinarily meant. They eat without pleasure, cry without pain, grow without knowing it; they desire nothing, fear nothing, know nothing; and if they act in a manner that demonstrates intelligence, it is because God, having made them in order to preserve them, made their bodies in such a way that they mechanically avoid what is capable of destroying them. (Quoted in Jolley 2000: 42)¹

For Malebranche, then, there is nothing it is like to be a dog, say, or a horse, just as there is nothing it is like to be a table or a teapot. No such entities are conscious;

¹ Nicholas Jolley (2000: 41–2) argues that, despite claims such as this, Malebranche's position did not rationally commit him to the theory of the 'beast-machine'.

they are all mindless mechanisms. The suggestion seems far-fetched, to say the least. We naturally assume that when a dog, for instance, drops to its forepaws, it is doing so because it *wants* to play; that when it whines, it does so because it is *feeling* hungry; that when it sits and gazes longingly at the front door, it is *hoping* for its owner's return. But although this is how things *seem* in such cases, is there really no room for doubt? Might it not be, as Malebranche would insist, that the dog is merely acting *as if* it were conscious? After all, one cannot look inside the animal's head to check. One can only appeal to its behaviour. And the behaviour of a conscious dog cannot be distinguished from the behaviour of a dog that is merely behaving as if it were conscious. Indeed, can't these sceptical worries be taken further? Is it not possible that not just dogs but *all* animals are mindless mechanisms? Is it not possible that Malebranche was right?

The first thing to note about this line of reasoning is that it presupposes a certain conception of what interpersonal understanding involves. It rests on the assumption that, although one can directly apprehend one's own mental states by means of introspection (as when Shirley knows that she is feeling pain), those of others cannot be directly apprehended, but must instead be inferred on the basis of how they behave (as when Shirley infers that Pierce is in pain because he is swearing loudly and clutching his foot). Although there is not enough space here to explain their arguments, it is worth noting that several writers in the fields of phenomenology and philosophy of mind have challenged that general conception of interpersonal understanding (see, e.g., Ratcliffe 2007: ch. 5; Zahavi 2010). But suppose, for argument's sake, that those writers are wrong and that it really is impossible to directly apprehend the mental states of others. Making that assumption not only casts doubt on any claims about the mental lives of dogs; it calls into question claims about the mental lives of *any* other beings, whether human or nonhuman. So, adopting this sceptical standpoint, I might conclude that I am unable to get inside Fido's head to determine whether or not there is anything going on there. However, continuing these sceptical thoughts, I might arrive at the conclusion that I am unable to get inside my brother's head to determine whether or not there is anything going on *there*. Granted, Adrian can *tell* me that he is thinking and feeling certain things. But can I be certain that he is not merely a complicated mechanism, bereft of consciousness but capable of simulating speech? In fact, can I be absolutely certain that I am not the only conscious being in the universe?

This, however, is not the place to assess whether that last, crazy claim – a statement of solipsism – is true. (And, anyway, if it is true, I have bigger worries.) For now, it will be enough to consider Malebranche's claim: that no nonhuman animals are conscious.

What are the chances of that claim being true? Well, unlike the claim that square circles or married bachelors exist, it is not *absurd*, which is to say that its truth is not a logical impossibility. That said, a great many extremely implausible states of affairs are logically possible, so that is not much of a concession. It is a logical possibility, after all, that everyone named Algernon is a shape-shifting wizard. It is also logically possible

that we are living in a virtual reality simulation run by a technologically advanced race of alien reptiles.

Yet, leaving the matter of merely logical possibilities aside and returning to the real world, is there any *evidence* for thinking that any nonhuman animals are conscious? To many people, and in particular to those who live and work with social mammals such as dogs and horses, the claim that no animals are conscious will seem extremely implausible. It certainly seems so to me. The proposition that dogs are mindless mechanisms strikes me as being so fanciful that I have a hard time imagining what the world would be like if it were true. It is, I believe, misleading to say that I am nearly 100 per cent certain that dogs are conscious. As I write, I am nearly 100 per cent certain that Rabat is the capital city of Morocco, but should that belief turn out to be false, I will simply make a note of the new item of knowledge and my life will carry on pretty much unchanged.² But what if dogs turned out to be mindless mechanisms? That new item of knowledge would rock my world to its foundations. For one thing, I would have to reappraise all those moments I have spent in the company of dogs, walking, running and playing with them. In fact, if they really were mindless mechanisms, would it be correct to say that I was in their *company*?

So although I cannot seriously doubt that dogs are conscious, this is not because I believe there to be overwhelming evidence in favour of the hypothesis that they are conscious. A commitment to the consciousness of dogs is installed at a more basic level in my form of life than talk of evidence and hypotheses would suggest (cf. Gaita 2003: 39–52; Dupré 2002: 217). Yet that personal observation only proves so much. Maybe some reasonable people *can* seriously doubt that dogs are conscious. And, even if that is not possible, matters quickly become much murkier when we move beyond the category of dogs and other mammalian companion animals. What of kingfishers, cobras, salamanders, octopuses, lobsters, sharks, beetles, scorpions and centipedes? To assess whether any such creatures are conscious, we will need to consider scientific evidence. And to investigate our moral relations with them (as we shall do in later sections), we will need to assess the evidence that some of them are *sentient* – that is, capable of feeling pain or suffering.

First, there is behavioural evidence. Many animals respond to bodily damage in ways that are not unlike the ways that human beings respond. Upon treading on a drawing pin, a dog will yelp and quickly withdraw its paw, and afterwards it will avoid putting its weight on the damaged limb. It is true that not all animals respond in such ways (insects, for instance, do not avoid using damaged limbs). And it is also true that one could dig in one's heels and continue to insist that yelping dogs are merely behaving *as if* they are in pain. However, behavioural observations of this sort surely lend some support to the hypothesis that some animals can feel pain.

Second, there are various items of physiological evidence. A great deal of attention has been paid, in this context, to the presence of endogenous opioids, substances which,

² It turns out that Rabat really is the capital of Morocco. (I just checked.)

in humans, are released in order to alleviate the pain resulting from major injury. Interestingly, such opioids have also been detected in a wide range of nonhuman animals – even insects and earthworms (Varner 1998: 53). Or consider nociceptors. In human bodies, nociceptors respond to damaging or potentially damaging stimuli by sending nerve signals to the spinal cord and the brain, leading to the feeling of pain. Yet nociceptors are also present in many nonhuman animals, including all birds and mammals. For sure, in order to be *conscious* of pain, a being would seem to require a central nervous system; however, fish, reptiles, amphibians, birds and mammals all meet this criterion as well.

Identifying and comparing these various items of behavioural and physiological evidence is no easy task, especially since many animals meet only some of the relevant criteria. For instance, although insects possess endogenous opioids, they lack central nervous systems and their behavioural responses to pain are quite unlike those of, say, mammals. Fish, reptiles and amphibians do not appear to possess nociceptors, yet their bodies have been found to contain endogenous opioids, they do have central nervous systems, and (like mammals, for example, and birds) they tend to avoid damaging or potentially damaging stimuli. Matters are further complicated by the possibility that different physical structures might be able to perform similar mental functions – that, for instance, a certain kind of feeling could be identified with either a certain state of a mammalian body or a very different state of an avian or reptilian body. Nonetheless, taken as a whole, the evidence suggests that, although all vertebrates can feel pain, most invertebrates cannot.³ Such, at least, was the conclusion of the multi-disciplinary working group that was convened by the UK's Institute of Medical Ethics to investigate the use of animals in biomedical research (Varner 1998: 52).

So there is compelling evidence that many animals are capable of feeling pain. There is, moreover, evidence that many of them are also capable of experiencing aversive states such as fear, anxiety and boredom. For example, behavioural studies have shown that many animals can exhibit the characteristic symptoms of fear, such as frequent urination and raised heart rate. In fact, many anti-anxiety drugs that are prescribed to humans have substantially similar effects on nonhuman mammals (Rowlands 2002: 10). Besides, as with the ability to feel pain, it is easy to see how a capacity to experience some degree of fear in the appropriate circumstances could have evolved through natural selection. If you're a rabbit or an antelope, it probably pays to be a bit nervy.

Singer's utilitarian case for animal liberation

There is compelling evidence that many animals are capable not only of feeling pain but of experiencing aversive states such as fear and anxiety. There are good reasons to think that many animals – vertebrates, certainly, and probably some invertebrates too – are sentient.

³ Cephalopods, such as octopuses and squid, are a probable exception (see Varner 1998: 49–51).

Clearly, this fact is morally significant. Yet in order to see *why* it is morally significant, we will need to take a brief detour to consider some general issues in moral philosophy.

Those issues are best introduced by means of an example. So, suppose that Bob, a violent and vindictive fellow, deliberately smashes the window of his boss's car. And suppose, further, that he has no moral reason to do so. Bob does not smash the glass because the car is sinking in a lake and his boss needs rescuing. He is not using shock tactics to teach her a salutary lesson about the dangers of carbon emissions and global climate change. He's simply upset at not having been recommended for promotion. It is clear that Bob has acted wrongly. But he has not wronged the car window. He has wronged his boss.

The relevant distinction can be expressed in terms of *direct duties*. Bob has certain direct moral duties to his boss, including, presumably, a direct negative duty not to damage her property without good reason. Yet he has no direct moral duties to car windows. Any duties he has with regard to such objects will be merely indirect, a function of his duties to those entities, like his boss, to whom he has direct moral duties.

To say that it is possible to have one or more direct moral duties to an entity is, I will stipulate, to say that that entity has *moral standing*.⁴ So, in our example, both Bob and his unfortunate boss have moral standing, whereas the car window does not.

What must an entity be like, what property or properties must it possess, if it is to have moral standing? Immanuel Kant believed that an entity has moral standing if and only if it is rational. Other candidates would be self-consciousness, the capacity to use language, or the ability to think recursively (roughly, to think about thinking).

The first major problem with these sorts of suggestions is that higherorder properties such as rationality will not be shared by all human beings. Babies, for instance, are not rational or self-conscious; nor are they capable of recursive thinking or of feeling embarrassment, guilt or regret. So, if one holds that an entity must possess one or more of those higher-order properties if it is to have moral standing, then one will be

⁴ Although this conflicts with some other uses of the term 'moralstanding', the same would hold true of *any* definition of moral standing. Even a brief consideration of the literature reveals that different writers often mean different things by the phrase. James Rachels, for his part, makes the promising suggestion that 'Theories of moral standing try to answer the question, "To whom do we have direct duties?"' – the implication being that an entity has moral standing if and only if we have direct moral duties to it (2004: 164). Although that is not a bad definition, it is too strict. Assume that, unknown to us, some remote corner of the galaxy harbours a population of thinking, feeling alien beings. It is implausible to suppose that we have any direct moral duties to them. After all, we do not even know that they exist. Nonetheless, it is surely unreasonable to deny the aliens moral standing, solely on the grounds of our ignorance. For this reason, I stipulate that to say that X has moral standing is to say that it is possible to have one or more direct moral duties to X.

forced to deflect the criticism that one is therefore denying moral standing to certain entities, such as human babies, which evidently do have moral standing.⁵

In response, it could be argued that those sorts of entities do in fact have moral standing, since, although they do not actually have the relevant properties, they either *had* or *will have* them. But such appeals are difficult to uphold. Consider the *potential* to possess higher-order properties. On the one hand, some entities may not even potentially have such properties. No doubt, some severely disabled people are not even potentially rational. On the other hand, it does not follow from the fact that an entity potentially possesses a certain higher-order property that it ought to be treated as if it actually possesses that property. A prince is a potential king, yet he is not entitled to wear the crown. So why, one might ask, should a potentially rational entity be treated as if it were rational? (Cf. Singer 2011: 138.)

So this is one problem with attempts to ground moral standing in the possession of higher-order properties such as rationality: any such attempt seems to commit one to the morally dubious claim that certain human beings lack moral standing. But a second and more basic problem is that it is far from clear why the possession of such properties should confer moral standing in the first place. Take rationality. We may well have certain duties to a rational entity because it is rational. For example, one of the many reasons Sarah should not ridicule her colleagues is because her colleagues are rational entities who can understand ridicule. She has no such duty to her budgerigar, since budgerigars are impervious to ridicule.⁶ It would seem, moreover, that we have direct moral duties to all rational entities. Yet it is not clear that we have such duties *because* the entities in question are rational. For why should the mere fact that an entity is rational suffice to make it an object of direct moral duties? What could be morally significant about rationality in itself?

The task, then, is to identify one or more properties that (a) can be reconciled with our belief that all men, women and children, regardless of intelligence, linguistic abilities and so forth, have moral standing, and (b) plausibly confer moral standing. Following the eighteenth-century philosopher and social reformer Jeremy Bentham, Peter Singer argues that the key property is *sentience*, which he glosses as ‘the capacity to suffer and/or experience enjoyment’ (Singer 1995: 8–9). He points out that just about all humans are sentient. Babies and people with severe mental disabilities might be neither rational nor able to use language; they might lack self-consciousness and be unable to think about thinking. Yet they are obviously sentient. So sentience satisfies

⁵ This line of reasoning is commonly called the ‘marginal cases’ argument. I will not use that phrase in this book, since it is, I think, disrespectful to refer to babies and other sentient beings that lack sophisticated mental capacities as marginal.

⁶ By contrast, Martha Nussbaum claims that some animals ‘are entitled to live in a world public culture that respects them and treats them as dignified beings. This entitlement does not just mean protecting them from instances of humiliation that they will *feel* as painful’ (2006: 398; emphasis in original). It is, however, unclear whether she thinks that budgerigars are entitled to this sort of protection. We will consider Nussbaum’s views below.

criterion (a). Criterion (b) is also met, since there is an obvious connection between sentience and moral standing. To say that an entity has moral standing, Singer maintains, is to say that it has certain interests which deserve to be taken into consideration. To return to the example with which we began, the car window that Bob smashed does not have moral standing, since it does not (and could not) have an interest in being smashed (or in anything else, for that matter). By contrast, Bob's boss does have moral standing because she has a conscious interest in various things, including not having her property destroyed by disgruntled employees. In fact, Singer maintains that sentience is 'not only necessary, but also sufficient for us to say that a being has interests – at an absolute minimum, an interest in not suffering' (1995: 8). Admittedly, that claim is open to question. As we'll see in the next chapter, not everyone thinks that an entity must be capable of either suffering or experiencing enjoyment if it is to have morally relevant interests. Biocentrists such as Gary Varner argue that plants, fungi and other non-sentient organisms have morally relevant interests in such things as obtaining enough light and water, even though they are not *consciously* interested in such things. What is more, some writers have disputed Singer's claim that sentience is sufficient for the possession of morally relevant interests (see, e.g., Watson 1992: 18). But suppose, for the sake of argument, that Singer is correct. Suppose that an entity really cannot have morally relevant interests unless it is sentient, and that, if it is sentient, it really must have morally relevant interests. It follows that the set of entities with moral standing maps perfectly onto the set of entities that are sentient. In the popular image, the 'moral circle' contains all sentient entities and no non-sentient entities. For this reason, I will refer to Singer's theory as a version of 'sentientism'.

How, though, can this form of sentientism be put into practice? Singer claims that, when deciding what to do, one ought to begin by identifying what beings one's actions are likely to affect. Having done this, one is morally obliged to act in a way that gives equal consideration to the interests of each and every one of those beings.⁷ So, by way of example, if I see that the action I am proposing to take would affect two individuals, X and Y, I am morally obliged to take the interests of both into consideration, and to do so in an even-handed and fair fashion. I am not morally permitted to give the interests of X less weight because I don't like his face. I do wrong if I decide to accord more weight to the interests of Y because I am friends with her father or because I like her taste in music. No, I am morally obliged to give equal consideration to the interests of both parties.

Now in my example X and Y were both human beings. However, Singer proposes that the same principle – the principle of equal consideration – should be employed in our dealings with any sentient beings. And, as we saw in the previous section, not all sentient beings are human. So, if I see that some action I am contemplating would

⁷ Dale Jamieson (2008: 114) interprets Singer as holding that the 'proper objects of moral consideration ... are interests, not beings'. Mark Rowlands (2002: 41) disagrees. In his view, Singer's position is founded upon the principle that all sentient *beings* ought to be treated with equal consideration, where this principle is best served by giving each being's *interests* equal consideration.

affect a third party, Z, I am not morally permitted to disregard Z's interests purely because Z is not a member of the species *Homo sapiens*. If I were to give X's interests less weight because he is of a certain race, I would be guilty of racism. If I were to give Y's interests less weight because she is female, I would be guilty of sexism. Likewise, argues Singer, if I were to regard Z's interests as being less important because she is a Hobbit or a Klingon or a Wookiee, I would be guilty of *speciesism*. I would also be speciesist if I were to discount Z's interests simply because she has four legs, fur and a wet nose. '[N]o being', Singer insists, 'should have its interests disregarded or discounted merely because it is not human' (1990: 329).

If Singer's argument works, then we should give equal consideration to the interests of all those beings which our actions are likely to affect. But, as Singer himself points out, this does not entail that all of those beings ought to be *treated* in the same way. For example, my Aunt Carole and her cat, Tinkie, both have interests, but only one of them has an interest in catching the latest episode of the television series *Crime Scene Investigation*. So if I do not wish to upset my aunt, I will take care not to disturb her viewing of Gil Grissom and his rubbergloved colleagues. But if my aunt is not in the room, Tinkie won't be at all concerned if I switch to another channel. Of course, both aunt and cat will have some interests in common, but, even in these cases, it does not follow that they ought to be treated in the same way. Both Tinkie and Aunt Carole have an interest in eating, yet only one of them will be satisfied with a bowl of Meow Mix.

For Singer, then, all individual sentient beings have moral standing. They have moral standing because they have interests that we are morally obliged to consider. Now, as we saw above, to say that an entity has moral standing is to say that it is possible to have direct moral duties to it. But it is to say nothing about the *strength* of those duties. As Robin Attfield (1983: 140) puts it, an entity might have moral standing yet its moral *significance* might nonetheless be very low.

In the light of this distinction, a case could be made that our moral duties to animals, though direct, are nonetheless weaker than writers like Singer and other animal liberationists would have us believe. In particular, it could be argued that although animals can suffer, their suffering is of a lower order than that of us humans. So, for instance, compare a human experimental subject with a laboratory rat. It might seem that the former would suffer more, or in more significant ways, than the latter. Amongst other things, he might recall happier times, dread what was to come, pine for his life outside the lab, or wonder whether things might have turned out differently had he taken a different road in life. As Stephen Budiansky (1998: 193–4) notes:

Our ability to have thoughts about our experiences turns emotions into something far greater and sometimes far worse than mere pain ... Sadness, pity, sympathy, condolence, self-pity, ennui, woe, heartbreak, distress, worry, apprehension, dejection, grief, wistfulness, pensiveness, mournfulness, brooding, rue, regret, misery, despair – all express shades of the pain

of sadness whose full meaning comes only from our ability to reflect on their meaning, not just their feeling.

But the significance of these considerations can, I think, be overplayed. As Matthew Scully (2002: 7) points out, a kick in the shorts needn't send a man into a profound existential crisis. It simply hurts. And it is likely that rats, dogs and pigs experience similar feelings when they are kicked (or whipped or beaten or packed into what in the meat industry are called 'growing houses'). Furthermore, it is not difficult to think of cases where a nonhuman animal would suffer *more* than a human placed in a similar situation. A drunk confined in the holding cell of a police station might gain some comfort from the thought that he'll be released once he's sobered up. But the suffering of a dog confined to a kennel will not be mitigated by the knowledge that her owner will retrieve her once he has returned from Majorca. The dog doesn't know that her confinement is only temporary.

Vegetarianism

To recap: Singer argues that, in deciding what to do, one is morally obliged to consider the interests of all those sentient beings, human and nonhuman, that one's action is likely to affect. And he adds that the interests of nonhumans will often carry similar weight to those of humans. However, it still remains to be shown how exactly his theory can be *applied*.

On this matter, Singer advocates what is known as a utilitarian (more precisely, a preference utilitarian) procedure. This involves the following: identifying all those beings that are likely to be affected by one's action; considering their various interests (or preferences) without regard for race, sex, species, etc.; determining whether the relevant interests are weighty (like a being's interest in not suffering) or trivial (like my interest in catching the latest episode of *Breaking Bad*); and, finally, assessing whether those interests would be thwarted or promoted by the action in question. The morally right action to perform will be the one that comes out on top once all these factors have been taken into account. Roughly speaking, it will be the one that, of all the available options, satisfies the most interests.⁸

Doing this properly requires some complicated calculations; however, in some cases one can see how the moral scales would tip without actually doing the sums.

Consider the practice of meat-eating. Singer would say that if we are to assess its moral pros and cons, then we must perform a cost-benefit analysis, in which the total aggregated interests in favour of meat-eating are weighed against the total aggregated interests in favour of vegetarianism.

⁸ So although, for Singer, we have direct duties to individual sentient beings, our primary duty is to maximize the satisfaction of their interests or preferences (see, further, Palmer 2003: 19).

Begin by considering the anti-vegetarian side of the moral scales. It is clear that many people would like the practice of meat-eating to continue. Lots of people like eating meat; indeed, it could be that some people (the inhabitants of polar regions, for example, where vegetation cannot thrive) *need* to eat meat in order to survive. In addition, many people have an interest in continuing the practice of meat-eating because it is central to their culture, or because their livelihoods depend on it – because they raise cattle, for instance, or because they work for meat wholesalers. So on the anti-vegetarian side of the equation, there are a variety of interests, some very serious and not at all trivial, which need to be taken into account.

But now consider the pro-vegetarian side of the scales. Many people have an interest in the abolition of meat-eating. Some, for example, are involved in the production or sale of soy-based foodstuffs and other alternatives to meat. Some find the notion of eating ‘flesh food’ repellent. However, in addition to this, the practice of meat-eating thwarts the interests of an immense number of animals. After all, although billions of people eat meat, this figure pales in significance next to the truly vast number of animals that suffer as a result of the food industry. Dispel bucolic images of well-cared-for animals leading long and happy lives before being painlessly put to death. The norm is factory farming, and this means huge facilities packed with animals which are fattened up and kept alive through the routine dosing of hormones and antibiotics. It is true that pre-industrialized farming practices were hardly kind to animals, and it is also true that the inhabitants of factory farms are protected from some sources of suffering (such as foxes and hunters). Nonetheless, most factoryfarmed animals experience terrible suffering. Consider chickens. ‘Layers’ that are born male are killed shortly after birth (in some facilities, by being tossed into high-speed grinders). The birds that are permitted to develop (both female layers and ‘broilers’ of both sexes) are likely to suffer at least one painful debeaking, before being packed into either battery cages (layers) or growing-houses (broilers) with their frenzied fellow birds. In such conditions, the creatures frequently develop osteoporosis, a condition which often results in snapped wings and caved-in ribcages. The lives of factory-farmed pigs are hardly better. Breeding sows, for instance, will have their ears notched and tails docked (both without anaesthetic), before being confined to – in fact, often chained into – stalls too narrow to enable them to turn. So confined, they typically develop sores, tumours, lesions, cysts and pus pockets. Or consider cattle. Facilities in the USA and some other countries continue to produce ‘formula-fed’ veal from calves which have been intentionally deprived of iron, a diet that results in stomach ulcers and chronic diarrhoea. In many countries, members of the public would be prosecuted for keeping animals in such conditions (Garner 2005: 106).

Now it is true that not all farms are factory farms; moreover, there are a great many responsible farmers who care about, and care for, the animals they keep. Still, whether the animals are from factory facilities or more humane ones, they are likely to end up in the same place – the slaughterhouse. Horror stories abound about such places. Scully relates one abattoir worker’s experience of cutting the hooves off strung-

up cattle passing by at a rate of over 300 per hour. The creatures are supposed to be dead already. But the worker's experience tells otherwise: 'They blink. They make noises. The head moves, the eyes are open and still looking around. They die piece by piece' (quoted in Scully 2002: 284). The interests that are being violated here are not trivial, like a man's preference for beefburgers over veggie burgers, but of the strongest and most serious kind. Singer argues that when all the relevant interests are considered equally, and when their various strengths are gauged, one course of action will emerge as being morally obligatory. The practice of meat-eating should be abolished.

If Singer is correct – and suppose, for argument's sake, that he is – then individuals will, all things being equal, be morally obliged to do what they can to promote the abolition of meat-eating.⁹ They may choose to meet those obligations by, amongst other things, lobbying their governments, donating money to animal welfare groups, or voting for abolitionist political parties. But should they *themselves* give up eating meat? It is not obvious that they should. For it would seem unlikely that in boycotting meat any particular individual will save the lives of any animals. The animals will be killed anyway.

Call this the 'my conversion will make no difference' argument. Singer's response is to point out that there must come a point at which the addition of one more vegetarian (or the subtraction of one more meat-eater) from the population decreases the number of animals reared and killed for food. For sure, if one meat-eater (call him Sebastian) abstains from eating meat, his abstention will probably have no effect at all. But perhaps his abstention marks a tipping point. Maybe it was all that was needed in order to produce change. Singer (1990: 335) puts it like this:

There must be a series of thresholds ... which determine how many factory farms are in existence. In this case one more person becoming a vegetarian will make no difference at all, unless that individual, added to the others who are already vegetarians, reduces demand below the threshold level at which a new factory farm would have started up (or an existing one would have remained in production, if the industry is declining).

But there is something strange about Singer's argument. As Regan (1983: 225) observes, it has the odd result that any particular individual has a moral obligation to become a vegetarian only if the number of vegetarians is already so high that one more abstention from meat would result in a threshold being crossed (or a tipping point being reached), resulting in a net decrease in the number of animals reared and killed for slaughter. So, if Singer is correct, then Sebastian's moral obligations with respect to meat-eating depend on the actions of others. As Regan notes, it is very strange to think that our moral obligations should depend on such contingencies.

⁹ And, it must be added, other practices such as intensive dairyfarming and the raising of animals for their fur.

But there is, I think, a simpler and better response to the ‘my conversion will make no difference’ argument (though one that does not obviously flow from utilitarian principles). Suppose, again, that the practice of meat-eating should be abolished on moral grounds. The fact that a practice is morally wrong and deserving of abolition is a reason not to participate in it, and this holds true even if the non-participation of a single individual does not improve the state of the world one bit. True, when the costs of non-participation are very high, it takes a very good person to stand up for what they believe to be right. In totalitarian regimes, refusing to voice your support for the glorious leader can get you locked up or killed. But even if there are any costs involved in giving up eating meat (and it is far from clear that there are), they are surely not *that* high.

Summary

The view that all nonhuman animals are mindless mechanisms is not credible. Some animals – and certainly all mammals – are capable of suffering. Peter Singer argues that it is possible to have direct moral duties to any such being; he argues, in other words, that each and every *sentient* being has *moral standing*. We are, he continues, morally obliged to consider the interests of such beings – and especially their interests in avoiding suffering – when we are deciding what to do. And this includes our furred and feathered evolutionary cousins. Indeed, if we choose to ignore or downplay the interests of a nonhuman sentient being simply because it is nonhuman, then, Singer claims, we are guilty of *speciesism*. What we *should* do, in his view, is to consider all those sentient beings, human and nonhuman, that would be affected by each of the various courses of action open to us and then choose to act in the way that promises to satisfy the most interests. Working on this *utilitarian* basis, Singer concludes not only that the practice of meat-eating is morally wrong and should be abolished, but that each of us should give up eating meat.

Further reading

- Allen, C., and M. Bekoff (2007). ‘Animal Minds, Cognitive Ethology, and Ethics’, *Journal of Ethics* 11 (3): 299–317. Addresses the relations between scientific work on animal cognition and moral philosophy. Available online at: http://ethik.univie.ac.at/fileadmin/user_upload/inst_ethik_wiss_dialog/Allen_C.
- Gaita, R. (2003). *The Philosopher’s Dog* (London: Routledge). A set of thought-provoking, and often moving, reflections on ethics, animal minds and much else.
- Singer, P. (2011). *Practical Ethics*, 3rd edn (Cambridge: Cambridge University Press). Singer discusses our moral duties to animals in chs. 3–5.

2. Beyond Animal Liberation

The previous chapter focused on Peter Singer's arguments, as set out in *Animal Liberation* and other works. His conclusions are contentious, and some will dismiss them as being 'too extreme'. But it would be a mistake to reject them on that basis alone. In thinking about ethics, we are not being asked which views we feel most comfortable with; we should not think of ourselves as intellectual consumers, picking those arguments whose conclusions we like (cf. Jamieson 2008: 142). Our job is to evaluate claims on the basis of the arguments presented for them and to endorse those claims that are supported by the best reasons.

This is not to say that Singer's arguments are watertight. In fact, they are open to a number of objections. In this chapter, we will consider five. Doing so will give us an opportunity to examine some nonutilitarian arguments concerning our moral relations with animals.

Racism, sexism ... speciesism?

It is one thing to say that the moral worth of an action is solely a function of its effects on the interests of those affected, but it is quite another to endorse Singer's claim that those interests should be considered *equally*. It is doubtless a good thing that some people in society – judges, say, or doctors – exercise this sort of strict impartiality (Belshaw 2001: 296, n.10). But we are not all judges or doctors, and even judges and doctors do not wear their wigs and stethoscopes all the time. So, for instance, it may be appropriate for a judge to be strictly impartial when she is sitting in court; in fact, this is part of what it means to be a good judge. But what would we think if we learnt that she accords no special weight to the interests of her own family outside of the courtroom? We may continue to think that she is a good *judge* (though in the light of this further information we might have our doubts). But we might legitimately wonder whether she is a good *person*.

These thoughts suggest that it is not always morally wrong to exercise some degree of partial concern. Partiality for members of one's family may not always be permissible (think of the nepotistic employer), but in many situations 'familyism', if it may be so described, would seem to be morally acceptable and not at all like sexism or racism (cf. Midgley 1983: 101–2). Indeed, some writers have argued that a special concern for family members and other individuals to whom we feel close is not just morally permissible but a precondition for the exercise of moral concern. For example, Kongzi

(Confucius) believed that benevolence (*ren*) begins at home, with devotion to one's parents and older siblings. More recently, John Benson (1978: 536) has defended a similar view: 'That we care at all about the interests of strangers of our own species or animals of other species results from our extending to them by sympathy something of the concern that we feel spontaneously for those with whom we have closer connections.' This extension of sympathy, he continues, 'may approach in its effects but is quite different in principle from an impartial concern which attempts to eliminate as irrelevant the actual relationships in which the agent stands and the moral claims which they generate. The danger in this attempt to eliminate partial affections is that it may remove the source of all affections' (Benson 1978: 536). We are, Benson suggests, bondforming creatures, and acting morally is typically a matter of developing and extending these bonds, rather than of dismissing them altogether in the hope of achieving the state of cold impartiality which Singer recommends. If Benson is right, then there is little to admire in the man who, eager to eliminate all forms of prejudice, is no longer especially concerned with the interests of, say, his wife and children. Better to admire the person whose actions spring from her sense that animals are fellow creatures – what Matthew Scully (2002: 246) calls 'our humble brothers in suffering and sadness and the story of life'.¹

The moral significance of killing

Singer thinks that, all things being equal, it is a bad thing to bring about suffering. And, as we have seen, the rearing of animals for food produces a truly vast amount of suffering. But of course it also results in a vast number of *deaths*. Each year, over 60 billion animals are slaughtered for food worldwide (D'Silva and Webster 2010: 1). Several thousand will have been killed since you began reading this sentence.

Let us grant that it is, all things being equal, bad deliberately to cause suffering. What about death? Is it a bad thing, morally speaking, to kill a sentient being?

Singer's first response to such questions would be to point out that the mechanized and systematic killing of animals tends to involve suffering. Given the rate at which animals are killed in some slaughterhouses – up to 400 per hour for cattle (Fitzgerald 2010: 62) – it would be astonishing if it were otherwise. But set these issues aside and focus on those cases in

¹ In response to this sort of challenge, Singer could maintain that in many situations one cannot reasonably be expected to try to be absolutely impartial. In many situations, for instance, one simply won't have enough information to be impartial. And even if one does have all the relevant information, one might not have enough time to consider it. Kuhse, Singer and Rickard (1998: 460) maintain that in such situations 'it is reasonable to think that the impartial good will be better served if people cultivate habits and dispositions to care about and favour those who are close to them'. If 'those who are close to them' is taken to include some animals, then this argument could provide the basis for a response to the concerns of Benson and Scully.

which a sentient being can be killed quickly and painlessly, without being made to suffer. Singer argues that the moral permissibility of painlessly killing a sentient being hinges on whether the being in question qualifies as a *person* – that is, a rational and self-conscious being, aware of itself as a distinct entity with a past and a future (Singer 2011: 76–81). It is important to note that ‘person’, in this context, is not synonymous with ‘human being’. True, Singer maintains that *most* humans are persons: most adults are, but babies, for example, are not, and nor are those who have been mentally incapacitated through advanced Alzheimer’s, say, or severe strokes. However, Singer argues that some nonhuman animals are persons too. The great apes, he suggests, can be persons, as can a range of other higher mammals, including dolphins and quite possibly dogs, cats and pigs (Singer 2011: 101–2).

Singer argues that when a sentient being is a *non-person*, then it may not be morally wrong to give it a quick and suffering-free death. For example, it would not be wrong to kill it were its life so miserable that death would be a blessing. It is true that if the animal enjoys any higher quality of life, killing it would result in a small decrease in net utility. Once dead, the creature would not be in a position to eat, drink, mate and in other small ways contribute to the Universe’s sum total of utility (conceived as interest satisfaction). Yet Singer argues that even in these cases it would be morally permissible to kill the being, as long as one could find some way to offset the decrease in net utility occasioned by its death. Consider the example of a goose. Assume that the goose does not qualify as a person, according to Singer’s criteria, and assume, moreover, that its life is not so miserable and suffering-ridden that it would be better off dead. Painlessly killing the creature deprives it of future opportunities to satisfy its interests by pecking at grain, mixing with other geese, and the like, and in this sense it counts as a net loss in the great utilitarian calculus. But now suppose that, having killed the goose, one chooses (bizarrely, in the light of one’s earlier murderousness) to buy another goose from a farmer who was planning to slaughter it the very next day. Rescuing and subsequently caring for the second goose results in a net increase in utility which, if large enough, could outweigh the net decrease caused by the killing of the first goose. Singer’s general conclusion is that sentient beings that do not qualify as persons are, in this sense, *replaceable*.

Persons present an entirely different case. Singer argues that because they are aware of themselves as distinct entities with pasts and futures, sentient beings that qualify as persons have an interest in continuing to live. For instance, if a human – let’s call her Fiona – were to die today, she wouldn’t see her children grow up, she wouldn’t be able to complete the novel she’s writing, she would never get to see the Grand Canyon or to hike the awe-inspiring Milford Track in New Zealand. She has an interest in going on living which would be thwarted by her death. And this, Singer maintains, is one

reason why we should deplore the killing – even the painless killing – of some sentient beings. All things being equal, one should not kill persons.

It is worth pausing at this point to note how far we have departed from commonsense beliefs about what is right and wrong. By the lights of Singer's criteria, you and I qualify as persons; however, human babies do not. So, if Singer is correct, then it is usually morally worse, all things being equal, to kill an adult human being than to kill a human baby. But that suggestion might seem perverse. Certainly, many will contend that the worst acts, morally speaking, are those that are perpetrated upon the most vulnerable members of the moral community – the old, the sick and the very young. Now Singer usually dismisses appeals to intuition in moral philosophy, and he might very well respond that our intuitions about these matters are askew and need to be corrected. It is, however, another question whether he would be right to do so.

But assume that Singer is right and that it is, morally speaking, a worse thing to kill a person (such as you or me) than to kill a non-person (such as a human baby). It is a further question whether any nonhumans qualify as persons. Clearly, many animals can have interests that refer to future states of affairs, as when a dog anticipates its dinner or a squirrel buries nuts for spring. Yet Singer's argument hangs on the claim that some of them can also have interests in continuing to live – and this claim is open to question. The difficulty with it is that a conscious interest in continuing to live seems to involve mental capacities which no animals appear to possess. For if one has such an interest, then it would appear that one must want to go on living, and if one wants to go on living then it would seem that one must be able to grasp one's own mortality and the opportunities that would be foreclosed by one's demise (cf. Regan 1983: 207). Once all those conditions are spelt out, it may seem improbable that any nonhuman animals, even chimps and dolphins, have interests in continuing to live. It would, all things being equal, be wrong to cause them *suffering*; yet Singer has not proved that *killing* them involves any special wrongdoing (see, further, Palmer 2010: 131; Regan 1983: 206–8).

Regan's case for animal rights

Imagine that a circus has come to town. In the big-top show, a distressed elephant is pulled into the ring for the audience's amusement. Is this something to which responsible moral agents should object? Singer, for his part, would point out that the elephant is a sentient being that has interests – notably an interest in not suffering – that we are morally obliged to take into account. But it is another question whether he would condemn the elephant's treatment as morally wrong. Granted, Singer will almost certainly think that it *is* morally wrong. It is very unlikely, after all, that the sum total of the audience members' relatively trivial interests in enjoying the show will outweigh the elephant's very serious interest in not being made to suffer. What, though, if the audience were *huge*? And what if everyone *really* enjoyed seeing the ele-

phant? Is it not possible that the audience members' interests in seeing the elephant perform tricks could outweigh the elephant's interest in being left unmolested?

For Tom Regan, such examples indicate a general flaw with utilitarianism. They highlight the fact that utilitarians are not primarily concerned with individual beings, but with what those individual beings, so to speak, contain. Classical utilitarians, like Bentham and Mill, claimed that one ought to act so as to maximize pleasure or happiness. For Singer, by contrast, it is the satisfaction of preferences or interests that is all-important. So when Singer says that all animals are equal, his point is not that all (sentient) *animals* should be considered equally. His suggestion is that their *preferences* or *interests* should each be given equal consideration. As Regan puts it, Singer's theory entails that any particular individual is 'only a receptacle of what has value (i.e., preference satisfaction), lacking any independent value of its own' (1983: 210).²

In Regan's view, this is completely unacceptable. Kant was, he suggests, right to claim that certain beings are valuable in themselves, and not simply because they have – or are receptacles for – interests or preferences. And Kant was, he adds, also right to maintain that any being that possesses this 'inherent value' is not simply a tool or a resource, but a proper object of respect.

For Regan, then, Kant's general approach is the way forward. There really can be no moral justification for treating a being with inherent value as a mere means to an end, even the end of maximizing utility. But the great Prussian was, he maintains, wrong to claim that *only* rational beings have inherent value.³ Regan departs from Kant in arguing that that sort of value is possessed not just by rational beings, but by all those entities that qualify as 'subjects-of-lives'.

On Regan's account, to be a subject-of-a-life is not just to be alive, but to have a range of mental properties and capacities: 'individuals are subjects-of-a-life if they have beliefs and desires; perception, memory, and a sense of the future, including their own future; an emotional life, together with feelings of pleasure and pain; preference- and welfare-interests; the ability to initiate action in pursuit of their desires and goals; a psychological identity over time; and an individual welfare' (Regan 1983: 243). Admittedly, that list includes a number of higher-order properties and capacities that are unlikely to be possessed by any animals other than certain mammals. Even so, although Regan claims that any entity that satisfies the subject-of-a-life criterion has inherent

² This, in any case, is Regan's view. He assumes that Singer is committed to a teleological version of utilitarianism, according to which one's most basic moral commitment is not to consider *beings* but simply their *interests*. As Rowlands (2002: 37–41) argues, this interpretation of Singer's position is questionable (see ch. 1, n. 7).

³ Kant's theory is not anthropocentric, since it does not entail that all rational beings must be human. (By its lights, a rational alien would have inherent value.) Nonetheless, Kant insists that no nonhuman animals qualify as rational. So although his theory is not humancentred, it does not recommend direct moral concern for any animals. Kant does, however, argue that mistreating animals is a sign of callousness – a moral vice. He also maintains that we have an indirect duty not to mistreat animals, since doing so tends to incline us to mistreat our fellow human beings. See Kant (2010 [c.1779]).

value, he does not insist that entities that fail to satisfy that criterion cannot have inherent value. The criterion 'is set forth as a sufficient, not as a necessary, condition of making the attribution of inherent value intelligible and nonarbitrary' (1983: 246). Regan takes it that all normal mammals over one year old count as subjects-of-a-life, adding that in assessing other cases, such as those of birds or very young mammals, one should 'err on the side of caution' (1983: 391; cf. Singer 2011: 103).

So, for Regan, an entity that is a subject-of-a-life necessarily has inherent value, and, further, the same inherent value as any other subject-of-a-life. Unlike in Orwell's *Animal Farm*, no subjects-of-lives are more equal than others. Regan adds that any entity that has inherent value deserves to be *treated* as having inherent value. This means that one ought not to harm it (not, at least, without good reason). It also means that one ought not to treat it as merely a means to some end, even a very desirable and worthwhile end. Indeed, unlike Bentham and Singer, Regan insists that any such entity has a moral *right* against those moral agents who would treat it so disrespectfully. For instance, he believes that the moral wrong of intensive pig farming cannot be mitigated by, say, giving pigs more space or more mental stimulation. For the real evil is not that the pigs' interests in such things as freedom and mental stimulation are disregarded; it is that the poor animals are seen as nothing more than means to the end of providing humans with pork. What should provoke our moral horror is, Regan would say, the fact that society has chosen to sanction the existence of facilities with, as one government document puts it, 'raw goods (breeding stock and feed) going in one end and the finished article (pork and bacon) coming out the other' (quoted in Singer 1990: 330, n.9). He would argue that it would, likewise, be wrong to use an elephant as the centrepiece of a circus show, even if a truly vast audience really enjoyed seeing the creature, and even if, moreover, the elephant itself actually enjoyed standing on its hind legs and shooting water at humans with whitened faces and red noses. More generally, Regan maintains that any subject-of-a-life has a moral right not to be raised for food, or subjected to toxicity tests, or killed for its skin, and so on. And it retains this right even if eating it, spraying hairspray into its eyes, or skinning it could be justified on utilitarian grounds. However the utilitarian sums turn out, such practices should, he claims, be abolished. This means, of course, that individuals should abstain from hunting, eating meat and so forth. Yet Regan adds that even more than this is demanded of us: his position 'requires acting to bring about those changes that are necessary if the rights of ... animals are not to be violated' (1983: 353). It requires not just abstention, but also efforts to educate and inform the general public about the wrongness of 'the animal industry', as well as legal reforms to effect the required changes (1983: 353).

It is easy to see how Regan's theory could be used to criticize practices such as badger-baiting and seal-clubbing. In such cases, his theory clearly recommends that the practices be abolished. In other instances, however, the recommendations are less clear. Take those cases – common in ethics textbooks, if less so in reality – where one is forced to choose between harming one subject-of-a-life and causing comparable

harms to several. In considering such situations, it is important to recall that although Regan believes that all subjects-of-lives have a right not to be harmed, he maintains that those rights are merely *prima facie*, which is to say that they can be overridden if certain conditions are met. The following ‘minimize overriding principle’ (or ‘minimize principle’, for short) sets out one of the relevant conditions:

Special considerations aside, when we must choose between overriding the rights of the many who are innocent or the rights of the few who are innocent, and when each affected individual will be harmed in a *prima facie* comparable way, then we ought to choose to override the rights of the few in preference to overriding the rights of the many. (Regan 1983: 305)⁴

This principle is not based on utilitarian considerations. Regan is not suggesting that the rights of the few may legitimately be overridden when the aggregated utilitarian pros outweigh the aggregated utilitarian cons. Instead, the minimize principle is supposed to derive from the fundamental idea that all those beings that have inherent value have *equal* inherent value. For if all beings have equal inherent value, then no being’s moral right counts for more than any other being’s moral right. And if this is the case, then it would (as the minimize principle states) be wrong to allow the rights of the few to override those of the many.

A second challenge for Regan’s theory is presented by those cases when in order to prevent a major harm to one individual, several individuals must suffer minor harms. Once again, such situations seem to necessitate that some rights are violated. And, once again, the question is whether to violate the rights of the many or those of the few.

To deal with such situations, Regan introduces his ‘worse-off principle’: ‘Special considerations aside, when we must decide to override the rights of the many or the rights of the few who are innocent, and when the harm faced by the few would make them worse-off than any of the many would be if any other option were chosen, then we ought to override the rights of the many’ (1983: 308).⁵ Consider a situation in which four people must each receive a moderately hard slap to the face if a fifth person is to avoid losing a finger. Each of the five individuals has a *prima facie* right not to be harmed. However, the worse-off principle tells us that the rights of the many should be overridden and four slaps be administered. Furthermore, Regan makes it clear that,

⁴ Regan makes it clear that this principle applies only in those cases where the rights of the *innocent* stand to be violated. If an individual is guilty, then his guilt may justify his being treated in ways that violate his moral rights (as when a murderer is imprisoned and thus deprived of his moral right to liberty). Animals, however, ‘cannot be anything but innocent’ (1983: 295).

⁵ Note that if one is to assess the magnitude of these harms one must pay attention to the possible consequences of one’s actions. Nonetheless, as Regan explains, ‘the moral relevance of these considerations is parasitic on moral principles whose validity is *not* argued for on the grounds that their adoption will bring about better consequences’ (1983: 310). So Regan does not accept the consequentialist principle that the moral worth of actions depends entirely on their consequences.

when it comes to the worse-off principle, the ‘numbers don’t count’ (1983: 308). So if 400 or 4,000 faces need to be slapped in order to prevent a man from losing a finger, then so be it. The demands of morality have been satisfied.

The worse-off principle has some interesting implications for our moral relations with nonhumans. To appeal to just one more fanciful thought experiment: imagine that five individuals are adrift in a lifeboat, four humans and one dog. One individual must go overboard or all will perish. Whose life should be sacrificed?

Regan’s answer is that it should be the dog. Since ‘the harm of death is a function of the opportunities for satisfaction it forecloses’, the death of a dog is, he argues, a lesser harm than the death of a normal adult human (1983: 324). It follows that the dog’s right should be overridden. In fact, Regan maintains that this holds true regardless of the numbers involved: ‘A million dogs ought to be cast overboard if that is necessary to save the four normal humans’ (1983: 351).

Now that conclusion might seem to conflict with the animal-friendly tone of the rest of Regan’s theory. Yet there are at least two things that can be said in the man’s defence. First, it is important to realize that Regan is not suggesting that the dog should be sacrificed simply because it is not a member of the species *Homo sapiens*. Regan is no more a speciesist than Singer. Instead, he appeals to the relative magnitudes of the harms involved. If four humans were stranded on a lifeboat with a sensitive, super-rational nonhuman such as Mr Spock, it is not at all clear that the Vulcan ought to go overboard. Second, Regan points out that lifeboat situations are extremely uncommon. Certainly, the circumstances in which people choose to consume meat are rarely so dramatic. For while someone may be obliged to throw a dog from a sinking lifeboat, very few people need to eat meat in order to survive.

Flourishing

Recall the sad image of a pig confined to a narrow stall in some factory farm. Singer would rightly object to the creature’s treatment, arguing that, since pigs suffer when so confined, they should be allowed to roam free unless there are sufficiently strong countervailing reasons to keep them penned up. The fact that lots of humans like eating pork does not provide such a reason.

But suppose that the pig is not suffering. Suppose that it has been pumped full of some ‘happy drug’ which ensures that it is entirely content in its pen. And assume, further, that the process of developing the drug did not involve a great deal of suffering, and, moreover, that the pig is not going to experience a crashing ‘low’ once its drug supply runs out. Once all these assumptions are made, it is hard to see how a utilitarian objection to the pig’s treatment could gain purchase. The creature is not suffering. According to the utilitarian calculus, everything would seem to be perfectly okay.

But is it? Are there any reasons to think that the pig is nonetheless in what might be described as a bad state, even though it is not suffering?

There are. One option would be to argue that confining the pig to a tiny cage and pumping it full of happy drugs is an affront to the animal's *dignity*: that the confined and drug-addled pig is a degraded pig, a mere shadow of the sprightly, sociable, truffle-snuffling beast it would have been in the wild.

This, at any rate, would be Martha Nussbaum's assessment. In *Frontiers of Justice*, she argues that individual beings have certain capabilities that must be realized to at least a minimum level if they are to live dignified lives. In the case of humans, someone who could not fulfil the relevant capabilities would be unable to live a 'fully human life, a life worthy of human dignity' (2006: 181). Indeed, Nussbaum maintains that if a human being is to live such a life, he must be able to realize a very wide range of capabilities, pertaining, amongst other things, to bodily health and integrity, the exercise of imagination, practical reasoning, social interaction and political participation. This, she insists, is not simply a descriptive claim about what conditions must obtain if humans are to be able to live with dignity. She maintains that humans are *entitled*, as a matter of *justice*, to realize these capabilities.

Nussbaum argues that it is not simply members of the species *Homo sapiens* that need to fulfil their key capabilities. The same also holds true of animals. Now, to be sure, Nussbaum agrees with Bentham and Singer that (broadly speaking) only those animals that are capable of feeling pain have moral standing, but she proposes that it is not only sentience that matters. If they are to flourish and so live lives worthy of the dignity of their species, animals must realize a range of capabilities, at least up to a minimal threshold level. And, as with humans, she does not offer this merely as description. Any sentient animal is entitled to have its capabilities secured to a minimal threshold level: this is, she maintains, a requirement of justice (2006: 381). So, amongst other things, animals are entitled to healthy lives (which means that laws forbidding 'harsh or cruel treatment' of animals are required as a matter of justice). They are entitled to bodily integrity (of the sort that is violated by practices such as debeaking and tail-docking). They are entitled to 'an environment that is the sort in which they characteristically flourish'. They may not have property rights; however, they are entitled to territories that are rich and large enough to allow them to flourish. They are entitled to opportunities to play and to form appropriate attachments to others of their kind (for a more complete list, see Nussbaum 2006: 392–401).

The exact details, Nussbaum concedes, will need to be worked out for each species, since even closely related species inhabiting similar habitats, such as the sociable lion (*Panthera leo*) and the decidedly unsociable leopard (*Panthera pardus*), might realize their capabilities in very different ways. In some cases, indeed, differences may exist between individuals of the same species. Both border collies and Afghan hounds are classified as *Canis lupus familiaris*, yet the different breeds need to exercise their basic capabilities in very different ways, with collies having a greater need for mental stimulation, amongst other things. However, while it will often be unclear what exactly must be done if an animal is to realize its capabilities, it will in many instances be clear that *something* must be done. In many cases it will be clear that the animal is failing

to realize one or more of its capabilities and is consequently failing to live a dignified life. So, to return to our previous example, the factory-farmed pig has a capability to continue living, which will of course be violated when it is put to death. It has a capability to live a *healthy* life, which is violated when it is kept in conditions which foster the growth of sores, cysts and tumours. What is more, even pigs that have been raised in confinement retain their capabilities for intelligent social behaviour. Studies have shown that when they are released into more natural settings, factory-farmed pigs tend to revert to the behaviour of wild boar, building communal nests with walls to offer protection against prevailing winds, for example, and forming close personal ties with other pigs (see Stolba and Wood-Gush 1981). A pig can realize none of these capabilities when it is tethered to the bars of a 6- by 2-foot stall. For Nussbaum, justice demands that it not be kept in such conditions.

Is Nussbaum's case convincing? Rather than lumping animals together as sentient beings or subjects-of-lives, Nussbaum is sensitive to the considerable differences that exist between (and to some extent within) species – and that is surely to her credit. Yet her position remains vulnerable to several objections. I shall consider just one of them.

The objection I have in mind can be brought out by means of a thought experiment. So, imagine that, in response to pressure from Singer-inspired animal welfare groups, scientists succeed in creating a new species of animal, a 'pyg', which is not merely content with being confined in tiny stalls but actually flourishes in such conditions. The hope is that the general public will come increasingly to favour pyork over pork, that more and more meat producers will choose to raise pygs over pigs, and that the total amount of suffering in the world will accordingly be reduced.

At first sight, it is difficult to see how one could use Nussbaum's capabilities approach to criticize the breeding of pygs. After all, the pygs locked up in factory farms *are* flourishing. They *are* realizing what limited capabilities they have.

On what grounds, then, could one object to the breeding of pygs? One strategy would be to contend, in Regan-esque fashion, that individual pygs have inherent value, and that since they have inherent value they ought not to be treated merely as meat. Another option would be to ask what kind of *person* would create such animals. For there are reasons to think that it would take someone of dubious character – not necessarily a cruel person, but one who lacks humility or one or more other virtues – to create a pyg. As David E. Cooper puts it, what seems to be wrong about the breeding of pygs and other such practices 'is that they are the doings of a certain kind of person' (2002: 143).

We will consider such *virtue ethical* appeals in more detail in chapter 5. For now, it will suffice to note that even if certain biotechnological practices deserve to be condemned on virtue ethical grounds, it is a further question whether they should, all things considered, be discontinued. So, suppose that the breeding of pygs really would reduce the need to raise pigs for food. Suppose that, as a direct result of pyg-breeding, the number of suffering pigs would be greatly reduced. If the virtue ethical case is

well taken, then it would be unvirtuous, maybe even vicious, to create pygs. But that would only provide a *prima facie* reason against producing the animals – a reason, in other words, that could be overridden by other, more compelling reasons. And in this case it seems that we would have a compelling reason for breeding pygs. Indeed, even if it would be hubristic to do so, we might be morally obliged to create pygs in order to reduce the suffering of pigs (cf. Sandler 2005: 226).

Duties to wild animals

Singer tends to focus his attention on the sufferings of domestic animals such as pigs, sheep and chickens – but what about wild animals? After all, a huge amount of suffering occurs in wild nature, and it isn't obvious why the suffering of a wolf, for instance, should count for less than the suffering of a domestic dog. Are we morally obliged to try to prevent 'wild' or 'natural' suffering?

Singer resists the suggestion that we are on the grounds that trying to alleviate the suffering of wild animals would necessitate large-scale interferences in ecological systems, which, judging by the results of our past efforts in this regard, are likely to 'do far more harm than good' (1995: 226). But one might wonder, with Palmer (2010: 30), whether this response can be reconciled with Singer's utilitarianism, given the enormity of natural suffering and given the fact that, in some cases at least, we surely *do* know enough ecology to allow us to intervene without precipitating ecological disasters. Despite the man's protests, Singer's theory seems to point in the direction of intervention to prevent natural suffering. If we are morally obliged, all things being equal, to try to reduce suffering, then presumably we are morally obliged, all things being equal, to try to reduce the suffering of wild animals. Nussbaum, for her part, boldly recommends such interventions. She urges that if we can prevent natural suffering and harm without bringing about even worse suffering and harm, then we should do so. True, it will not be easy to police nature (the suggestion calls to mind images of Land Rovers pulling antelope-shaped chunks of soy protein across the savannah, with lions in hot pursuit). Nonetheless, Nussbaum maintains that we should try to bring about a 'gradual supplanting of the natural by the just' (2006: 400).⁶

In *Animal Ethics in Context*, Clare Palmer challenges these conclusions. She seeks to justify what she calls the 'laissez-faire intuition' – the sense that 'while we should care for and assist domesticated animals ... we should just leave wild animals alone' (2010: 2).

⁶ By contrast, Regan's theory suggests that there are no moral duties to intervene in wild situations. Rights can only be violated by moral agents. Nonhuman animals are not moral agents. So there's no moral duty to stop the lion killing the antelope. However, this argument seems to lead to some very strange conclusions. As Jamieson (see Palmer 2010: 37–8) notes, Regan's view suggests that we are under no obligation to try to prevent people getting washed away by a tsunami (which, after all, is not a moral agent).

To make her case, Palmer distinguishes between negative duties (such as the duty not to cause suffering) and positive duties (such as the duty to provide care or assistance).⁷ She agrees with Singer and Nussbaum that we often have negative duties to avoid hurting or harming both wild and domestic animals. Moreover, she agrees with Singer – if not with Nussbaum – that we do *not* usually have duties to care for or assist wild animals. Granted, we may well have such duties to them when they have been harmed as a result of our actions – on account of our destroying their habitats, for instance. If, however, an animal counts as *fully* wild, then, although we may well have negative duties not to cause it suffering or harm, we do not usually have positive duties to care for or assist it (though it is usually *permissible*, maybe even *commendable*, for us to do either).

Palmer argues that we have positive duties to care for or assist animals only when we have certain sorts of relations with them. More precisely: ‘when humans create sentient animals that are vulnerable and dependent or put animals into situations where they become vulnerable or dependent, special [duties] to care for or to assist these animals are generated’ (2010: 6).

Various sorts of relations are relevant here (see Palmer 2010: 91–2). Take zoo animals. In some cases, the animals themselves may remain wild, in the sense that they would be able to flourish were they to be released into their natural habitats. Yet for as long as they are behind bars, they remain dependent on human beings for food, shelter and other necessities. We have set things up so that such creatures are ‘externally’ dependent on us. In other instances, however, animals are also ‘internally’ dependent on us. This is the case when we have created animals that simply wouldn’t be able to flourish without human help. Palmer (2010: 92) gives the examples of ‘cows that can only give birth through caesarean section, cats bred without fur or claws, turkeys bred to gain so much fat that they cannot walk, or genetically modified laboratory mice created to be susceptible to specific cancers’. In all such cases – whether the animals in question are merely externally or both externally and internally dependent on us – we have special duties to them, just as a cat breeder has special duties to the kittens that she has bred (Palmer 2010: 95).

This comparison with the cat breeder may seem inappropriate, for it might seem that the cat breeder only has duties to care for and assist the kittens because she *voluntarily* assumed those duties. If she had found the kittens in the street, then perhaps she would have had no duties to help them. But since she chose to create and raise them, she is responsible for taking care of them. More generally, it might seem that although *some* people have special duties to *some* animals (e.g., pet owners to their pets), it is simply not the case, as Palmer claims, that we have positive moral duties to those domestic animals that we did not choose to breed and raise.

⁷ Palmer writes of ‘obligations’ rather than ‘duties’. For the sake of consistency, I will continue to refer to duties. On the distinction between the two, see Palmer (2010: 108–9).

In response to this objection, Palmer *could* have argued that one need not have voluntarily assumed any special duties to care for and assist animals in order to *have* such duties. But instead she grants the truth of the premise, conceding that special duties to care for and assist animals must be ‘voluntarily assumed’ (2010: 95). However, she then proceeds to argue that, in a surprisingly wide range of cases, this condition is in fact met. For she argues that one’s voluntary assumption of duties need not be explicit.

The point can be explained by means of two of Palmer’s own examples (see 2010: 148–52). So suppose, first, that, hiking in some wild place, you happen across a squirrel which seems to have been grievously wounded by some wild animal. The poor creature’s suffering would seem to fall into the category of ‘wild’ or ‘natural’ suffering. So although you have a duty not to cause the creature further suffering or harm, you have no positive duty to help it. For sure, it would be morally permissible to provide help. One imagines, indeed, that a morally virtuous person would be disposed to provide help. But, by the lights of Palmer’s account, one is not *obliged* to help.

Now consider a different example. Suppose that while you are out walking you come across an injured and suffering squirrel by the side of a busy road. It looks like it has been run over. As in the case of the wild squirrel, it is clear that you are obliged not to harm the creature gratuitously. But are you obliged to help it?

Palmer argues that you are: you have a positive duty to help the squirrel, even if the only help you could provide is to give the poor creature a quick and painless death. The reason for this, she explains, is that although you yourself did not run the squirrel over (you were out walking, remember), the creature was nonetheless harmed as a direct result of an institution – road transportation – from which you will have benefited and from which, moreover, you will *know* you have benefited. And not just this: Palmer points out that you will know that the numerous benefits you receive from road transportation come at the price of injury to humans and animals, amongst other things. Now, if you had not only abstained from driving but also withdrawn from society, relinquishing all the various benefits, such as cheap goods, that road transportation affords, then your hands would be clean. You would bear no moral responsibility for the adverse effects of the institution, and you would have no positive duty to help the squirrel. However, chances are, you have not done this. Chances are, you have, in effect, given your implicit consent to an institution which you know results in hurt and harm. Palmer argues that you have therefore voluntarily (if not explicitly) assumed positive duties to care for and assist those beings that are harmed as a result of the institution of road transportation. So you have a positive duty to help the injured squirrel.

In this manner, Palmer seeks to avoid the conclusion that, all things considered, we ought to do what we can to alleviate natural suffering – not by appealing to the potentially calamitous consequences of intervening in wild nature, but by distinguishing between our duties to wild animals and our duties to domestic ones. In some respects, the case she develops resembles those of Singer, Regan and Nussbaum. For instance,

as do each of those writers, Palmer attributes moral standing to individual sentient animals. In other respects, however, her account is very different. As Palmer explains, Singer, Regan and Nussbaum all ‘subscribe to something like the view that if something is owed to one animal, it is owed to all animals that are relevantly similar’ (2010: 5). So, despite their various differences, Singer, Regan and Nussbaum would all agree that our general moral duties to a wild tiger are the same as our general moral duties to a tiger in a zoo. As we have seen, Palmer disagrees. Although we might have the same negative duties to both creatures, we have positive duties to the captive tiger that we do not have to its wild counterpart.

Summary

Not everyone has found Singer’s position convincing. Some have taken exception to his view that we should strive to be completely impartial – not just race- and sex-blind, but species-blind as well – in considering what we ought morally to do. Others have argued that Singer’s onesided focus on the satisfaction of preferences or interests does not enable him to identify what is morally wrong with *killing*. Tom Regan, for his part, notes that Singer’s account would permit one to hurt the few in order to satisfy the interests of the many. But this, Regan contends, shows that Singer’s account fails to do justice to the fact that all subjects-of-lives, whether human or nonhuman, have moral *rights* to be treated with respect. Martha Nussbaum objects to Singer’s position on different grounds, arguing that we are morally obliged not (or not simply) to satisfy sentient beings’ interests, but to ensure that they are able to realize their basic capabilities and so lead flourishing and dignified lives. So, according to Nussbaum, we do wrong if we confine a single tiger to a tiny cage, even if we pump it full of happy drugs to ensure that it is in a perpetual state of bliss. We do wrong because a tiger so confined is unable to realize its basic capabilities to hunt, for instance, and command a vast territory. Clare Palmer notes that Singer’s arguments suggest that we should take steps to minimize the suffering of *wild* animals. But that interventionist conclusion should, she suggests, be resisted. She argues that, although we have negative duties to both domesticated and wild animals, we only have positive duties to the former.

Further reading

Acampora, R. R. (2006). *Corporal Compassion: Animal Ethics and Philosophy of Body* (Pittsburgh: University of Pittsburgh Press). Unlike the sources listed below, this excellent book draws primarily upon the works of Husserl, Merleau-Ponty and other ‘Continental’ philosophers.

Midgley, M. (1983). *Animals and Why They Matter: A Journey around the Species Barrier* (Harmondsworth: Penguin). A wideranging and beautifully written study.

Rowlands, M. (2009). *Animal Rights: Moral Theory and Practice*, 2nd edn (Houndmills: Palgrave Macmillan). Exceptionally clear.

3. Biocentrism and Ecocentrism

One of our main aims so far has been to assess which sorts of entities (or, if you like, beings) have *moral standing* or, as it is sometimes put, are in the *moral circle*. So, amongst other things, we asked whether Kant was right to suggest that only rational entities have moral standing, or whether, as Peter Singer suggests, nonrational sentient ones have it too.

Call this the *moral standing approach*. It is not the only approach that one can take to environmental ethics, and in fact some writers maintain that it isn't a very good approach at all. For instance, pragmatists and practical philosophers would argue that any effort that is put into establishing the limits of the moral circle could usually have been better spent addressing practical environmental problems. We will consider some other objections to the moral standing approach in chapter 5. In this chapter, however, I will continue to focus on that approach, for doing so will, I hope, shed light on some fundamental issues in environmental ethics.

So, for now at least, let's stick with that approach. As we have seen, to say that an entity has moral standing is to say that it is possible to have one or more direct moral duties to it. In the first two chapters, we saw that there are good reasons to think that all sentient beings, human and nonhuman, have moral standing. But can the same be said of any other sorts of entities? What about non-sentient animals, such as barnacles and nematode worms? Is it possible to have direct moral duties to them? And what of plants? Do I do wrong if, just for the hell of it, I chop down a tree? Presumably I do, if the tree is my neighbour's property, or if it contains a squirrel's drey or a bird's nest. But bracket all this and consider whether my action would be wrong even if it affected no entities other than the tree. And, thinking more widely, what of ecosystems or biological species? Do such entities have moral standing? This chapter will address these and other, related questions, beginning with the topic of our moral relations with non-sentient living things.

Life

Singer argues that sentient beings have moral standing because they are capable of having conscious interests – notably, a conscious interest in not suffering. Clearly plants are not sentient beings: they cannot have conscious interests in anything. But can they have any sorts of interest? Perhaps they can; for there is a sense in which something can be in an entity's interests even if it (or he, or she) has no conscious

interest in it. Consider the example of a smoker. What she wants, sitting in the park during her lunch break, is a cigarette. She is, one might say, consciously *interested* in having a cigarette.¹ But unless she is suicidal, having a cigarette is not *in* her interests. It is not in her interests because it may well contribute to her premature death. So something can be in someone's interests even if he or she takes no conscious interest in it. Interests do not have to be conscious (Varner 1998: 26, 58; cf. Regan 1983: 87).

By the same logic, certain things can be said to be in the interests of plants. As I write these words, for example, I can see one of my houseplants, a dragon palm. It is in the interests of this plant to be watered and fed, especially during the growing season, and to receive some light, though not too much, and not direct sunlight. This is not to say that the plant is consciously interested in these things, that it *desires* food, water and sunlight. Desiring plants are the stuff of fairy tales and science fiction. It is merely to say that the palm can flourish only if it is provided with certain nutrients, the proper amounts of water and enough light of the right wavelengths (cf. Goodpaster 1978: 319).

Some, no doubt, will find it hard to countenance talk of non-conscious interests. Yet even if there is no literal sense in which non-sentient entities have interests, there are, I believe, reasons to think that individual plants, fungi and other non-sentient but living entities occupy a special place in the moral universe. For whether or not they have non-conscious interests, it is clear that such entities have *goods of their own*. This means two things. On the one hand, it means that certain conditions can be good or bad *for* such entities in a way that nothing could be either good or bad for, say, a snowflake or a shoelace. So whether or not it has any sort of interest in being watered, procuring the right amount of water (not too much, not too little) is good *for* the dragon palm, just as certain other conditions (perpetual darkness, for instance, or being sprinkled with concentrated sulphuric acid) are bad *for* it. Alternatively put, the dragon palm, like any living entity, can be benefited or harmed. On the other hand, to say that an entity has a good of *its own* is to say that its good is not derived from the desires, interests or good of some other entity (Sandler 2007: 77). Consider, by way of contrast, the good of a man's liver. It does not stretch the English language to say that it would be good for Barney Gumble's liver were he to break his habit of quaffing Duff beer.² But saying *that* is only a roundabout way of saying that drinking less Duff beer would be good for Barney. The organ only has a good because the organism to which it belongs has a good. But the good of an organism is not derived from the good of anything else. Like that of the dragon palm, Barney's good is his own (or at least it would be, were Barney a real person rather than a cartoon character).

There are, I think, compelling reasons to think that all individual living things, all organisms, have goods of their own. But can the same be said of any other sorts

¹ Though, to be sure, she may also have a 'second-order' interest of wanting *to want* to give up smoking.

² Barney is the local drunk in the TV show *The Simpsons*.

of entities? Begin by considering whether any *collections* of living things could have goods of their own. If they are sufficiently integrated and organized, then perhaps they could. A termite colony is one likely candidate (Sandler 2007: 77–8). Another would be a siphonophore, such as a Portuguese man o’ war. Floating on the ocean’s surface, individual Portuguese man o’ wars certainly look like individual organisms, but any particular Portuguese man o’ war is in fact a superorganism: a colony of organisms so cohesive and organized that it behaves like a single organism. Perhaps such an impressively integrated colony has a good of its own.

Portuguese man o’ wars are composed of a number of individual organisms of the same species. But maybe some entities with goods of their own are composed of organisms of *different* species. Take lichens, for instance. They behave as single organisms; they seem, in the sense sketched above, to have goods of their own. Yet any particular lichen consists of two or more organisms – usually a fungus and either an alga or a cyanobacterium – growing together in a symbiotic relationship (with the fungus providing the lichen’s body and the alga or cyanobacterium providing sugar by means of photosynthesis).

Termite colonies, Portuguese man o’ wars and lichens are all organic (carbon-based) and naturally evolved; however, it is not clear that an entity must satisfy either of these criteria if it is to have a good of its own. For example, C-3PO, from the *Star Wars* movie series, is both inorganic (mostly metal, I guess) and artefactual (i.e., made rather than born). Still, he seems to have a good of his own. If he existed, he could be *harmed*, rather than merely *damaged*.³

Nonetheless, setting aside fanciful speculations, the only entities we know of that have their own goods are both carbon-based and naturally evolved. The set of such entities includes not just all sentient beings, but all living beings, from sea slugs to dragon palms and from lemurs to lichens. *Biocentrists* argue that each of these living beings has moral standing. They argue, in other words, that it is possible to have direct moral duties to each and every individual living being.

People tend to reject that conclusion for two reasons.⁴ First, some contend that biocentrism saddles us with too many moral duties to consider. For how, critics ask, could anyone possibly take account of their duties to each and every one of the countless living things they interact with on a daily basis? Walking through a forest, one would need to identify and consider one’s direct moral duties to the various insects, plants and fungi that one squashes underfoot. One would need to identify and consider one’s direct moral duties to the midges buzzing around one’s head. One would need to identify and consider one’s direct moral duties to the trillions of microorganisms that inhabit one’s own body. That’s an awful lot of duties to identify and consider – so many, indeed, that some critics have wondered whether it is possible to live as biocentrism

³ That said, he doesn’t seem to be too bothered when he is blown apart in *The Empire Strikes Back*.

⁴ The following discussion draws on Varner (1998: 77–9).

recommends. J. Baird Callicott, for one, remains unconvinced. With biocentrism, he maintains, ‘a point of moral overload is reached and the whole enterprise of ethics threatens to collapse into absurdity’ (quoted in Varner 1998: 78).

But suppose, for argument’s sake, that it is possible to identify and consider all of those duties. The biocentrist would now seem to be faced with a second problem: for, if biocentrism is true, then it would seem that each and every one of us is doing wrong pretty much all the time. When I thoughtlessly squash the forest-dwelling organisms underfoot, I am doing wrong. When I swat the midge that has landed on my arm, I am doing wrong. When, pausing for lunch in a forest clearing, I take an ill-advised bite from a warm cheese sandwich which has been festering in my backpack, I do wrong by killing millions of microorganisms. These may only be small wrongs; but for at least some biocentrists, they are wrongs nonetheless. As the great Albert Schweitzer put it, while killing might, in some cases, be ‘necessary’, it can ‘never be “*ethical*” as such’ (quoted in Barsam and Linzey 2001: 170). Admittedly, it is unclear how biocentrists like Schweitzer think we are to minimize this wrongdoing; however, their recommendation is likely to be extremely demanding. Perhaps, like some adherents of the ancient Indian religion of Jainism, they believe that we are morally obliged to abstain, as far as we can, from eating and drinking and moving around. But, for critics of biocentrism, to demand *that* is to demand too much (see, e.g., Passmore 1974: 123).

Although both of these objections have some force, neither is obviously decisive. For a thoughtful biocentrist can have a good stab at defusing both charges by establishing certain general moral priorities among living beings. Take Gary Varner’s interest-based version of biocentrism (1998: ch. 4). Varner suggests that the interests of human beings are generally more important than those of sentient nonhumans, and that the interests of sentient nonhumans carry greater weight than the merely ‘biological’ interests of insects, plants, fungi and the rest of the living but non-sentient world. Establishing this hierarchy enables Varner to avoid the first objection. In deciding how to act, I am not morally obliged to take an exhaustive inventory of the relevant (conscious and non-conscious) interests that might be affected by my action. In most circumstances, the hierarchy will simplify matters. So if, for instance, I find a child caught in a tangle of brambles, I do not need to weigh the interests of the child against those of the individual bramble plants. The hierarchy is clear. For moral purposes, the interests of children will tend to trump those of plants.⁵

Establishing a hierarchy of interests also enables Varner to avoid the conclusion that everyday activities, such as eating a sandwich, involve tragic dilemmas – situations, that is, in which a subject cannot avoid wrongdoing. When I take my bite from the sandwich, I do not deserve to be scolded for thwarting the interests of the countless microorganisms that I ingest and kill, since my (important) interest in eating trumps

⁵ This will not always be the case. In some circumstances – when, for instance, a vast population of plants could be saved by thwarting a human’s trivial interest – the biocentric hierarchy would presumably favour the plants.

the combined (relatively unimportant) interests of the microorganisms.⁶ As the biocentrist Robin Attfield (1983: 140) would say, although an individual microorganism has moral *standing*, its moral *significance* is negligible.

Not all biocentrists would endorse Varner's hierarchy of interests. Yet any biocentrist worth her salt will have resources at her disposal to establish certain general priorities in our moral duties to different sorts of living beings and, in this manner, to avoid the two objections sketched above.⁷ But that alone does not mean that biocentrism is vindicated. For if the defence of biocentrism set out above works, all it shows is that two reasons for rejecting biocentrism are not obviously decisive. It does not provide any positive reason to think that biocentrism is true. In light of this, we must now ask whether there are any reasons to think that we can have direct moral duties to plants, fungi and other non-sentient yet living beings.

At first sight, it may seem unlikely that we could have any such duties.

Return to the idea of a conscious interest in avoiding suffering. Just about everyone would agree that, all things being equal, something bad has happened when an entity is *hurt*. It is true that pain has its uses; indeed, the adaptive function of pain is to prevent an organism from being harmed. Even so, it would seem that pain *in itself* is bad whenever it occurs, and it would seem, moreover, that the fact that an action would bring about pain always generates one reason – though not necessarily an overriding one – against performing it. But can the same be said of *harm*? Entities that have goods of their own can be harmed, rather than merely damaged. Why, though, should the mere fact that an entity is capable of being harmed generate any direct moral duties to it? And why – to approach the issue from the opposite direction – should the mere fact that an entity can be benefited mean that we humans are obliged to benefit it? As John O'Neill writes:

We can know what is 'good for X' and relatedly what constitutes 'flourishing for X' and yet believe that X is the sort of thing that ought not to exist and hence that the flourishing of X is just the sort of thing that we ought to inhibit ... It is not the case that the goods of viruses should count, even just a very small amount. There is no reason why these goods should count at all. (1992: 131)

One argument in support of the claim that a capacity to flourish *does* generate such obligations runs (roughly) as follows. We all care about our own flourishing. What is more, just about all of us care about the flourishing of some other people. We want

⁶ For sure, I may deserve criticism if my sandwich-consumption would wipe out a truly vast number of microorganisms: Varner does not insist that 'higher' interests must always trump 'lower' ones; he is merely setting out some general priorities.

⁷ For instance, both Taylor (1986) and Sterba (1998: section II) make use of appeals to self-defence. For example, both would argue that it is morally permissible to kill a deadly scorpion, if that is the only way to avoid being stung.

those we love to do well for their own sakes. We want them to flourish rather than to decline – not because their flourishing is good for us, but because it is good for them. But if we were morally perfect, wouldn't we see that flourishing is *in itself* a good thing? And, seeing this, wouldn't we value the flourishing of *anything*, regardless of whether it has two legs or four, or even a network of roots and a stem?

Arguments of this kind could be framed in terms of consistency. That is to say, it could be argued that someone who cares about the flourishing of sentient beings but doesn't care one bit about the flourishing of non-sentient beings is guilty of rational inconsistency. However, the argument need not be set up this way. Another strategy would be to argue that, whether or not she is rationally inconsistent, someone who doesn't care at all about the flourishing of non-sentient life-forms must lack some admirable and morally relevant character trait, such as imagination or empathy.⁸

Arguments of this second kind can be spelt out in several different ways. During the 1980s and 1990s, many *deep ecologists* chose to make the case in terms of the capacity to *identify* with nonhuman beings. According to this line of argument, an inability to identify with nonhuman entities indicates some sort of failing – not perhaps a moral failing (deep ecologists were typically reluctant to frame their arguments in moral terms), but a lack of spiritual maturity.

Their reasoning ran like this. It has often been noted that egotism indicates a lack of psychological and (for want of a better word) spiritual maturity. Whereas the selfish man is ruled by self-interest, other, better men identify with others. Thus a man might come to identify with his wife. If something is in his wife's interests, then he will see it as being in his interests. He might come to identify with his immediate family or – thinking more broadly still – with his local community. And expanding the sphere of identification still further, he might come to identify with his nation, or even with all humankind. As the psychologist Abraham Maslow once put it: 'Identification-love ... means transcendence of the selfish Self. It implies also a wider circle of identifications, i.e., with more and more and more people approaching the limit of identification with all human beings. This can also be phrased as the more and more inclusive Self. The limit here is identification with the human species' (1971: 262; cf. Fox 1995: 201). For deep ecologists such as Arne Naess, Maslow was right to conceive of psychological and spiritual development as a process of *transpersonal identification*, in which, identifying with a wider and wider circle of beings, one comes eventually to realize 'as expansive a sense of self as possible' (Fox 1995: 124). But the psychologist was wrong to draw the line at identification with all human beings. To realize the widest, most accommodating sense of self is, Naess claimed, to have come to identify with all manner of *nonhuman* beings too – and not just the sentient ones. Thus, in the words of one sympathetic commentator, 'To see one's true self *as* the mountains, rivers and forests, and as the birds, dolphins and all the inhabitants of the great wide earth, constitutes a sound

⁸ On the differences between appeals to consistency and appeals to virtue, see Cooper (1995).

basis for living an ecologically sound way of life' (Habito 1997: 172; cf. Shelley 2003 [1819]: 635).⁹

These are bold claims, and many have found them unconvincing. For example, the ecofeminist Val Plumwood contends that an emphasis on *identifying* with nature occludes the natural world's 'distinctness and independence from us and the distinctness of the needs of things in nature from ours' (1993: 178). And that, she adds, has troubling ethical implications: 'One may in certain situations claim without arrogance to act in solidarity with or on behalf of another through one's own (always imperfect) understanding of that other's situation, but one may not without arrogance assume that one is that other or knows that situation as does the other, that the other is transparent and encompassable by self without residue' (1993: 178). Still, I suspect that Plumwood would have agreed with Naess's general criticism of those who ask, dismissively, why we should care about the goods of dragon palms and other non-sentient living beings. For whether or not such questions are evidence of rational inconsistency, they really do seem to indicate a lack of spiritual maturity. That, I suspect, is something on which the ecofeminist and the deep ecologist could agree.

Ecosystems

In the previous section, I introduced biocentrism by considering the example of a houseplant. We saw that certain conditions, such as receiving the right amount of water, are good for the houseplant. We also saw that there are reasons to think that we have some sort of moral duty, albeit a very weak and easily overridden one, to help the houseplant to flourish (or at least to refrain from harming it).

So far, then, biocentrism appears to be plausible. But now consider a different example. Imagine a wild deer in a forest, munching on a sapling. What would a biocentrist make of this situation? Presumably, she would begin by noting that the situation involves at least two individual living things – the deer and the sapling. And she would, I guess, move on to observe that each of these living things makes a moral demand upon us: that we have certain direct moral duties to the deer and certain direct moral duties to the sapling. But it is unrealistic to suppose that there are just two living beings to consider here. The situation in actual forests will be much more complicated. So, if the biocentrist is to provide anything even approaching an accurate assessment of the rights and wrongs of the situation, she will need to consider a number of other affected parties: not just the deer and the sapling, but also the other plants that are, as it were, jostling for space on the forest floor, and not just these, but also the caterpillars which the deer is depriving of food, the wolves that prey on well-fed deer, and the parasites that inhabit the deer's gut. Seen through the lens of biocentrism, the forest scenario,

⁹ Note the references to mountains, rivers and forests. Although one can appeal to transpersonal identification to defend biocentrism, many versions of deep ecology are much more radical than any biocentric theory.

like any real-world situation, will seem to involve a vast number of living beings, each of which makes its own demands upon us moral agents.

Is this a plausible picture? As we saw in the previous section, some will object to it on the grounds that it saddles us with too many moral duties to consider or too many to discharge. Here, however, I would like to consider a related but distinct objection, one that J. Baird Callicott expresses as follows:

Before the rather recent emergence of ecology as a science the landscape appeared to be, one might say, a collection of objects, some of them alive, some conscious, but all the same, an aggregate, a plurality of separate individuals. With this 'atomistic' representation of things it is no wonder that moral issues might be understood as competing and mutually contradictory clashes of the 'rights' of separate individuals, each separately pursuing its 'interests' ... Ecology makes it possible to see land ... as a unified system of integrally related parts. (1980: 321; cf. Rolston 1989: 111)

According to Callicott, then, the biocentrist's picture is too *individualistic* to do justice to the intimate relations between all things in nature. Whereas Taylor, Attfield and Varner see collections of individuals, the competing claims of which must each be weighed, the science of ecology has revealed that the world is marked by process, flow, change and intimate relations between things. *Ecocentrists*, like Callicott, argue that our ethics should reflect this fact.

One of the best ways to introduce ecocentrism is to consider Callicott's chief inspiration: the writings of Aldo Leopold, the early twentiethcentury forester, ecologist and nature writer. And a good way to introduce that body of work is to consider Leopold's most famous and influential book, *A Sand County Almanac*.

In his *Almanac*, Leopold describes a moral epiphany he had while working as a forester in the south-western United States. While eating lunch one day on a rocky outcrop (or 'rimrock') overlooking a river, he and his fellow foresters spotted a she-wolf and her cubs on the banks far below. In those days, he confesses, 'we had never heard of passing up a chance to kill a wolf', and the group opened fire on the pack. Leopold describes the results:

We reached the old wolf in time to watch a fierce green fire dying in her eyes. I realized then, and have known ever since, that there was something new to me in those eyes – something known only to her and the mountain. I was young then, and full of trigger-itch; I thought that because fewer wolves meant more deer, that no wolves would mean hunters' paradise. But after seeing the green fire die, I sensed that neither the wolf nor the mountain agreed with such a view. (1949: 130)

Leopold did not suddenly come to realize that wolves have moral standing. Reading on, the nature of his realization becomes clear: 'I have seen edible bush and seedling

browsed, first to anaemic desuetude, and then to death. I have seen every edible tree defoliated to the height of a saddlehorn ... I now suspect that just as a deer herd lives in mortal fear of its wolves, so does a mountain live in mortal fear of its deer' (1949: 130–2; cf. Kohák 1984: 98).¹⁰

The chapter in which this discussion appears is entitled 'Thinking Like a Mountain'. Yet Leopold is no animist. He does not believe that it is possible to adopt the perspective of a mountain (if that phrase makes sense). Rather, as the passage above indicates, to think like a mountain is to regard the wolves from an ecological standpoint. It is to appreciate the contribution the creatures make to the good of the ecological or biotic community of which they are members.

Leopold maintains that this community includes us. *Homo sapiens* is a 'plain member and citizen' of the same biotic community that includes wolves, deer, sedge and soil (1949: 204). And this community is, he points out, extended in both time and space. On the one hand, Darwin and his successors have shown us that we share much of the same great evolutionary history with wolves, and indeed with deer and sedge. On the other hand, the science of ecology has revealed to us that we are bound up in the same natural cycles as all living things. Following the British ecologist Arthur Tansley (to whom we owe the concept of an ecosystem), Leopold often makes the point in terms of energy. The energy plants absorb from the sun passes to herbivores. In many instances, it goes on to nourish carnivores, before being returned to the soil in the form of faeces. But, however it arrives there, most of the sun's energy eventually returns to the soil to nourish decomposers. Land, Leopold claims, 'is not merely soil; it is a fountain of energy flowing through a circuit of soils, plants, and animals' (1949: 216).

The general trajectory is clear: Leopold urged his readers to shift their attention away from individual animals, plants and fungi and to focus on the biotic community of which they, along with all these various nonhuman entities, are 'plain members'. But what does he say about ethics? Although, as Varner (1998: ch. 6) points out, Leopold's views on this topic are the subject of much dispute, many commentators believe that they are encapsulated in a single statement made towards the end of the *Almanac*: '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' (1949: 224–5). The wording will perturb some readers: for instance, modern ecologists tend to downplay 'stability', thinking that ecosystems are more dynamic than Leopold believed (see, e.g., Botkin 1990). But, for Callicott, the message is clear. Leopold is not simply claiming that 'the

¹⁰ Cf. the views of Mengzi (Mencius), as set out in the fourth centuryBCE Confucian classic, *The Book of Mengzi*: 'There was a time when the trees were luxuriant on the Ox Mountain, but as it is on the outskirts of a great metropolis, the trees are constantly lopped by axes. Is it any wonder that they are no longer fine? With the respite they get in the day and in the night, and the moistening by the rain and dew, there is certainly no lack of new shoots coming out, but then the cattle and sheep come to graze upon the mountain. That is why it is as bald as it is. People, seeing only its baldness, tend to think that it never had any trees. But can this possibly be the nature of a mountain?' (Mengzi 2003 [fourth century BCE]: 127).

good of the biotic community is the ultimate measure of the moral value, the rightness or wrongness, of actions' (Callicott 1980: 320). He is suggesting that the worth of any particular member of that community is a function of the contribution it makes to the good of the community as a whole. And for Leopold that community is, as we saw, a *biotic* community.

A comparison with the individualist views of writers such as Singer and Varner may be helpful here. Take the example of a rabbit. The sentientist and the biocentrist agree that to assess how we ought to act in our dealings with the creature, we need attend only to its intrinsic properties. It does not matter whether the animal is languishing in the laboratory of a pharmaceutical company or hopping about on some green and sun-drenched meadow. The sentientist will say that in both cases it has a certain moral standing and significance because it is sentient. The biocentrist will say that in both cases it has a certain moral standing and significance because it has a good of its own.

By contrast, an ecocentrist will maintain that to assess how we ought to treat the rabbit – or indeed any being – we must pay attention to its context. And the key question here, she will insist, is whether the entity contributes to the good of the environmental whole of which it is part. If so, then there may be strong reasons to preserve it. If, for example, the entity is a member of what ecologists call a keystone species, then killing it may disrupt the biotic community of which it is a member. If, however, the entity contributes little or nothing to the good of that community, then there may be no reason to promote its flourishing. In fact, if it detracts from the community's good, then there may be reasons to wipe it out. So, if the populations of cane toads, say, or brown tree snakes have spiralled out of control (as they have in Australia and Guam, respectively), then, according to ecocentrism, it might be not just *permissible* but *obligatory* to cull them.

In his 1980 paper, 'Animal Liberation: A Triangular Affair', Callicott takes such whole-focused or *holistic* thoughts to their logical conclusion:

The biospheric perspective does not exempt *Homo sapiens* from moral evaluation in relation to the well-being of the community of nature taken as a whole. The preciousness of individual deer, as of any other specimen, is inversely proportional to the population of the species. Environmentalists, however reluctantly and painfully, do not omit to apply the same logic to their own kind. As omnivores, the population of human beings should, perhaps, be roughly twice that of bears, allowing for differences in size. A global population of more than four billion persons and showing no signs of an orderly decline presents an alarming prospect to humanists, but it is at present a global disaster ... for the biotic community. (1980: 326)

Callicott has now distanced himself from the view expressed in this passage.¹¹ Yet some misanthropic environmental thinkers have embraced it. To my knowledge, none

¹¹ He later claimed (2003 [1990]: 205) that he was simply describing an 'obnoxious and untenable' position which might be thought to flow from Leopold's land ethic.

have suggested that humans should be culled; however, some have maintained that there is cause to welcome those events that just so happen to reduce the global population of human beings. In light of the global disaster to which Callicott refers, war, pestilence and famine are, in their view, no bad things.

These are appalling suggestions. For one thing, they often rest on the racist assumption that the peoples who have grown too numerous reside in parts of the world to which ecocentrists are less attached – Sudan or India, say, but not Belgium or the United Kingdom. But the problem here is not simply unjust discrimination. It is appalling to suggest that the value of any human beings, whether Sudanese or Belgian, should be measured by nothing more than the contribution they make to the good of the environment. Regan (1983: 361–2) famously dismissed the very suggestion as ‘environmental fascism’. For, just as in political fascism an individual is valuable only to the extent that he or she contributes to the good of the nation state, so, according to some forms of ecocentrism, an individual entity would seem to be valuable only to the extent that its continued existence contributes to the good of the environmental whole to which it belongs. The fact that it might be a subject-of-a-life, for instance, is of no account.

Still, it would be very unfair to condemn all ecocentrists on these grounds. Callicott himself is certainly no friend of fascism (indeed, he was active in the civil rights movement during the 1960s). No doubt stung by Regan’s charges, he came eventually to adopt a much less contentious version of ecocentrism.¹² As Y. S. Lo explains, the argument developed in his 1980 paper appeared to suggest that there is an ‘absolute direct moral duty to protect the good of the biotic community, to which any other good always ought to be subordinated’ (2001: 332). Yet by 1987 Callicott had come to endorse the principle that ‘It is a *prima facie* moral duty to protect the holistic good of the biotic community, to which the goods of individuals occasionally ought to be subordinated’ (Lo 2001: 339). In this context, ‘*prima facie*’ means ‘capable of being overridden’. Hence the 1987 formulation is much less contentious than its predecessor.

This is not to say, though, that it is wholly uncontentious. For even moderate, non-fascistic formulations of ecocentrism can prove difficult to defend. Consider, first, the problem of identifying environmental wholes such as ‘biotic communities’ or ecosystems. Ecocentrists, whether strong or moderate, join forces in maintaining that one is morally obliged to take the goods of such wholes into account. But if one is to consider their goods, then one must first of all be able to pick out the relevant wholes, and in many cases this is no easy task.

¹² See, for instance, Callicott (2003 [1990]: 204). A case could be made that Callicott’s more moderate ecocentrism was truer to Leopold’s views. After all, Leopold (1949: 204) had maintained that the land ethic implies respect for one’s ‘fellow members’ of the biotic community.

Take ecosystems.¹³ Although the concept of an ecosystem has proven useful in ecology, it presents moral philosophers with certain difficulties. For if, as ecocentrists maintain, we are to give thought to ecosystems in deciding how to act, then we must be able to tell one ecosystem from another. As metaphysicians say, we must be able to ‘individuate’ them. Doing this can, however, prove difficult; in fact, it is often very unclear where one ecosystem ends and another begins.

As Dale Jamieson (2008: 151) notes, the problem arises in both temporal and spatial dimensions. Take the phenomenon of ecological succession. When they are left undisturbed, scrubland ecosystems tend to turn into woodland ecosystems. But to which ecosystem does the ecocentrist believe we have duties: the scrubland or the woodland? The answer is not obvious. Turning from the dimension of time to that of space presents its own problems. We have been referring to the scrubland as an ecosystem. But perhaps it contains a number of more localized ecosystems, such as the ecosystem of a particular ditch or the ecosystem that is centred on a particular decaying log. And – lowering the magnification now – perhaps the scrubland ecosystem is itself part of a wider ecosystem. So to which of these various ecosystems are we supposed to have duties? Whether or not these considerations generate problems for scientists, they certainly create difficulties for anyone who maintains that we have direct moral duties to ecosystems (see, further, Jamieson 2008: 150–2; also Sagoff 2010: 394–5).

Moreover, even if one can identify a certain environmental whole, it is a further question whether that whole has a good of its own that can be promoted. Granted, it is clear that individual organisms have such goods, and ecosystems have certainly been likened to organisms. Yet, as Tansley insisted, such claims are either false or merely metaphorical. Ecosystems are not organisms in any literal sense. For one thing, the parts of ecosystems tend to exhibit a much greater degree of autonomy than the parts of organisms. For another, unlike the state of any organism, the state of any particular ecosystem is not the result of some form of central organization. It reflects a hodgepodge of contingent factors, such as what kinds of seeds just so happen to have blown into the area and what kinds of animals just so happen to have colonized it. In short, ecosystems do not seem to be self-maintaining, self-governing systems. They lack the cohesiveness of individual organisms. To say this is not to deny that ecosystems can be in better or worse states: references to ‘ecosystem health’, conceived in terms of normal ecosystem processes and functions, make sense. It is simply to deny that anything could be good or bad for an ecosystem itself.

This might not mark the end of the line for ecocentrism. Perhaps, as Lawrence E. Johnson (1991: ch. 6) argues, ecosystems do in fact have goods of their own. And even if they do not, the ecocentrist has the option of switching her attention to some other kind of environmental whole. One strategy, here, would be to suppose that the

¹³ Leopold tended to follow the British ecologist Charles Elton in writing of the ‘biotic community’. Yet it is clear that what he really had in mind was something closer to an ecosystem – that is, a community of organisms in its abiotic environment.

earth itself functions as some sort of superorganism. That is not a new idea. At one point in his career, Leopold himself flirted with the notion that ‘the “dead” earth is an organism possessing a certain kind and degree of life’ (quoted in Callicott 1989: 88). Nowadays, that idea is more usually associated with James Lovelock’s Gaia hypothesis: the proposal that the earth may be thought of as a superorganism, in that it is a selfregulating, homeostatic system which tends to maintain the conditions necessary for the continuation of life (see, further, Lovelock 1995). However, as we saw above, it is one thing to say that a certain environmental whole has a good of its own, but quite another to say that that good ought to be promoted. So even if we suppose that Gaia *does* have a good of its own, more work would be needed to justify a Gaia-focused ecocentrism.¹⁴ And yet ecocentrists need not give up hope. Suppose, for argument’s sake, that neither ecosystems nor any other sort of environmental whole have moral standing. It does not follow that such wholes may permissibly be treated in any way we see fit. On the contrary, as we will see in the next chapter, even if ecocentrists really are wrong to suppose that we can have direct moral *duties* to ecosystems and the like, they are surely right to maintain that many such wholes are of very high non-instrumental *value*.

Biological species

We have considered our moral relations with organisms and environmental wholes. Yet some putative objects of environmental concern seem to fall into neither of these categories. Take biological species. We will consider some claims to the contrary below, but at first glance a species does not appear to qualify as an organism. *Canis lupus* is not itself a wolf; *Panthera tigris* is not itself a cat. Furthermore, species are not at all like ecosystems and other environmental wholes. It would seem, therefore, that the question of whether species have moral standing cannot be settled simply by assessing whether either organisms or environmental wholes have moral standing. Species would seem to present a different moral case.

One argument for thinking that species do *not* have moral standing runs as follows. When moral philosophers ask whether a certain entity has moral standing, the existence of the entity is not usually in question. For instance, although a sentientist and a biocentrist will disagree about whether a dragon palm has moral standing, both will accept that there exists some entity out there, as it were, in the world – namely, the palm – the moral standing of which is at issue. With biological species, however, matters are often much less clear.

¹⁴ For sure, one could argue that if Gaia can flourish, then we are morally obliged to promote its flourishing because we have moral obligations to the billions and billions of organisms that depend on its flourishing for *their* flourishing. But that would amount to a form of biocentrism, rather than a form of ecocentrism.

An example should help to illustrate the point. In 2010, a team of researchers defended the hypothesis that Africa has not one but two species of elephant, the African bush elephant (*Loxodonta africana*) and the African forest elephant (*Loxodonta africana cyclotis*) (see Rohland et al. 2010). Now it could simply be accepted that the researchers made a genuine discovery and that *L. cyclotis* (for instance) is a genuine species. Yet it is not obvious that one would be justified in thinking any such thing. For consider what it *means* to say that *L. cyclotis*, or indeed anything else, is a species. On this matter, different biologists often have different views. Some define species in terms of reproductive isolation; others appeal to evolutionary history. Some refer to overall genotypic similarity, while others emphasize shared anatomical features (see, further, Sandler 2012: 4). And, over time, different sets of criteria fall in and out of scientific fashion. In view of this, one might worry that *L. cyclotis* is not a ‘natural kind’ at all, but merely an artefact of the classificatory schemes that were used in the research that led to the 2010 paper. And if *L. cyclotis* really is an artefact of this sort, then it is difficult to see how it could have moral standing (see, further, Ereshefsky 1998).

In some cases, then, it will be difficult to determine whether a certain species has moral standing because it will be unclear whether the species in question is a genuine species. But the significance of these ontological worries can be exaggerated, for it will in many instances be clear that in distinguishing one species from another biologists really have managed to carve nature at its joints. So, for example, whereas there is some dispute about whether African elephants fall into just one species or two, biologists agree that African elephants (those of the genus *Loxodonta*) are to be distinguished from those of the genus *Elephas*, which are confined to Asia. In this case, as in many others, it would appear that biologists have identified a real distinction between different kinds of organism.

Suppose that *L. cyclotis*, the African forest elephant, is a natural kind and not simply an artefact of the classificatory schemes of biologists. Suppose that in this case biologists really have managed to carve nature at its joints. Does the African bush elephant have moral standing?

It would, I think, be a mistake to argue that it is not possible to have any direct moral duties to *L. cyclotis* because *L. cyclotis* is an abstract class, like the set of triangular objects, and it is absurd to think that such classes have moral standing. As James Sterba (2001: 30) points out, ‘Species are unlike abstract classes in that they evolve, split, bud off new species, become endangered, go extinct.’ A species, in short, is a historical individual. That said, it is a further question whether species, construed as historical individuals, are the sorts of ‘things’ to which it is possible to have direct moral duties; it is a further question, in other words, whether they have moral standing.

What is the answer to this further question? As we saw above, some biocentrists hold that an entity must have moral standing if it has a good of its own. Whether or not they are right about that, it is clear that an entity with moral standing must

have a good of its own. (In other words, whether or not having a good of one's own is *sufficient* for moral standing, it is clearly *necessary*.) Furthermore, if an entity has a good of its own, then it must be possible for certain effects to be good or bad for it. It follows that an entity can only have moral standing if certain effects could be good or bad for it – if, that is, it could be benefited or harmed. Now, to return to our example, it is clear that individual elephants can be benefited and harmed and clear, moreover, that they have moral standing. However, nothing could be either good or bad for the species of which individual African forest elephants are members. *L. cyclotis* can no more be benefited or harmed than it can strip bark from trees or wallow in waterholes. So neither *L. cyclotis* nor any other biological species has moral standing. To suppose otherwise is, it would seem, to make a category error.

Not everyone would agree with this assessment. For instance, Lawrence E. Johnson argues that, although a biological species is not sentient, it is nevertheless a living entity, and like any living entity it has a non-conscious interest ‘in whatever contributes to its coherent and effective functioning as the particular ongoing life-process which it is’ (2003: 479). Those interests, he adds, cannot be reduced to the interests of its members: in fact, it is typically in the interests of the species that some of its less fit members die (cf. Russow 1981: 102). In a similar vein, Holmes Rolston III argues that each biological species ‘defends a form of life’ (1989: 212) and that ‘Events can be good for the well-being of the species, considered collectively’ (1989: 214).

These claims are open to question. Suppose that a certain species can only avoid extinction if each of its current members is subjected to a regime of invasive and distressing medical procedures. In this case it would seem that a distinction could, as Johnson maintains, be made between the interests of the species and the interests of its members. However, as Clare Palmer (2009: 592) argues, if we take ‘a long-term view of the species, and summed individuals’ interests over time, it’s no longer clear that the summed interests of the individuals that are part of the species *would* come apart from the interests of a species understood as an individual’. Now one response to Palmer’s objection would be to postulate a situation in which the species can only be saved from extinction if *all* of its members, present and future, were to live disrupted and distressing lives. It could be argued that a distinction between the species’ interests and those of its members could legitimately be drawn in such an admittedly bizarre set of circumstances. Yet this response makes it difficult to comprehend what interests a species could possibly have. As Palmer (2009: 592) asks, ‘Would a species really be doing better by being composed solely from organisms with miserable lives, rather than by becoming extinct?’ Like her, I really have no idea.¹⁵

It is therefore unlikely that biological species have any non-conscious interests. Besides, even if they *do* have such interests, that fact alone would not entail that we have any direct moral duties to them, for it would remain to be shown that the relevant

¹⁵ For a similarly sceptical response to the suggestion that biological species have goods of their own, see Sandler (2007: 79–80).

interests are ones which we are morally obliged to consider (Palmer 2009: 593–4). Or, to put the point in terms of *goods* rather than interests: it is one thing to say that biological species have their own goods, but quite another to say that we are morally obliged to promote their goods. What John Nolt (2006) calls the gap between ‘good’ and ‘ought’ remains.

Suppose that Palmer is correct and species really do not have moral standing. Suppose, to appeal to a specific example, that while individual Sumatran rhinos have moral standing, the species of which they are members (*Dicerorhinus sumatrensis*) does not. As we saw in chapter 1, a distinction may be drawn between moral standing and moral significance. To say that an entity has moral standing is to say that it is possible to have one or more direct duties to it. Moral significance, by contrast, is a measure of the strength of those duties. So an entity with moral standing could nonetheless have a very low moral significance. In the light of this distinction, it could be claimed that, although both individual Sumatran rhinos and individual white rhinos have moral *standing*, the former have a higher moral *significance* since the white rhino is, if far from secure, less vulnerable than its critically endangered Sumatran counterpart.

That claim might sound plausible. It is widely accepted that we have especially strong moral duties to individual condors, pandas, leatherback sea turtles and other members of endangered species. Be that as it may, the notion that the members of endangered species should receive moral priority sits ill with many of the moral theories we have considered so far. Singer, for example, would maintain that suffering is suffering, and it is morally irrelevant whether it is, so to speak, going on in a Sumatran rhino or in a white rhino. Regan and Nussbaum would agree (though they would express the point in terms of being a subject-of-a-life or having certain capabilities, respectively).

Appeals to biocentrism tend to generate similar results. Biocentrists like Taylor and Attfield maintain that each and every individual living being has a good of its own that we are morally obliged, all things being equal, to promote. But if they are right about this, it is difficult to see why the good of a Sumatran rhino should count for more than the good of a white rhino. Or, to put the point in the terms favoured by Varner, it is hard to see why the conscious and non-conscious interests of the former should have greater moral weight than those of the latter.

Appeals to ecocentrism might seem to have more promise, for ecocentrists can consistently hold that the members of certain species deserve special moral consideration on account of the valuable ecological functions they perform. Take keystone species. As we saw in the previous section, members of such species play critical roles in the biological communities to which they belong, and their disappearance tends, therefore, to have disastrous ecological effects which the ecocentrist will, of course, be keen to avoid. Yet not all keystone species are endangered, and not all endangered species play critical roles in their biological communities. (I am not aware of any evidence that the Sumatran rhino is a keystone species, for instance.) It is therefore difficult to see how

an appeal to ecocentrism could justify the claim that certain individuals have special moral significance simply because they are members of *endangered* species.

What to conclude? Humans seem to be causing species extinctions at a rate higher than at any other time in the last 65 million years (approximately 1,000 times the natural rate). And as global climate change accelerates, this rate is likely to increase still further. Even in the most optimistic scenarios, 20–30 per cent of species are likely to be at heightened risk of extinction by 2100 (Sandler 2012: 1). Yet, as we saw above, species in themselves do not seem to have moral standing, and the individual members of endangered species do not seem to have an especially high moral significance simply because the species of which they are members are endangered. So why should we care about anthropogenic (that is, human-caused) extinctions?

My own view on this matter is that we should care. But in order to see *why* we should care, we must, I believe, appeal to concepts other than *moral standing* and *moral significance*. It seems to me that we must also think about the concepts of *value* and *virtue*. We will consider these in chapters 4 and 5, respectively.

Summary

For *sentientists*, like Peter Singer, all individual sentient beings have moral standing. *Biocentrists*, such as Paul Taylor, maintain that the same may be said of all those beings that have *goods of their own*. The set of beings with such goods roughly coincides with the set of living beings. So, according to biocentrism, all individual living beings, whether sentient or non-sentient, have moral standing. Biocentrists do not, however, maintain that our duties to all of these various beings are equal in strength. They acknowledge that our duties to a plant will typically be much weaker than our duties to a dog. Even so, they hold that it is possible to have direct moral duties to individual non-sentient beings, such as plants.

Various arguments are provided in support of these claims. Some *deep ecologists* argue that spiritually mature people will be disposed to identify with, and so be motivated to care for, individual living beings. For instance, Arne Naess suggests that the extension of moral concern to living beings goes hand in hand with a process of ‘self-realization’, in which one comes to identify with a wider and wider set of nonhuman beings.

Both sentientists and biocentrists (though not all deep ecologists) are primarily concerned with our moral duties to *individual* beings. By contrast, *ecocentrists* such as Aldo Leopold and J. Baird Callicott urge environmental ethicists to take their lead from ecological science by focusing their attention on the environmental wholes of which those individuals are parts (or members). Adopting this *holistic* standpoint, some ecocentrists maintain that we have moral duties to promote the goods of some environmental wholes. Some go as far as to claim that we have direct duties not just to the ecosystems to which organisms belong, but also to the biological species of which

they are members. The difficulty, in all such cases, is to show that the whole in question, be it an ecosystem, a species or ‘the land’, has a good of its own and, moreover, one that we are morally obliged to promote.

Further reading

- Callicott, J. B. (2013). *Thinking Like a Planet: The Land Ethic and the Earth Ethic* (New York: Oxford University Press). Offers a compelling interpretation of Leopold’s land ethic and then applies that ethic to the earth as a whole.
- Goodpaster, K. (1978). ‘On Being Morally Considerable’, *The Journal of Philosophy* 75 (6): 308–25. Reprinted in L. P. Pojman (ed.) (2001) *Environmental Ethics: Readings in Theory and Application*, 3rd edn (Belmont, CA: Wadsworth), as well as Shafer-Landau (ed.) (2013) *Ethical Theory: An Anthology* (Oxford: Blackwell). A lucid and concise defence of biocentrism.
- Sandler, R. (2012). *The Ethics of Species: An Introduction* (Cambridge: Cambridge University Press). Rigorous and crystal clear.
- Taylor, P. (1986). *Respect for Nature: A Theory of Environmental Ethics* (Princeton: Princeton University Press). Sets out a tremendously influential biocentric theory.

4. Questions of Value

To say that an entity has moral standing is to say that it is possible to have one or more direct moral duties to it. The only entities to which one can have such duties are those which have goods of their own. If nothing could be either good or bad for an entity, then it cannot have such a good and so it cannot have moral standing. In the first two chapters, we saw that there are compelling reasons to think that all sentient entities, whether human or nonhuman, have moral standing. In chapter 3, we examined some reasons for thinking that the same holds true of all living entities – not just pumas and pelicans, but also tapeworms, tulips and toadstools. Ecosystems and biological species are, however, a different matter. There are, we saw, good reasons to think that such ‘entities’ lack moral standing (cf. Schönfeld 1992).

Although this might seem a disappointing result, it is crucial to realize that questions about moral standing are not the be-all and end-all of environmental ethics. To say that an entity has moral standing is, as we saw, to say that it is possible to have duties to it, but it is to say nothing about the strength of those duties. An entity with moral *standing* could be of low moral *significance*: we might have duties to it, yet those duties might be very weak and easily overridden. For example, if biocentrists are right, then it is possible to have direct moral duties to tapeworms; yet, in the vast majority of situations, those duties are likely to be so weak as to be negligible. *Value* is yet another matter. Some entities that have moral standing are of very low value (think tapeworms again). Conversely, some entities that lack moral standing are of extremely high value: there are good reasons to treat them well, even though they’re not the sorts of things which one could *wrong* or to which one could *owe* anything.

Some entities that lack moral standing are of value because they are useful. Take pencils. Nothing can be either good or bad for a pencil, so pencils do not have moral standing. Even so, they are useful: they are of *instrumental value* to us.¹ And, of course, the same may be said of all sorts of other entities that lack moral standing, from roofs and roads to dinner plates and electric heaters. Some such entities will, it is true, also be valuable for their own sakes; they will also have a kind of *non-instrumental value*.² So, for instance, a dinner plate may well be useful. But if it is a treasured heirloom

¹ To say that something is useful is, I take it, to say that it has instrumental value. Not everyone would agree. For instance, Roger Crisp maintains that “‘instrumental values’ are not in fact values at all, but merely non-valuable means to things which are valuable” (1998: 477).

² I have chosen to use the phrase ‘non-instrumental value’ rather than the notoriously ambiguous ‘intrinsic value’. For a very clear explanation of the many different senses of ‘intrinsic value’, see O’Neill (1992).

it will not be of value *merely* because it is useful. It will also have some measure of noninstrumental value. Nonetheless, whether or not pencils, roofs, roads, dinner plates, electric heaters and other such entities are of noninstrumental value, they all have some measure of instrumental value. In short, they are all of value because they are useful.

The same holds true of many *natural* entities that lack moral standing. Take landscape features such as lakes or caves. It is hard to see how one could have any direct moral duties to them. It is hard to see what it could mean for a lake to be wronged, for instance. Nonetheless, some such entities clearly have instrumental value for human beings. We'll consider whether any of them are also valuable for their own sakes below; but, for the moment, all we need note is that many of them have some degree of instrumental value.

In the next section, we will examine one conceptual framework that is often used to think about nature's instrumental value for human beings – namely, the *ecosystem services framework*. In the second section of this chapter, we will ask whether the natural world has value in itself, and not simply because it is valued by human beings.

Ecosystem services and the value of places

Ecosystems provide human beings with a wide range of services. They can supply fuel, firewood and other useful products (*provisioning* services). They can provide *regulating* services by helping to keep ecological cycles in check (as vegetation regulates the water cycle, for instance). They can supply the *supporting* services, such as seed dispersal, on which all other ecosystem services depend. They are even said to provide various *cultural* services – by inspiring us, for example, or fortifying our resolve, or honing our aesthetic faculties, or supplying us with religious symbols, or shaping our sense of who we are.

Over the last few decades, the ecosystem services framework has become extremely popular – so much so that it has begun to ‘crowd out’ other ways of conceiving nature's value (Norton and Noonan 2007: 666). One can see why. The idiom of ecosystem services allows environmentally concerned people to express themselves in a way that makes sense in the context of the neoliberal economic and political systems which hold sway in most industrial and post-industrial nations (Peterson et al. 2009: 114). And it is not just a useful rhetorical device: in many cases, the framework can be used to show that it really does make economic sense to protect nature.

The mangroves along the coast of the Gulf of Thailand are a case in point. Although mangroves are good places for shrimp farms, the sludge and saline water the farms generate cause a great deal of environmental harm and damage. Still, at first sight, the conversion of mangroves into shrimp farms would seem to make financial sense. The farms provide work for local people and income for numerous local economies; indeed, shrimp farming plays a key role in the national economy of Thailand. However, once all the ecosystem services provided by mangroves are taken into account, matters are

not nearly so clear. For studies have revealed that mangroves provide a wide range of extremely valuable – and, moreover, *financially* valuable – ecosystem services. Amongst other things, they support offshore fisheries by providing nursery grounds for marine life, they help to control coastal soil erosion, and they provide local communities with protection from storms, as well as with various products, ranging from firewood to honey. Taking all these services into account, it is clear that it makes economic, and not just ecological, sense to preserve mangroves. According to one study, the net value of Thai shrimp farms is in the region of US\$1,078 to 1,220 per hectare. By contrast, the net value of mangroves, taking just three of their many ecosystem services into account, is approximately US\$10,158 to 12,392 per hectare (Hanley and Barbier 2009: 222–6).³

The ecosystem services framework can, therefore, be used to support environmental causes. More than that, it *has* been employed to good effect in a number of cleverly designed and well-executed studies.⁴ But it is important not to become so enamoured of it that one forgets its limits. For the framework is dangerously seductive. One begins by acknowledging that whether or not the natural world has some degree of non-instrumental value – whether or not, in other words, it is valuable for its own sake – it supplies us with a wide range of material benefits: not just obvious ones like food and firewood, but also ones, such as water purification and carbon sequestration, which are easier to miss. Then, having carefully catalogued and quantified those benefits, one moves on to note that the natural world also provides us human beings with various non-material benefits, in the form of aesthetic pleasure, for instance, or a sense of place. Nature, one concludes, supplies us not just with supporting, provisioning and regulating services, but with a range of valuable cultural services too. Yet once one has walked this far down the ecosystem services road, it is all too easy to forget one's initial acknowledgement of nature's noninstrumental value and fall into the trap of assuming that *all* the many and various ways that nature matters to us can be framed in terms of the ecosystem services it provides. But that would, I believe, be at least one step too far.

First, there is that distracting reference to *ecosystems*. Of the many benefits we derive from the natural world, not all are provided by ecosystems. Consider the various non-material benefits that we are said to obtain from the providers of cultural ecosystem services. As Thomas Kirchoff (2012) observes, when people derive spiritual, aesthetic and other sorts of 'cultural' benefit from the natural world, they are typically responding to certain directly perceptible things, places and events – such as daffodils, upland valleys or the coming of spring – rather than to ecosystems. Poets, for instance, do not rhapsodize about ecosystems; landscape painters do not paint them. If a woman

³ To be precise, these figures express what economists call 'netpresent values'. Explaining the meaning of that term would take us too far off track (for a brief account, see Tennent 2008: 165–7). Nonetheless, the point should, I hope, be clear.

⁴ See, e.g., Kenter et al. (2011). For a sympathetic introduction to the ecosystem services framework, see Juniper (2013).

is moved by her visit to the valley of the Somme in northern France, where in 1916 1 million people were either killed or wounded, she is not responding to an ecosystem or to any other sort of biological entity. She is responding to a place that is distinguished from other places by its peculiarly terrible history.

So one questionable feature of the ecosystem services framework is its emphasis on ecosystems. A second is its one-sided focus on nature's value for *human* beings. Granted, not all of those who seek to protect nature consider this anthropocentrism a problem. Take advocates of what has become known as the 'new environmentalism'. In their view, traditional environmentalism, with its central goal of protecting nature for nature's sake, has reached the end of its road. If we are to make any real progress in protecting nature, then we will need to persuade businesspeople and policymakers to support environmental causes – and if we are to do that, then we will have to appeal to the sorts of considerations that matter to them (see, e.g., Tercek and Adams 2013: xvii–xviii). So, the new environmentalists urge, we will need to argue that nature should be protected for anthropocentric reasons – because, for instance, it provides us with so many financially valuable ecosystem services.

Unsurprisingly, those environmental thinkers who cleave to more traditional ideals have disagreed. Take the journalist and nature writer Simon Barnes, for instance. In *How to be Wild*, he reflects on the claim that we ought to value rainforests because they are so useful – and so potentially useful – to us. Now that, he concedes, is a very reasonable claim. He freely acknowledges that rainforests are immensely useful to us – as, amongst other things, sources of medicines and absorbers of atmospheric carbon dioxide. But then, having mentioned a few of these valuable services, he strikes a sceptical note:

do you know what? It's all bollocks so far as I am concerned. I don't care whether the rainforest is good or not. If the rainforest was positively bad, I'd want to see it conserved. Yes, it's true all right: the what's-in-it-for-me argument for conservation stands up to the most scrupulous examination: strong, powerful, utterly persuasive. And yet I reject it absolutely. I am not even terribly interested in it. Perhaps I should be, but I really don't give a stuff. When it comes to the rainforest, when it comes to every other aspect of the wild world, I don't really care whether it's good or bad, whether it's profitable or not profitable, whether it's advantageous to humans or disadvantageous. I don't care about what's in it for me. I just care about what's in it. (Barnes 2007: 234; cf. McCauley 2006)⁵

For Barnes, as for Attfield, Callicott, Rolston and just about all the other environmental thinkers we have come across so far, nature is worth protecting for its own sake, and not simply because it is useful to us.

⁵ 'Bollocks' is British English slang. It's a slightly rude way of saying 'nonsense'.

A third set of issues concern *pricing*. Admittedly, there are often good reasons to price ecosystem services. To price something is to express its value in a way that makes sense to fiscally minded decision makers. Furthermore, as we saw above, the ecosystem services framework can be used to price benefits, such as those resulting from mangroves, which have traditionally been underpriced – and that, again, is no bad thing. Nevertheless, the practice of pricing ecosystem services raises a number of difficulties. Consider, first, the question of *how* they are to be priced (see, further, Hanley and Barbier 2009: ch. 9). It is true that some ecosystem services already have market prices (think, for instance, of the supply of timber – a provisioning service). But a service may still be priceable, even when it is not directly associated with any actual market. Take the cultural services supplied by a beautiful stretch of moorland. Even if there is no actual market for them, one might nonetheless be able to gauge their prices by, say, assessing the distribution of house prices in the area (an appeal to people’s *revealed preferences*). Alternatively, one could postulate a hypothetical market (a practice known as *contingent valuation*). So one could ask concerned parties how much they would be willing to pay in order to preserve the moorland’s stark beauty; or how much compensation they would require if, against their wishes, that beauty were to be marred by the construction of a radio mast or some other eyesore.

Each of these pricing methods has its limits. Contingent valuation, in particular, is vulnerable to several forceful objections. First, the preferences of future people cannot directly be gauged by ‘willingness to pay’ surveys and the like, and so may be undervalued or even entirely overlooked. Second, poor people tend to express a lower willingness to pay (or to accept compensation) than those who are rich, which can lead researchers to underestimate the strength of their preferences about the retention or loss of ecosystem services (see, further, O’Neill et al. 2008: 55–6). In addition to this, the use of contingent valuation is complicated by the fact that some people who care greatly about nature think it inappropriate – disrespectful, sometimes even sacrilegious – to express its value in monetary terms. As a result, they may simply refuse to say how much they would be willing to pay for a particular ecosystem service, or they may name an infinite sum, thereby ruining the researchers’ calculations. In many instances, one can understand their reluctance to play the economists’ game. For to put a price on a thing is not just a way of expressing how much one values it in quantitative terms; it also expresses one’s attitude to it. And to name a price is to imply that there is some finite sum of money that one would be willing to accept in exchange for whatever valued thing one is considering. In some cases, doing this is incompatible with respecting the thing in question. This is obviously the case if the ‘thing’ is a family member or a friend. (What price would you put on your mother, for instance, or your best friend?) Many people feel that it would also be disrespectful to put a price on the services nature provides.⁶

⁶ See, further, Jamieson (2008: 18–19); O’Neill et al. (2008: 84). For a rather different take on these issues, see Belshaw (2001: 58–9).

To be fair, these concerns about pricing do not militate against all attempts to evaluate ecosystem services. For instance, many of those who have adopted the ecosystem services framework have sought to obviate the difficulties involved with contingent valuation (see, e.g., Kenter et al. 2011). Some, moreover, have freely conceded that not all ecosystem services can be priced (see, e.g., Chan et al. 2012: 14). Be that as it may, while adopting the ecosystem services framework does not require one to hold that all such services can be priced, it does commit one to accepting that all the various benefits we derive from the natural world can be conceived of as services. And there are reasons to think that any such service-focused framework will be, if not inherently flawed, severely limited.

To introduce this fourth line of criticism, consider the example of a farmer, Jane, whose family has worked a certain area of upland for generations. Ryland's Fell provides Jane with more than just land on which to raise sheep. Different locations remind her of events in her own life, or in the lives of friends or family members. That, she will think, is the hedge my grandfather planted; there is the depression where John flipped his quad bike; down there is the spot that tends to turn into a bog when it rains. Jane's life and work is bound up with Ryland's Fell. The Fell, she says, is part of who she is.

Some of the benefits Jane obtains from the Fell could be described as cultural. Amongst other things, the place enables her to continue living the life she's grown accustomed to living. But that benefit cannot be adequately conceived in terms of the provision of ecosystem services. This, I would suggest, is not simply because Ryland's Fell is a *place*, rather than an *ecosystem*, but also because the relevant benefit cannot be adequately conceived in terms of the provision of a *service*. To see why, think about what it means for something to have value as a service-provider. If X is of value because it provides a service, then it is of instrumental value: it is of value as a means to some end. But if X is of *instrumental* value, then it must be possible, at least in principle, to specify the relevant end without referring to X. To illustrate, suppose that Maria decides to employ Mr Blue, rather than either Miss Red or Mr Green, to clean the windows of her flat. In this instance, the relevant end (namely, that the flat's windows get cleaned) can be specified without referring to Mr Blue. So it makes sense, in this case, to think of Mr Blue as being of instrumental value to Maria as a means to the end of her flat's windows being cleaned. And it therefore makes sense to think of Mr Blue as a service provider, and of Miss Red and Mr Green as alternative service providers. The case of Jane and Ryland's Fell is, however, entirely different. As we saw, the Fell is of value to Jane because, amongst other things, it enables her to continue living the life to which she has grown accustomed. Yet it is not a means to that end, for one could not provide anything even approaching a satisfactory description of Jane's life without referring to the place in which she lives. So, although Ryland's Fell is of value to Jane, it is not of value to her simply because it provides her with a valuable *service*. It is of *constitutive* value: it has value for her not because it is an effective means to some end, but because it is part of a whole which is of value to her. Ryland's Fell is of value to Jane because it is integral to or partly constitutive of her way of life.

That argument needs more work – but suppose that its conclusion is true. Suppose that Ryland’s Fell really does have constitutive value for Jane because it is partly constitutive of her way of life. How does that fact bear upon the question of how *we* should regard and treat the Fell? Does the fact that the place has constitutive value for *Jane* entail that it has some sort of value for *us*?

The answer will, I suspect, depend on the nature of Jane’s way of life. Suppose that her affection for Ryland’s Fell goes hand in hand with a xenophobic wish to exclude those she regards as outsiders. If that were the case, would the fact that the place is of constitutive value for Jane provide *us* with any reason to value it? I suspect it would not. Granted, we might value the Fell – but not because it is partly constitutive of Jane’s xenophobic way of life. By contrast, if we judge Jane’s way of life to be on the whole a good way of life, then we might think that the fact that the Fell has constitutive value for her is something that provides us with a reason to protect or in some other way look after the place.

Whatever the answers to these questions, it is clear that appeals to the constitutive value of places need to be examined with a critical eye. One can love a particular place without wishing to exclude ‘outsiders’ from it, of course. But even those of us who dislike xenophobia might nonetheless be guilty of naivety in our thoughts and feelings about the places we love. We might care greatly about our local wood or meadow; yet we might give very little thought to those places that are logged, mined and polluted so that we can continue to live the consumerist lives we have grown used to living. We might be strongly attached to the places we know and love, and yet coldly detached from what is happening in those, poorer parts of the world that are exploited in order to provide us with cheap goods (see, further, Plumwood 2011).

The task, then, is to combine a recognition of the constitutive value of places with an awareness of the dangers of prejudice and injustice. I will not try to do this here. In this section, I have merely tried to show that not all those places that are of value to us are of value to us as service providers. The world we inhabit matters to us in many different ways. If we restrict ourselves to thinking in terms of service provision, we will miss a great deal.

Objectivity and subjectivity

Britta likes tomato ketchup; her husband, Jeff, does not. She says that tomato ketchup is lovely, while Jeff thinks that the world would have been a better place had the disgusting stuff never been invented. But now ask yourself what ketchup is like *in itself*, independent of its relations to any judging subjects. Is it lovely or nasty? Plainly it is neither. Although ketchup might seem lovely to some people, it is in itself neither lovely nor unlovely. Its loveliness (or unloveliness) is a merely subjective matter: it reflects nothing more than our tastes.

Projectivists hold that what applies to loveliness holds true of all values.⁷ Things in themselves, independent of their relations to valuing subjects, are, in the projectivist's opinion, value-free. Their value is projected onto them by valuing subjects, as coloured ink is sometimes applied to black-and-white photographs. In David Hume's apt phrase, the world is gilded and stained 'with the colours borrowed from internal sentiment' (2004 [1751]: 135). And, according to projectivism, this holds true whether things are taken to have a very high value or very little value at all. Either way, whatever value (or, indeed, 'disvalue') they have has its ultimate source in us.

This is thought to hold true, moreover, of the value of natural things, places, processes and events. A projectivist can consistently hold that, say, a particular natural thing has immense value. She could even maintain that it is valuable for its own sake and not merely on account of its usefulness (or potential usefulness) for human beings.⁸ Nonetheless, she will add that any value we see in nature has its ultimate source in us.

In light of these thoughts, one might be tempted to endorse the following claim:

A. Nature has value only if it is valued by humans.

(A) is very implausible, however. Imagine the world of the early Jurassic period. True, there are as yet no flowers or birds, but it is nonetheless full of mountains and forests and remarkable creatures, such as lumbering sauropods and swooping, leathery-winged pterosaurs. Yet, contrary to *The Flintstones*, humans are yet to evolve. So if (A) is true, then the world of the early Jurassic must have been entirely devoid of value. Indeed, if (A) is true, then it was not until a few hundred thousand years ago, when *Homo sapiens* appeared, that nature came to have value.

Holmes Rolston III calls this the 'light-in-the-refrigerator theory of value', for, according to it, values only 'light up' when humans are actually present, rather like the light in a refrigerator only comes on – or so we assume – when the door is opened (2005: 76). Those who (like Rolston) are inclined to reject that notion but who (unlike Rolston) wish to hold onto projectivism may wish to endorse the following, modified claim:

⁷ Different forms of projectivism apply to different domains of value. For instance, one form might apply to aesthetic values but not to moral ones. In the following, I focus on global projectivism: the notion that *all* values are projected.

⁸ If that sounds odd, consider the example of a beautiful painting, such as Cézanne's 1887 *Mont Sainte-Victoire*. The painting is not valuable simply because it attracts tourists to exhibitions and the like. It is valuable for its own sake, and not simply for its uses. Yet it would seem that the painting only has this non-instrumental value because it matters to beings, like us, who are capable of appreciating beauty. So even though *Mont Sainte-Victoire* has non-instrumental value, that value would seem to be *anthropogenic* in origin. Environmentally friendly projectivists, such as J. Baird Callicott, maintain that the same holds true of many natural things, processes, places and events (see, further, Callicott 1989: 133–4).

B. Nature has value only if it is (or would be) valued by humans.

According to this *dispositional* account of value, the Jurassic world had value if and only if it would have been valued by human beings, were any present. Granted, not just any human valuers will do. They would have to be competent valuers, rather than, say, pathologically insensitive. What is more, conditions would have to be such as to allow them competently to evaluate the world in which they found themselves. So they could not be on the run from rampaging dinosaurs, for instance. Hence any plausible dispositional account of nature's value would need to be more detailed than (B). Still, (B) gives the general picture: if competent, suitably placed humans would have valued the Jurassic world, had they been present, then that world had value.

Some, however, will think that this focus on *human* valuers is unnecessarily anthropocentric. There is, they will contend, no need to appeal to possible human valuers to justify the claim that the Jurassic world contained value. It had value because it had value for its various nonhuman denizens.

These thoughts point in the direction of a third account of nature's value:

C. Nature has value only if it is (or would be) valued.

On this account, the Jurassic world had value not simply because it would have been valued, were any (competent, suitably situated) *humans* present, but also because it was in fact valued by the various *nonhuman* subjects, such as *Diplodocus* and *Stegosaurus*, that inhabited it. By the lights of (C), then, one of the reasons the vast evergreen forests of the early Jurassic had value is because they were in fact valued, as sources of food and shelter, by the various dinosaurs and other nonhuman beings that lived in them. On this account, the forests of the Jurassic period had instrumental value for a variety of nonhuman beings.

One does not need to picture a prehistoric world to grasp the point. Recall the (fictitious) example of Ryland's Fell. While the Fell will have value for those humans who, like Farmer Jane, call it home, it will also have instrumental value for a range of nonhuman valuers: the growing tips of heather plants will be of value to red grouse; stretches of blanket bog will provide the nesting grounds for – and will therefore be of value to – dunlin and other wading birds; grass stems will be of value to field voles, as field voles, in turn, will be of value to predators such as short-eared owls. Maybe, indeed, the place could be integral to the lives of – and thus of constitutive value to – some of its nonhuman inhabitants in something like the way that it is integral to the life of – and so of constitutive value to – Jane.

These sorts of values can be specified without explicit reference to human concerns. It is, for instance, a biological fact that the growing tips of heather plants are of value to red grouse; it is, likewise, a biological fact that grass stems are of value to field voles: what humans may think or feel about the matter is of no account. As Rolston

(2003: 146) puts it, such values are ‘objectively there, discovered not generated by the valuer’.

That is, I think, true but misleading. It is true that certain things (such as heather) have value for certain nonhumans (such as grouse), and that these relations can be specified without explicitly referring to the needs, interests, attitudes or perspectives of human beings. Yet this result is less significant than it might appear. For even if it is accepted that a certain natural entity has objective value for certain nonhumans, it is a further question whether the entity in question is of value in any sense that exerts a moral pull upon us humans. It is, after all, one thing to establish that heather has objective value for grouse, but it is quite another to show that what is of value to grouse is of value in any sense that makes a claim on us humans. And to show that heather, or indeed anything else, has value in the latter sense, one needs to consider the sorts of things – truth, love, beauty, freedom and so forth – that matter to beings like us.

For those who worry that that last suggestion is still too anthropocentric, there might seem to be just one option left:

D. Nature has value in a sense that can be specified without any reference to actual or possible valuers.

In *Philosophical Investigations*, Ludwig Wittgenstein wrote that ‘philosophical problems arise when language *goes on holiday*’ (2009 [1953]: 23; emphasis in original). Part of his point was that such problems are not, as philosophers like to say, deep. They are the result of using words out of context. Now, whether or not this is true of all philosophical claims, it certainly seems to be true of (D). To suppose that something can have value in a *strongly objective* sense – in a way, that is, that can be specified without any reference to a valuer – is not, I think, to have had some deep insight into the nature of things. It is simply to have misused the term ‘value’.

To recap: although I have acknowledged that not all valuers are human, I have also maintained that the notion of value makes no sense when it is entirely separated from the idea of a valuer. Suppose that I am right. What follows? Well, it would, I believe, be a mistake to think that we must therefore fall back to the projectivist’s notion that subjects project value onto an intrinsically value-free world. For it is a false dichotomy to suppose that values must be either strongly objective, in the sense specified above, or else projected onto an intrinsically value-free world.

Consider what it means for something to be a world. Clearly, it cannot be an undifferentiated mush. It must be articulated; one must be able to tell one thing from another. But on what basis is any world thus carved up? As one would expect, opinions differ; however, it seems to me that part of the answer must refer to the needs, interests, attitudes and perspectives of those beings for whom the world in question is a world. For instance: my world, the one I am inhabiting as I type these words, contains a

number of things – amongst others, a mobile phone, an acoustic guitar and a copy of Donna Tartt’s novel *The Secret History*. However, it is unlikely that reality in itself – if such an expression makes sense – is carved up into such things. No, to explain the existence of phones, guitars and novels, one must refer to the interests of beings who, like you and me, are interested in communicating with one another, making music and reading stories. To a being with a very different set of basic interests, a different set of things would reveal itself. For example, a being that had no conception of music but an interest in making fire might look to the spot where I see a guitar and see seven entities: a wooden box with six (frustratingly non-flammable) metal wires attached.⁹

The basic thought is well expressed by David E. Cooper: ‘There can be no question of first describing how the world’s contents are and then placing them on a scale of values: for there would be no world of facts to describe in the absence of projects that matter to us’ (1990: 91). That, admittedly, is a controversial claim, and defending it is no easy task (Cooper, for his part, draws on the writings of Merleau-Ponty and other existential phenomenologists to develop his case). If, however, Cooper’s claim is true, then the dichotomy set out above is false. The objectivist is wrong to suppose that values are strongly objective in the sense that they can be specified without any reference to actual or possible valuers. But the projectivist is also wrong to suppose that values are projected onto an intrinsically value-free world, since the idea of an intrinsically value-free world makes no sense. Against projectivism, nothing could count as a world unless it is, so to speak, lit up in terms of what matters to a being for whom it is a world. And this holds true whether one is referring to a world of plastic and glass or to one of roots, leaves and soil.

Summary

The concept of *value* must be distinguished from that of *moral standing*. Some entities that have moral standing are (arguably) of low value. Some that lack moral standing are of immense value (the sun would be one example). It is standard practice in many environmental organizations to assess the value of ecosystems on the basis of the *ecosystem services* they provide to human beings. Those ecosystems that yield vital services are held to be of high instrumental value; the value of those that provide less important services is deemed to be lower. Yet this practice is vulnerable to several criticisms. Its *anthropocentrism* is a concern, for instance. Moreover, in some of those cases when nature is of value to us, it does not seem to be of value to us as a service provider. For example, when a particular natural place is integral to a person’s life, it is not just of instrumental value to her; it is not of value to her merely because it

⁹ The point applies to more than just artefacts. The sun, for instance, does not disclose itself to us as a bare thing, to which we then attach value and meaning. To explain why it discloses itself to us at all, one must refer to the fact that we are diurnal mammals – creatures, that is, who need light and warmth. See, further, James (2009: ch. 1).

provides her with one or more services. It would seem to be of *constitutive* value to her.

A different set of issues concerns the *objectivity* of nature's values. On the face of it, there would seem to be just two basic options: either those values are objective ingredients of nature as it is 'in itself' or they are projected upon nature by valuing subjects. Some writers (such as Holmes Rolston III) choose the former option; others (such as J. Baird Callicott) opt for the latter. Both positions are, however, open to question.

Further reading

- O'Neill, J. (1992). 'The Varieties of Intrinsic Value', *The Monist* 75 (2): 119–38. Reprinted in various anthologies, including D. R. Keller (ed.) (2010) *Environmental Ethics: The Big Questions* (Oxford: Wiley-Blackwell), and A. Light and H. Rolston III (eds.) (2003), *Environmental Ethics: An Anthology* (Oxford: Blackwell). Explains the various meanings of 'intrinsic value', before appealing to Aristotle's ethics to try to bridge the gap between 'good' and 'ought'.
- Rolston, H., III (1994). 'Value in Nature and the Nature of Value', in R. Attfield and A. Belsey (eds.) *Philosophy and the Natural Environment*, Royal Institute of Philosophy Supplement 69 (Cambridge: Cambridge University Press): 13–30. Reprinted in D. R. Keller (ed.) (2010) *Environmental Ethics: The Big Questions* (Oxford: Wiley-Blackwell) and A. Light and H. Rolston III (eds.) (2003), *Environmental Ethics: An Anthology* (Oxford: Blackwell). One of the most respected and influential figures in the field argues that nature's value does not depend on its being valued.
- Sagoff, M. (2008). *The Economy of the Earth: Philosophy, Law, and the Environment*, 2nd edn (New York: Cambridge University Press). Several essays in this superb anthology examine the relations between economic and moral values.

5. How Should One Live?

Imagine a man – call him Bob – who is very much aware of the benefits he derives from the natural world. He values the bees that buzz around his garden because he knows that they pollinate his flowers – and that, he realizes, is a valuable ecosystem service. He values the stand of silver birches at the end of his garden because he knows that they protect his property from the harsh northerly wind. He values the bleak hills that surround his home because of the pleasure they give him on Sunday afternoon strolls. He admits that he isn't sure whether he has any duties to nonhuman entities or whether, indeed, any of them have non-instrumental value. But he quickly adds that nature is, in any case, an immensely valuable store of natural capital.

It seems to me that Bob is overly concerned with what he can get out of the natural world. Don't get me wrong: natural entities and processes *are* immensely useful. They really do provide us with a variety of important benefits. But to value them for their uses alone – well, that seems to indicate a flaw in one's character. Bob would be a better man – certainly a more admirable man, maybe a more fulfilled one too – if he could relinquish his preoccupation with the usefulness of things and take what Iris Murdoch (1971: 83) calls a 'self-forgetful pleasure' in bees, birch trees and wind-blasted hills. He would be a better man if he could value at least some such things as ends and not simply as means.

Not everyone will think that a fair assessment. But for present purposes there is no need to come to a definite conclusion about whether Bob is a good man. It is enough to note that in evaluating his character we are adopting a distinctive approach to moral philosophy – that of virtue ethics.

Environmental virtue ethics

The central themes of virtue ethics may be introduced by way of contrast with those of consequentialism and deontology. Both consequentialists (like Singer) and deontologists (like Regan) are primarily concerned with the evaluation of actions and kinds of actions. The former typically hold that the moral worth of any action – its status as obligatory or whatever – depends solely on what states of affairs it brings about. Roughly speaking, if an action has good consequences then it is deemed to be morally right; if its consequences are bad then it is deemed to be morally wrong. Deontologists, by contrast, maintain that the moral worth of some actions does not

depend entirely on their consequences, but on other considerations, such as whether the agent acted for the sake of duty.

Virtue ethicists, for their part, are not wholly unconcerned with the evaluation of actions; however, their primary interest is in the evaluation of *character*. Their main aim is to establish what character traits would be possessed by an exemplary person.

Character traits, in this context, are conceived as dispositions to think, feel and act in certain ways. Take compassion, for instance. A compassionate person will in certain conditions be moved by the suffering of others and want to see it alleviated. This desire will, moreover, tend to motivate her to act, and when she tries to alleviate suffering she will feel good (rather than, say, resentful) about doing so. This is not to say that a compassionate person will *always* be moved by suffering when she encounters it: people sometimes act out of character. It is to say that she will *tend* to exercise compassion when circumstances demand. The callous person, by contrast, will tend to remain unmoved by the suffering of others, and the cruel person may, indeed, delight in it.

Some (e.g., Doris 2002) have expressed doubts on the issue; however, it is generally accepted, by philosophers and non-philosophers alike, that character traits exist. It is widely accepted that some people are truthful, while others are mendacious; that some are witty, others dull; that some are prodigal, others thrifty – and so forth. Many of these traits will seem commendable; many, that is, will seem to qualify as *virtues*. Others will appear to be *vices*. Furthermore, there will in many cases be little or no disagreement about which traits count as virtues and which as vices. Few people think that it is a good thing to be mendacious or cruel, for instance. In some cases, however, opinions will differ. For example, while Aristotle lauded the pride (*megalopsuchia*) of the man who ‘thinks himself worthy of great things’, virtue ethicists who have been inspired by Buddhism tend to praise humility (see Aristotle 1980: 67; Cooper and James 2005: 91– 3). Similarly, not everyone would endorse the views expressed by Gordon Gekko, the unscrupulous business tycoon in Oliver Stone’s movie *Wall Street*. Environmental thinkers, in particular, are likely to balk at his claim that ‘Greed, for lack of a better word, is good.’¹

In some instances, then, different people will have different opinions about which character traits are virtues. To resolve such disagreements, virtue ethicists have provided certain general criteria which must be satisfied if a trait is to qualify as a virtue.

On one popular conception, a virtue is a character trait that one must have if one is to flourish as a human being. Thus Aristotle argued that if a man is to flourish – if his life, taken as a whole, is to qualify as a *good* life – then he must possess virtues such as pride, courage and temperance.² To be sure, Aristotle does not endorse the Stoics’ claim that virtue is *all* that is needed to live such a life. He concedes that virtuous

¹ *Internet Movie Database, Wall Street, Quotes* (www.imdb.com/title/tt0094291/quotes).

² ‘Man’ is intentional. Expressing the prejudices of his age, Aristotle had a very low opinion of the capabilities of women, children and those he called natural slaves.

people are sometimes just plain unlucky (his example is that of Priam, the noble but unfortunate King of Troy). But he insists that one cannot flourish unless one possesses the virtues. So if, as he maintains, courage and temperance are virtues, then someone who is either excessively cautious or intemperate cannot be flourishing.

Aristotle's theory of virtue ethics had a great impact on the Greek and Roman intellectual worlds, and in the Middle Ages it came to form the basis for Thomas Aquinas's hugely influential theological ethics. In the Enlightenment, it was briefly eclipsed by the rise of new deontological and utilitarian approaches, developed by thinkers such as Kant and Bentham. Yet in the second half of the twentieth century, virtue ethics rose again – a revival that is usually traced back to Elizabeth Anscombe's influential 1958 paper, 'Modern Moral Philosophy'. Indeed, many modern virtue ethicists have followed Aristotle's lead in holding that a virtue is a character trait that one must have if one is to flourish as a human being. In other words, many virtue ethicists have endorsed eudaimonism (from *eudaimonia*, the ancient Greek word for a good life).

Not all virtue ethicists are eudaimonists. Some hold that a character trait can count as a virtue not because of its connection with human flourishing, but for some other reason. One such thinker is Christine Swanton. According to Swanton, a character trait is a virtue if and only if it is a disposition to respond in a sufficiently skilful manner to certain demands of the world. These demands can have their source in the agent (e.g., 'the bodily pleasures which are the focus of temperance') or outside the agent (e.g., 'human beings, property, money, or honours'). They can take the form of certain circumstances (e.g., 'the dangerous situations which are the concern of courage'), abstract items (e.g., 'knowledge or beauty') or physical objects (such as 'art works or cultural icons') (Swanton 2003: 20). Swanton's account is complicated, and there is not enough space to detail it here. For now, it will suffice to note that she insists, contrary to the eudaimonist, that certain virtues – she tentatively suggests 'a trait of persistence in the face of relentless opposition' – may tend to be 'inimical to agentflourishing' (2003: 83, 294).

It is important to distinguish between the concept of a *virtue ethicist* and that of a *virtuous person*. Virtue ethicists are not always virtuous persons, and virtuous persons are often not virtue ethicists. It is particularly important to distinguish between (a) the virtue ethicist's question of what makes a character trait a virtue, and (b) the question of what sorts of considerations will typically motivate a virtuous person. A failure to attend to this distinction can generate confusion. So, for example, forgetting the distinction between (a) and (b), someone might wonder whether eudaimonism entails that the virtuous life must be marked by a selfish preoccupation with one's own flourishing. Yet once the distinction is recognized, the worry reveals itself to be groundless. Although eudaimonists maintain that a virtue is a character trait that one needs if one is to flourish, they can consistently add that virtuous *persons* will be motivated by considerations other than self-interest. Suppose, for instance, that benevolence qualifies as a virtue because one must be benevolent if one is to flourish. Someone who endorses this variety of eudaimonism can maintain, without inconsistency, that the benevolent

person will be motivated to help others not because she believes that doing so will enable her to flourish, but because she sees that others need help.

This example should also dispel the notion that the virtue ethicist is committed to the implausible view that a virtuous person can only be motivated by aretaic considerations – i.e., considerations pertaining to virtue and vice. For sure, in some instances they might be so motivated. For example, a just person, one who has the virtue of justice, may be moved to act by thoughts about what justice requires. But in many cases virtuous persons, acting in character, will be moved by non-aretaic considerations (Williams 1985: 10). So, as we saw, a benevolent person does not act for the sake of benevolence. She acts for the sake of others (cf. Hursthouse 1999: 128).

Not all virtue ethical considerations pertain directly to our relations with the natural world: some virtues and vices primarily concern our relations with other humans. If, say, truthfulness is a virtue, then it is one that is for the most part exercised in inter-human relations. The same holds true of wittiness and tact. Even so, many candidate virtues and vices do bear upon our relations with the nonhuman world. For example, a compassionate person will care about the suffering of at least some nonhumans. A woman who is disposed to feel wonder at wonderful things is unlikely to remain unmoved by Carlsbad Caverns or the Victoria Falls. A gentle person will tend to handle certain artefacts with care; but, similarly, she is unlikely to spend her weekends dynamite fishing or tearing up sand dunes in a fat-wheeled buggy. As Ronald Sandler argues in his excellent book on the topic, there would seem to be a number of ‘environmental virtues’, pertaining to sustainability, environmental activism, communion with nature, environmental stewardship and respect for nature, amongst other things (2007: 48–52, 72).

Buddhism and compassion

The best way to get to grips with environmental virtue ethics is to consider some candidate environmental virtues. I begin with compassion – or, to be more precise, compassion as it has been conceived within Buddhist traditions.

In order to understand what Buddhists think compassion is and why they think it is a virtue, one needs to understand something about Buddhist philosophy in general. And a good place to begin, in trying to do this, is with the Buddha’s statement that life is shot through with what, in the ancient Indian language of Pali, is called *dukkha*.

What does it mean to say that life is marked by *dukkha*? In English, the word is conventionally rendered as ‘suffering’; however, that translation is not accurate, since *dukkha* is supposed to involve more than just physical and mental anguish. In human beings, at least, it is also thought to involve a subtle and pervasive state of dissatisfaction and restlessness. The person so afflicted – me, probably you and, if the Buddha is correct, pretty much everyone else as well – is dissatisfied with how things are and wishes them to be otherwise. As such, he is constantly acted upon by cravings:

pushed away from those things he wants to avoid, such as old age, sickness and death, and pulled towards those things he wants to have, such as fame, youth, beauty, power and comfort.

According to the Buddha, *dukkha* can be overcome by following a set of practices known as the Eightfold Path. There is no need, here, to describe the various elements of this path. For present purposes, just two of them are salient. First, to progress along the Buddhist path of practice is gradually to take up a different relation to those things that once seemed to be the cause of one's suffering. So, although someone who has made good progress along the Buddhist path may well experience the bare sensation of toothache, that sensation will not set in train the series of anxious thoughts and feelings – about impending visits to the dentist and the like – that constitute *dukkha*. She will feel the sensation, but she will not, so to speak, feel the need to flee from it. The same may be said of pleasant sensations. When the advanced practitioner takes a cool sip of lemonade on a balmy summer's evening, she will experience a pleasant sensation, but she will not feel the need to cling to the experience – to wish, for instance, that it will never end.

This, then, is the first aspect of Buddhist practice that I would like to emphasize: the development of a cool, undistracted attitude towards the world, one in which the practitioner is fully present in each lived moment.

The second aspect is the overcoming of self-centredness. For the cravings which mark the condition of *dukkha* are thought to presuppose an unhealthy measure of self-centred concern. That is admittedly an empirical claim, yet it is one that is readily borne out by introspection. Think about the sorts of things that bother you. It might be the fear of failure or humiliation, for instance, or a longing for respect, love, sex, status or fame. Chances are, most of the things on your list more or less obviously presuppose some sort of self-concern. Buddhists believe that this holds true generally. In their view, each of us tends to think that life is a movie in which we play the starring role.

So, according to Buddhism, to be afflicted by *dukkha* is to be subject to a host of self-centred cravings; and if *dukkha* is to be ended, then those cravings must be ended. Accordingly, one of the central goals – perhaps the central goal – of Buddhist practice is to become selfless.³

This process of becoming selfless is thought to have some significant implications for our relations with others. The idea is something like this. Those of us who have not awakened from the dream of *dukkha*-ridden life tend to make a sharp distinction between our own suffering and that of others: our own suffering matters, while that of others, and especially those to whom we do not feel close, matters much less. Yet as one becomes increasingly less self-centred, one becomes increasingly aware of the suffering of others. So, for instance, sitting in the dentist's waiting room, I may be vaguely aware that the man opposite is grimacing and holding his jaw; yet, absorbed

³ Or, as many Buddhists would put it, to face up to the fact that no-self exists.

in my own worries, I am unlikely to pay him much attention. An awakened person, in contrast, would not tend to dismiss the man's *dukkha*. On the contrary, she would be acutely aware of the man's toothache, even if, being awakened, she would not be subject to anything like the train of distractions to which the man himself is subject. As Christopher Gowans puts it, although the awakened person takes on the suffering of others, she does so without 'the sense of intense personal ownership' (2003: 145). Because of this, she is not overwhelmed by their suffering and can respond with a calm, unruffled mind: 'perhaps something closer to the dispassionate concern of a social worker whose personal life is not ordinarily broken up by worries about his caseload than the impassioned concern of a person who lies awake worrying about her best friend's marital problems' (2003: 145–6).

It should be clear, even on the basis of this extremely brief sketch, that Buddhism offers an account of what it means to lead a good life.⁴ The good life is the awakened or 'nirvanic' life. Compassion, moreover, is thought to be an integral part of that life. On the Buddhist account, then, to be awakened is, amongst other things, to be compassionate, and to be compassionate is to be acutely aware of the prevalence of suffering, to want to alleviate it, to try to do so, and to feel good (rather than, say, resentful) about doing so. True, there are differences between Buddhist compassion and what we ordinarily think of as compassion. For one thing, in the light of her selflessness, it is problematic to say that the awakened person is moved by the suffering of those she considers to be *others*. For another, her compassion will be emotionally cooler, less passionate, than that of many of those people we normally think of as compassionate. Nonetheless, there are clearly some striking similarities between Buddhist compassion and common or garden compassion. In particular, both must be distinguished from pity. In fact the distinction between compassion and pity is especially marked in the Buddhist case, for pity seems to involve a degree of condescension – as when one takes pity on someone – and someone who is selfless cannot be condescending (at least not intentionally).

Much more would need to be said to provide a full account of what Buddhist thinkers mean by compassion and why they think it is integral to the awakened life. And much, much more would need to be said to defend the claim that Buddhism is basically virtue ethical in form.⁵ For our purposes, however, it will suffice to note that everything that has been said so far is supposed to apply to the suffering of both humans and nonhumans. For, unlike Malebranche, Buddhists acknowledge that animals suffer. Traditionally, even invertebrates were thought to be sentient. (As it happens,

⁴ There are in fact many such ideals. In the Theravāda tradition, which nowadays holds sway in Thailand, Sri Lanka and Burma, the ideal is that of the *arhat*. In the Mahāyāna traditions of, say, Bhutan, the ultimate goal is to attain Buddhahood by means of the long and spiritually demanding Bodhisattva path. For more on these issues, see Collins (1998).

⁵ Although Cooper and James (2005) argue that Buddhist ethics is basically virtue ethical in form, that claim would not be endorsed by all scholars of Buddhism. For some very different interpretations of Buddhist ethics, see Barnhart (2012) and Goodman (2009).

this is one reason for the travel ban traditionally imposed on members of the Buddhist clergy during the rainy season: in wet weather, worms and other earthdwelling creatures will be drawn to the surface, where they could easily be squashed under the sandals of unsuspecting monks and nuns (Harvey 2000: 175)). What is more, the suffering of nonhumans is thought to *matter*. For the Buddhist, as for Jeremy Bentham and Peter Singer, suffering is suffering, and it should not be dismissed simply because it is, as it were, going on inside a furry, feathered or scaly being, rather than a featherless biped. So, for Buddhists, the man who feels for the suffering of his fellow humans but not for that of a mouse or a dog is not genuinely compassionate at all. By the same token, it is thought that the awakened person must be free of certain vices: not just the cruelty exhibited by people who torture animals, but the callousness of those who are unmoved by the suffering of broiler chickens and veal calves.

Some will dismiss talk of compassion for animals as soft and sentimental. In their view, one should base one's moral judgements on good hard facts and eschew dubiously feminine appeals to the heart. Yet there is no good reason to accept such regressive views. As ecofeminists have shown, compassion, receptivity and various other traits which have traditionally been derided as feminine seem to qualify as environmental virtues (see, e.g., Plumwood 1993: 182–9). In any case, whether or not Buddhist appeals to compassion are in some sense feminine, they certainly shouldn't be dismissed as sentimental. For one thing, Buddhist philosophers hold that compassion has a cognitive component: the development of the virtue is thought to go hand in hand with the development of insight into one's own selflessness, and indeed the selfless or essenceless nature of all entities. For another thing, in Buddhist contexts, concern for others is always thought to be conditioned by another virtue, equanimity. So compassion is supposed to extend to all animals: not just charismatic megafauna such as tigers, pandas and whales, but also creatures that scamper, scuttle or slither (Harvey 2000: 170). Thus Gary Snyder, the Zen Buddhist poet, imagines a 'depth ecology' which would 'go to the dark side of nature – the ball of crunched bones in the scat, the feathers in the snow, the tales of insatiable appetite ... the nocturnal, anaerobic, cannibalistic, microscopic, digestive [and] fermentative' (2000: 136–7). From the standpoint of Buddhist ethics, all these beings, no matter how repellent or insignificant they might seem, live lives afflicted by suffering, and so all of them deserve our compassion.

Humility

Environmental thinkers often praise the virtue of humility, while deploring the arrogance and hubris of those who run roughshod over any green and growing things that threaten to thwart their all-soimportant projects. Thus Rachel Carson (1962: 257) decries the 'practitioners of chemical control' for their lack of the virtue, while the historian Lynn White (1967: 1206) rounds off his seminal essay 'The Historical Roots of our Ecologic Crisis' by praising the 'humility' that St Francis exhibited towards all

creation. In a similar vein, Gary Snyder claims that the ‘etiquette of the wild world’ requires ‘a certain modesty’: ‘Good quick blueberry picking, the knack of tracking, getting to where the fishing’s good ... reading the surface of the sea or sky, are achievements not to be gained through mere effort. Mountaineering has the same quality. These moves take practice, which calls for a certain amount of self-abnegation, and intuition, which takes emptying of yourself’ (1992: 37).

It is one thing to list those thinkers who laud humility and condemn arrogance and hubris, but it is quite another to provide a clear account of the connections between humility and environmental concern. And before considering those connections, something needs to be said to explain what humility is. It is, in fact, particularly important to do this since the virtue can be conceived in a number of different, sometimes conflicting, ways. Julia Driver (1999: 830) construes humility⁶ as a disposition unintentionally to underestimate one’s self-worth. For Iris Murdoch, by contrast, it is a ‘selfless respect for reality’, and so quite unlike those traits Driver calls virtues of ignorance (see Murdoch 1997: 378; cf. Milligan 2007: 219). Others proffer different accounts: for G. F. Schueler (1999), humility is a disposition not to care whether other people are impressed by one’s achievements; for David Horner (1998: 434), a state which ‘honors others and esteems them as superior’; for Vance Morgan (2001: 315), a tendency to believe oneself ‘to be beneath others’.

This is just a sample of the numerous accounts that have been offered;

I will not try to survey them all.⁷ For present purposes, it will suffice to note that, although the nature of humility is widely disputed, there is considerably more agreement about what sorts of actions would be ‘out of character’ for a humble person. All agree that a humble person will not tend to talk about herself excessively, and that she will not be given to boasting. All agree that she will not tend to overestimate her own worth and status, or the worth of her own projects and achievements. Most commentators believe that, being largely unconcerned with such matters, the humble person will not spend much time comparing her own abilities, projects and achievements with those of others.⁸

There is general agreement, then, that humility is incompatible with boasting and other forms of self-aggrandizement. The incompatibility, here, is a relation weaker than logical incompatibility. As Aristotle (1980: 4) observes, ethics tends to deal with ‘things that are only for the most part true’, and indeed it is not logically impossible for a humble individual to boast, for instance. She might simply be having an ‘off

⁶ She calls it ‘modesty’. In the following, I take ‘humility’ and ‘modesty’ to be synonymous.

⁷ For a helpful introduction, see Grenberg (2005: 107–11).

⁸ On this point, the views of those (such as Horner and Morgan) who believe that being humble involves having a lowly opinion of oneself must be distinguished from the views of those (such as Murdoch) who construe humility as a kind of selflessness. For those in the latter group, the humble person will neither overestimate nor underestimate her own worth or status, but will, by contrast, be free of the self-centredness that manifests itself in, amongst other things, a concern with such self-estimation.

day', or she might have misread the social situation in which she finds herself. However, the incompatibility in question must be more than mere statistical divergence. It cannot simply be the case that there just so happens to be a negative correlation between humility and actions such as talking excessively about oneself or trumpeting one's achievements. The relevant relation is, I think, analogous to that which obtains between delivering a religious sermon and uttering profanities. There is no logical incompatibility here. An unorthodox preacher might deliberately swear in order to make a religious point, and even a conservative preacher might stub his toe on the font and, for a moment, forget himself. But it is not the case that preachers just so happen to avoid the use of profanities. Rather, the use of profanities tends to be inappropriate in religious contexts. It is in this sense that the use of such language is incompatible with the delivering of sermons. Similarly, being humble is incompatible with actions such as boasting and trumpeting one's successes.

These actions all involve the overestimation of one's own worth or status relative to that of one's peers. Yet one can exhibit a lack of humility in many different ways – not just by thinking oneself superior to one's peers but, for instance, by overestimating one's own abilities relative to those of entirely different sorts of entities, as when a professional wrestler compares his strength to that of a bull or (more hubristically still) a bulldozer. Furthermore, it is possible to exhibit a lack of humility by failing to appreciate the extent to which one's own achievements depend on factors not of one's own making, such as one's upbringing, the trailblazing innovations of others, and the advice of family and friends. In many cases, moreover, the un-humble individual will not merely ignore these sorts of factors: he will also situate himself, his projects and his achievements in some grand narrative; in fact he may well accord himself and his work major roles in that narrative. As an example, consider a historian who concludes his textbook on world history with a long account of the value of his own contributions to intellectual life. Such a man is unlikely to be humble, for the humble man will tend not to overestimate the significance of his projects in the great scheme of things. He is unlikely to believe that they have much historical significance.

This last point indicates one connection between the exercise of humility and our attitudes to, and treatment of, the natural world. The humble man, we noted, will not tend to exaggerate his role in human history. By the same token, he will not tend to exaggerate the significance of his projects on *natural* historical timescales. He is unlikely to think that they have much evolutionary or geological significance, for example. On the contrary, he will tend to be humbled by such evolutionary or geological considerations. Considering the fate of a particular endangered species, he will be acutely aware of the vast evolutionary history that produced it, the accumulated effects of countless tiny changes in the genetic composition of the relevant populations. And he will therefore realize how momentous an event it would be if we latecomers to the evolutionary scene were to bring about its extinction, by, say, flooding the valley in which its last remaining population is located. Thinking this, moreover, will prompt him to reassess the importance of his own projects. 'Is it really so important', he

might ask himself, ‘that this dam gets built when so much is at stake?’ There might of course be strong countervailing reasons to build the dam and, feeling the force of these, the humble man might go ahead and get building. Considerations of humility do not provide overriding reasons. But they do provide reasons.

Another example is provided by the ethics of mountaineering.⁹ In discussions of that topic, much critical attention has been paid to high-impact climbing methods, such as the driving in of compression bolts and the affixing of aluminium ladders. The moral standing approach provides little guidance here. If high-impact climbing neither harms nor threatens to harm any life-forms, then, by the lights of the moral standing approach, nothing would seem to be wrong with it. As we saw in chapter 3, a plausible case can be made for saying that non-sentient living beings, such as plants and fungi, can be harmed. But, surely, nothing could be either good or bad for a mountain. And if nothing could be good or bad for a mountain, then a mountain cannot have moral standing. End of story.

Yet one could object to the use of high-impact climbing methods on grounds of humility. The climber who drives compression bolts into a rock face which has taken thousands – maybe millions – of years to form betrays a lack of the virtue. What matters to him, one might say, is not the vast geological story of the mountain – the slow movement of tectonic plates, the resulting upheavals of land masses, the relentless effects of wind, rain and ice that combined to produce the rock face he scales. No, what matters is his own story – the one in which he proves his mettle against the forces of nature, perhaps, or in which he silences all those sceptics back home who doubted he could ever reach the summit. Indeed, in blasting in his long lines of compression bolts, the unhumble climber is, in effect, etching his own story into the side of the mountain (cf. Leopold 1949: 68). In this respect, he is rather like the historian who concludes his textbook on world history with a long account of the value of his own contributions to intellectual life. The climber’s actions also indicate a lack of humility. They indicate that he has overestimated the importance of his own endeavours in the great scheme of things: that he has failed to recognize their insignificance, when measured against the immense history embodied in the mountain. Hence, even if the climber’s actions do not threaten to harm any human or nonhuman beings, the climber himself can be criticized on moral grounds. He can be criticized for his lack of virtue.

Attention

Recall the moral standing approach. Those who adopt it need not assume that there is only one morally relevant property. They need not think that all entities within the moral circle have the same moral significance or value. So, as we saw, Singer maintains that there are special reasons not to kill those sentient beings that qualify as persons.

⁹ Although the following example is fictional, it is inspired by the real-life case I discuss in James (2015).

Even so, the image of the moral circle encourages the ‘monistic’ notion that there exists some single property which buys one admission to the club of morally privileged beings. For Kant, it is *rationality*; for Singer, *sentience*; for biocentrists, *having a good of one’s own*.

Now attempts to establish the limits of the moral circle may well prove useful for virtue ethicists, for if an entity is in that circle, then it is a possible object of benevolence. Yet benevolence is not the only virtue. Hence, as John O’Neill, Alan Holland and Andrew Light note, placing too much emphasis on attempts to delimit the moral circle can occlude the plurality of moral demands:

The concept of moral concern or moral consideration in the abstract does not capture the variety of responses that are required of different objects under different descriptions. For example, Kant is right that particular capacities for rational reflection about ends demand a particular kind of respect from others. However, it does not follow that all other objects are mere things that fall out of the domain of proper regard. It is rather the nature of that regard which changes. Likewise, sentient beings demand from us a particular set of relations of benevolence that non-sentient beings cannot evoke – one cannot be cruel or kind to a carrot. However, it does not follow that there are not other sets of attitudes and responses that are owed to non-sentient living things in virtue of their nature. (O’Neill et al. 2008: 109)

As O’Neill et al. proceed to note, virtue ethical approaches can accommodate this diversity. The key is to recognize that different virtues involve different responses to different sorts of things. Thus compassion is a response to the suffering of others, and a compassionate response involves a desire to alleviate that suffering. Gratitude, by contrast, is a response to one’s having been benefited by another, and a grateful response involves a recognition of that benefit and a desire to acknowledge it (Sandler 2007: 41).

It is not enough, however, for a virtuous person to be able to assess *which* virtues need to be exercised in any particular situation. She must also be able to tell *how* those virtues ought to be exercised. In many cases, this will involve her perceiving what the virtuous thing to do is. Putting extraneous considerations out of mind and attending closely to the situation at hand, the compassionate person, for instance, will perceive when a creature needs to be put out of its misery; a wise person will see when it would be foolish to press on through the storm.

In her essay ‘The Idea of Perfection’, Iris Murdoch explains what it means to see the world through the eye of virtue by appealing to the example of a mother, M, and her daughter-in-law, D. At first, she maintains, M feels hostility towards D. The girl strikes her as being ‘pert and familiar, insufficiently ceremonious, brusque, sometimes positively rude, always tiresomely juvenile’. Yet M is not a bad person, and after a

while she comes to think that her first impressions of D might have been wrong. So the mother decides to ‘look again’ at what her daughter-in-law is like, and her impressions change. M discovers the girl to be ‘not vulgar but refreshingly simple, not undignified but spontaneous, not noisy but gay, not tiresomely juvenile but delightfully youthful, and so on’ (Murdoch 1971: 16–17). By giving ‘sustained attention’ to her daughter-in-law, M comes to see the young woman ‘as she really is’ (ibid.: 39, 36).

For our purposes, two features of Murdoch’s account are worth noting. First, she does not seem to think that attending to X and coming to see it as it ‘really is’ involves somehow piercing the veil of human meanings to apprehend X as it is ‘in itself’, divorced from any reference to subjectivity. Instead, her discussion implies that to see something as it ‘really is’ is to see it in a way that is not distorted by one’s own selfinterest. In a nod to Buddhism, she claims that attention requires ‘unselfing’ (1971: 82). Second, Murdoch makes it clear that the virtue of attention can be directed not just at persons but at other things too, including natural things. Consider the following famous example from her essay ‘The Sovereignty of Good over Other Concepts’: ‘I am looking out of my window in an anxious and resentful state of mind, oblivious of my surroundings, brooding perhaps on some damage done to my prestige. Then suddenly I observe a hovering kestrel. In a moment everything is altered. The brooding self with its hurt vanity has disappeared. There is nothing now but kestrel’ (1971: 82).

In considering the moral relevance of attention, we find ourselves a long way from the moral standing approach. For if one is truly to attend to something, then, arguably, one must give up the urge to categorize it. One must relinquish thoughts about whether it is in or out of the moral circle and fix one’s mind and senses upon what it is in itself (cf. Fowles 2000 [1979]: 54–6).

Writers other than Murdoch have made similar recommendations. Martin Heidegger (1966: 54) urges his readers to exercise a ‘releasement toward things’; Thomas H. Birch (1993: 328) argues that we should give up trying to sift those entities that matter morally from those that do not and cultivate the ‘initial generosity of spirit’ that gives ‘others of all sorts a chance to reveal their value’; Jim Cheney and Anthony Weston (1999: 130) spurn attempts to delimit the moral circle and urge that we should exercise a ‘basic courtesy’ in our dealings with all entities; Val Plumwood (2002: 195) recommends that we develop the ‘openness’ and ‘attentiveness’ that ‘allow us to be receptive to unanticipated possibilities and aspects of the non-human other’. These writers are not all saying the same thing; however, their writings all point towards a similar conclusion: that the virtuous person will attend to the natural things she encounters, not as representatives of certain general types, such as *sentient being* or *living thing*, but as the particular things that they are.

Summary

Virtue ethicists maintain that in thinking about ethics it is best to begin with the question of what it means to live a good human life – one that exemplifies certain traits of character (virtues), while being free of certain others (vices). Opinions differ on the question of what makes a character trait a virtue. *Eudaimonists*, such as Rosalind Hursthouse, hold that a virtue is a character trait that a human being needs if she is to flourish. Non-eudaimonists, such as Christine Swanton, disagree.

Roughly speaking, an *environmental* virtue is one that bears directly upon how we relate to the natural world. One candidate is *compassion*. In Buddhist traditions, for instance, it is held that someone who is genuinely compassionate will be moved not just by the suffering of her fellow humans, but also by that of nonhumans. *Humility* is another candidate environmental virtue. Even though non-living entities such as biological species and mountains do not seem to have moral standing, there are reasons to think that a virtuous person will be humble, and that a humble person would treat such entities with respect. A third candidate environmental virtue is the sort of *attention* that is exhibited by skilled naturalists, for instance. Writers such as Val Plumwood and Anthony Weston argue that the moral standing approach both reflects and fosters a lack of attention.

Further reading

- Cheney, J., and A. Weston (1999). ‘Environmental Ethics as Environmental Etiquette: Toward an Ethics-Based Epistemology’, *Environmental Ethics* 21: 115–34. Reprinted in A. Weston (2009) *The Incomplete Eco-Philosopher: Essays from the Edges of Environmental Ethics* (Albany, NY: State University of New York Press). Although this essay isn’t about virtue ethics, it does present a compelling case for the exercise of a particular environmental virtue – namely, attention.
- Sandler, R. (2007). *Character and Environment: A Virtue-oriented Approach to Environmental Ethics* (New York: Columbia University Press). Rigorous and detailed; particularly strong on the theoretical foundations of virtue ethics.
- Sandler, R., and P. Cafaro (eds.) (2005). *Environmental Virtue Ethics* (Lanham, MD: Rowman & Littlefield). Virtue ethical reflections on various environmental issues, ranging from GM crops to Islamic attitudes to nature.

6. The Aesthetics of Nature

I am lucky to live near a ‘dene’, a deep wooded valley running down to the sea. On a map, it’s just some piled-up contour lines near the coast. But, experienced from the inside, it is an extraordinary place.

First of all, it is surprisingly dark. The canopy of oak, ash and wych elm is so thick that it admits only a few beams of sunlight, even on a hot summer’s afternoon. The atmosphere is heavy and tropical. Hart’s tongue ferns, wood horsetail and other moisture-loving plants flourish in the soft rich soil; there are even a few orchids. Butterflies make their haphazard ways from flower to flower. Hoverflies hang suspended in the air.

I suppose the dene is useful. It helps me to relax, for instance. And I certainly think it is a good thing, morally speaking, that it exists. But when I recall the place, its *aesthetic* qualities are the first to come to mind. It is, I recall, a beautiful place.

What, however, is one to make of that judgement? Is the dene objectively beautiful, or is its beauty to some extent in the eye of the beholder? In what sense is one’s aesthetic appreciation of the dene like one’s aesthetic appreciation of a work of art? Must I know something about the place if I am properly to appreciate its aesthetic qualities? And if so, how much do I need to know? Do I need to know that the dene was carved out of magnesian limestone by torrents of meltwater after the last Ice Age? Or is such knowledge irrelevant in this sort of context? Is the dene’s beauty simply a reflection of its sensuous surface – how it looks, feels, smells, sounds and tastes?

Disinterestedness and engagement

That’s a diverse set of questions. In order to address them, we will need to step back to consider what, in general, an aesthetic judgement is.

At first sight, the answer might seem clear: aesthetic judgements are about beauty and ugliness. Yet not all such judgements are about those qualities. Consider a storm at sea, waves roiling and swelling under a low dark sky. The storm is awe-inspiring, but it isn’t exactly beautiful. Nor is it ugly. Or take neatness. It seems to be an aesthetic quality. But it is not obviously a form of either beauty or ugliness.

But set these complexities to one side for the moment and return to the quality of beauty. Clearly, to judge something to be beautiful is to make an aesthetic judgement. Yet what exactly does this mean? How, in particular, are aesthetic judgements to the effect that X is beautiful to be distinguished from moral judgements (such as ‘X is

wicked'), judgements of etiquette (such as 'X is the polite thing to do') and practical or functional judgements (such as 'X is the right tool for the job')?

According to Immanuel Kant, the answer hinges on the relations between judgement and *pleasure*. Judgements of beauty, he maintains, necessarily involve pleasure. To judge something to be beautiful is to take pleasure in its beauty, to find it pleasing to one's senses. And this pleasure, moreover, is of a certain kind. Kant argues that if we judge an object to be beautiful, then the pleasure on which we base our judgement must be *disinterested*. Providing a full explanation of what Kant means by this would take us too far off course (see, further, Budd 2002: section 2.9). For now, it will be enough to note that the pleasure one takes in X *cannot*, in Kant's view, count as disinterested if one is simply pleased to see that X is a means to some desirable end. So, if my pleasure in visiting the dene was simply the satisfaction of finding a nice spot in which to relax or a prime piece of real estate, or an ideal habitat for a rare species of orchid, then I could not have been judging the place to be beautiful. To see the dene as beautiful, I must have set aside concerns with, amongst other things, the possible uses of the place. I must have been responding to its sensuous appearance – how the dene looks, feels, sounds, tastes and smells – and to nothing else.

Not everyone has been convinced by these claims. Friedrich Nietzsche, for one, thought that Kant's account contained 'a fat worm of basic error' (2007 [1887]: 74). Nearly a century later, Theodor Adorno maintained that 'the doctrine of disinterested satisfaction is impoverished in view of the richness of aesthetic phenomena' (2008 [1970]: 366). In this section, however, I will focus on the works of a more recent critic, one who specializes in the field of environmental aesthetics – namely, Arnold Berleant.

Berleant's critique is aimed not just at Kant's account but at a whole tradition of thought which has accorded disinterestedness an essential role in aesthetic judgement. In Berleant's view, it is not just Kant's insistence that aesthetic judgements are based on disinterested *pleasure* that must be rejected; one must also repudiate claims that aesthetic *appreciation* or *judgement* is necessarily disinterested.

In developing his case, Berleant connects the notion of disinterestedness with *distance* (1992: 114). In order to contemplate something with disinterest, he claims, one must be psychologically distanced from it. This distance, he adds, may be created through the use of frames, both literal and metaphorical (1992: 114). Imagine that you are viewing a painting in an art gallery. You know that it is what lies within the frame that should command your attention. The colour of the wallpaper, the murmur of voices, the hum of the airconditioning system – all of these are, you realize, distractions. The fact that the painting is enclosed within a frame helps you to bracket out the everyday world and your everyday concerns. The frame helps you to contemplate the painting with disinterest.

It is not only paintings that are framed. A sculpture stands on a plinth; a thick red rope prevents visitors from getting too close. The dimming of the hall lights tells the audience members that the performance is about to begin and that, for the next hour or so, they will need to set aside thoughts about work, family and credit card

bills and focus their attention on the music. Like the painting and the sculpture, the performance has been framed. It has been abstracted from the texture of everyday life and offered up as an object of what Berleant calls disinterested contemplation.

In *natural* environments, however, this sort of framing, and the attendant psychological distance, is more difficult to achieve. As Berleant (1992: 164) notes: 'It seems easier to contemplate a landscape painting than a landscape, for painting frames the scene, offering it as an object for disinterested regard. There are no annoying insects to distract one, no wind to ruffle one's hair, no precarious footing or dizzying heights. One can adopt a disinterested stance without danger or fear of disruption.' According to Berleant, the image of the disinterested observer contemplating a nicely framed aesthetic object is inappropriate when it comes to the aesthetic appreciation of natural environments.¹ One cannot achieve that sort of psychological distance when one is batting away mosquitoes, for instance, or trying to extricate one's foot from a sucking swamp. Nature is, he writes, a realm 'in which we live as participants, not observers' (1992: 170).

Berleant points out that the participatory or 'engaged' character of our appreciation is particularly evident in our encounters with the vastness and power of nature – the sorts of encounters that Edmund Burke and others categorized as *sublime* (Berleant 1992: 170). Wild storms, towering thunderclouds, fountains of lava, looming cliffs, crashing waterfalls – we do not respond to such phenomena as detached observers. Our aesthetic appreciation of them is conditioned by a sense of our own vulnerability. It is the alarming proximity of so much power that gives one's encounter with the waterfall its frisson. The aesthetic qualities of the thunder clouds reflect the fact that they tower above us. If we were as giants compared to them, they would not seem nearly so impressive. However, Berleant points out that the fundamentally engaged character of our aesthetic appreciation of natural environments is evident in other, less thrilling contexts as well: 'canoeing a serpentine river when the quiet evening water reflects the trees and rocks along the banks so vividly as to allure the paddler into the center of a six-dimensional world; camping beneath pines black against the night sky; walking through the tall grass of a hidden meadow whose tree-defined edges become the boundaries of the earth' (1992: 170). Berleant's conclusion is clear: 'the aesthetic mark' in our relations with all of nature, and not just its magnificent and overwhelming parts, 'is not disinterested contemplation but total engagement' (1992: 170). Hence what we need for nature is a different aesthetic: one of 'engagement', which 'acknowledges the experience of continuity, assimilation, and engagement that nature encourages' (1992: 168).

What are we to make of Berleant's attack on the aesthetics of disinterestedness? He is surely right to stress that our aesthetic appreciation of nature is typically participatory or engaged. To see why, set aside reflections about science and metaphysics, and

¹ In fact, he thinks that it's also an inappropriate model for the aesthetic appreciation of artworks. For simplicity's sake, I do not discuss his views on that issue here.

consider what it is like to experience the natural world. It is all too easy to suppose that we pre-reflectively encounter that world as subjects spectating on a collection of discrete objects (this or that log, this or that rock, this or that tree ...). However, as the phenomenologists to whom Berleant often appeals have revealed, such descriptions are very inaccurate (see, further, James 2009). The nature we pre-reflectively encounter is deeper, richer and in many respects stranger than this objectivist conception suggests.

Consider Roger Deakin's account of the experience of a wood: 'Once inside a wood, you walk on something very like the seabed, looking up at the canopy of leaves as if it were the surface of the water, filtering the descending shafts of sunlight and dappling everything' (2007: xiii). Deakin has captured something important here: the fact that woods are typically experienced from the inside. And not just woods: John Muir wrote that in the mountains, 'Our flesh and bone tabernacle seems transparent as glass to the beauty about us, as if truly an inseparable part of it, thrilling with the air and trees, streams and rocks, in the waves of the sun' (2007 [1911]: 10). In many cases, moreover, to appreciate the aesthetic qualities of an environment is not simply to be immersed in it, but to be actively engaged with it. Think of the scuba diver swimming through the extraordinary unfolding world of a coral reef or of the climber scaling the rock face – in these sorts of cases, the environment is appreciated from the inside, by an active participant, rather than by a passive spectator.

But is our aesthetic appreciation of the natural world always so participatory and engaged? Don't we ever regard it, in any of its endlessly beautiful forms, as an object from which we are psychologically distanced? Take one's appreciation of a shark in an aquarium. True, we might see the creature as beautiful. But don't we nonetheless regard it as an object offered up for our detached observation? In what sense is our appreciation of it either participatory or engaged?

There is something to this objection. It is true that our encounters with nature can be more or less participatory and engaged. However, Berleant is, I believe, right to point out that they are typically *more* participatory and engaged than they might at first seem. Reconsider the encounter with the shark. Our aesthetic appreciation is enlivened by the alarming proximity of the creature – perhaps, even, by the sense that, just as we are watching it, so it might be watching us. As in cases of what Kant called the dynamic sublime, our aesthetic appreciation seems to involve pleasure mixed with a certain kind of fear.

Furthermore, the shark strikes us as graceful. Yet our sense of its grace is conditioned by our pre-reflective sense of our own bodies. I do not have fins and a tail, but I know what it's like to swim. And in watching the shark flex its body and move so effortlessly through the water, I feel the creature's movements in my own muscles (cf. Abram 1996: 61).

Another example: imagine that one has pulled one's car over to the side of the road to snap a photograph – the classic picture-postcard view of some impressive mountain valley. One is appreciating the aesthetic qualities of the landscape; moreover, as with the example of the shark, it might seem that one is doing so from a detached and

distanced aesthetic standpoint. But, once again, this impression is inaccurate. For one's appreciation of the scene will be influenced by environmental factors: by the wind in one's hair, for example, or the sun's warmth on one's skin. It will certainly be conditioned by one's sense of the valley's size and proximity, the way that one's attention is naturally drawn into its immense volume. As with the shark, one's aesthetic appreciation of the valley will, to some extent, be participatory and engaged.

More would need to be said to prove the point, but it would seem that Berleant is right to claim that the aesthetic appreciation of nature typically involves not detached contemplation, but participation and engagement. But is he also right to maintain that such appreciation cannot be disinterested?

The first thing that must be noted about Berleant's criticisms of the aesthetics of disinterestedness is that it isn't clear that they militate against the most prominent defence of the role of disinterestedness in aesthetic judgement – namely, Kant's account. For, as we saw, Kant maintains that a judgement only qualifies as a judgement of beauty if the *pleasure* it is based on is disinterested (Budd 2002: 46). Berleant, by contrast, supposes that disinterestedness is 'a special kind of attention', an *attitude* supposedly adopted by aesthetic appreciators (1991: 215, n.3). So although his criticisms might militate against some conceptions of disinterestedness, it is unclear whether they have force against Kant's account (see Zangwill 1992; cf. Berleant 1991: 216, n.9).

Berleant's account of the relations between disinterestedness and distance is also open to question. As we saw, Berleant maintains that in order to achieve disinterested contemplation, one must put some psychological distance between oneself and the object one is contemplating. Yet some passages in his works imply that the disinterested observer must be not just psychologically 'distanced' from their personal interests and so forth, but also *physically* removed from the object on which they take themselves to be spectating (Brady 2003: 134). Thus Berleant suggests that to appreciate architecture with disinterest one must be able to encompass the whole of the relevant structure in a single view. 'But surely', he contends, the champions of disinterestedness have got it wrong, for 'a building is more than an object seen from a distance. It is meant to be entered, to be moved through, to house activities of some sort' (1992: 162). More generally, Berleant maintains that the 'distancing' required of disinterestedness is 'difficult to achieve when one is surrounded by the "object"' (1992: 164).

Is Berleant's claim plausible? As we saw above, if the pleasure one derives from the object of a judgement is to qualify as disinterested, then one cannot simply be pleased to find that the object is a useful means to some end. So one cannot be judging the object as a status symbol, for example, or as a potential source of profit. But there is, I believe, no reason why one's encounter with it cannot be either participatory or engaged. As Ronald Hepburn points out, one's aesthetic responses to nature can involve 'some sort of detachment' in the sense that one is 'not using nature, manipulating it, or calculating how to manipulate it'. Even so, in such cases one can at the same time be 'both actor and spectator, ingredient in the landscape and lingering upon the

sensations of being thus ingredient, rejoicing in their multifariousness, playing actively with nature, and letting nature, as it were, play with [oneself]' (1966: 290, emphasis removed; cf. Carlson 1993: 222–3; Cooper 2006). Indeed, Emily Brady points out that even the pleasure derived from the aesthetic appreciation of food – and surely eating is a quintessentially engaged activity – can be disinterested 'in so far as we appreciate gustatory qualities for themselves and not merely for consumption' (2003: 127).

Form, knowledge and the beauty of clouds

So far, we have been considering the question of what makes a judgement an aesthetic judgement. In this section, I turn to a different issue: the question of what it means to appreciate nature's aesthetic qualities in a *proper* manner. Different writers express this question in different ways. Ronald Hepburn (1997: 65) asks how one is to distinguish the 'serious' aesthetic appreciation of nature (as when it is perceived with, say, 'full and thoughtful attention') from the 'trivial' (as when natural objects are 'hastily and unthinkingly perceived', for example). Marcia Muelder Eaton (1998: 149) wonders what it is that makes some aesthetic experiences of nature 'better' than others. Yuriko Saito (1998: 135) asks how one is to tell when the aesthetic appreciation of nature is 'appropriate'. Despite their various differences of opinion, all of these writers are concerned with the same general question: What does it mean to *properly* appreciate nature's aesthetic qualities?²

What criteria must be satisfied if one is to do this? One option is to appeal to the virtues and vices of character that are brought into play in one's appreciation. That is to say, one strategy is to maintain that one's aesthetic appreciation of nature qualifies as 'proper' if – and to the extent that – it involves the exercise of certain virtues, and 'improper' if – and to the extent that – it involves the exercise of certain vices. We came across one candidate virtue in the previous chapter. For Iris Murdoch, 'selfless attention to nature' is both a moral and an aesthetic virtue (1971: 40). Her discussion implies that one of the ways to determine whether someone is properly appreciating nature is to ask whether his appreciation involves not selfishness, sentimentality or superficiality, but 'a refined and honest perception of what is really the case' (1971: 37).

Other candidate virtues concern imagination. Thus Emily Brady (2003: 158–61) argues that one way to tell whether someone is properly appreciating nature is to ask to what degree and in what manner they are exercising their imagination. If they are not doing so at all, then their appreciation may be too passive to qualify as aesthetic. If, by contrast, their imaginings are entirely unconstrained by how things are, then they may count as nothing more than flights of fancy. The ideal, Brady suggests, is to

² Some readers will maintain that the grammatically correct phrasing here is 'properly to appreciate'. But that sounds awkward. In the following, I have often chosen to defy the grammarians and split the infinitive.

‘imagine well’, where this involves ‘spotting aesthetic potential, having a sense of what to look for, and knowing when to clip the wings of imagination’ (2003: 160). Imagining well, she adds, is like an Aristotelian virtue in that it is a learned disposition to respond to the world in a certain way, when circumstances demand (see, further, 2003: 160).

That, then, is one sort of answer to the question of what it means to properly appreciate nature’s aesthetic qualities: roughly speaking, one is doing so if and only if one’s appreciation involves the exercise of aesthetic virtues rather than aesthetic vices. Granted, it is another question whether any such virtue-based account can be justified. But I won’t try to settle that matter here. For the remainder of this section, I will focus on another way that environmental aestheticians have tried to distinguish proper from improper appreciation.

So: consider the proposal that one can properly appreciate the aesthetic qualities of a natural object only if one knows something about it.³ On the face of it, that might seem a promising suggestion. Certainly, when it comes to the aesthetic appreciation of artworks, such as paintings, sculptures and dance performances, knowledge often seems to play an important role (see, further, Walton 1970). If I am to appreciate – that is, properly appreciate – the aesthetic qualities of a certain painting, then I will need to have some knowledge of the painting in question. I will need to know that I am viewing a painting, rather than, say, a rectangular sculpture that has been hung on a wall. Furthermore, I will need to know something – if only some very basic facts – about the tradition to which the painting belongs. So, for instance, if I am to appreciate Picasso’s *Guernica*, I must know that it is neither a realist nor an impressionist work. In many cases, moreover, I will need to know something about the artist’s intentions. If I am to appreciate the aesthetic qualities of the painting, then I may need to know that Picasso created it in response to his outrage at the atrocities inflicted in the bombing of the village of Guernica during the Spanish Civil War. At any rate, my competency as a judge would be undermined if I thought Picasso painted the work to celebrate the forces of Franco’s nationalism.

On a plausible view, then, knowledge tells us what to appreciate in artworks, and it also helps us to identify the aesthetically relevant aspects of whatever artwork we are appreciating. What of natural objects? Granted, what we take to be natural objects are, in many cases, the products of human intentions. Trees have been pollarded, heaths have been intentionally burned, river banks have been restored. Yet very wild natural objects do not seem to reflect an artist’s intentions; nor are they the products of any sort of aesthetic or artistic tradition. To properly appreciate the aesthetic qualities of a wild wood or wetland, I do not need to know anything about impressionism, cubism or the pre-Raphaelites.

It might therefore be thought that proper appreciation, in this context, amounts merely to some kind of response to the sensuous surface of natural objects – to their

³ Of course, nature includes processes, places and events, and not just objects. However, for simplicity’s sake, I will continue to use the term ‘natural objects’ in the following.

colour, shape, smell and so forth. According to this *formalist* thesis, knowledge of objects – of their historical origins, for example, or of the natural kinds to which they belong – is aesthetically irrelevant.

Anti-formalists – or, as they are more usually known, *cognitivists* – contend that this is entirely wrong. In their view, the proper aesthetic appreciation of nature, like the proper aesthetic appreciation of artworks, requires knowledge. One must know something about a natural object if one is to appreciate its aesthetic qualities in a proper manner.

For Allen Carlson, the most influential cognitivist in the field of environmental aesthetics, the relevant knowledge is that of the natural sciences. One must have some knowledge of sciences such as biology or geology if one is to properly appreciate the aesthetic qualities of nature. So, to use Carlson's oft-cited example, although a humpback whale is a 'graceful and majestic mammal', 'were it to be perceived as a fish, it would appear more lumbering, somewhat oafish, perhaps even a bit clumsy' (2000: 89). Similarly, one cannot see the beauty of a flamingo if one believes it to be a pink stork with a deformed bill; nor can one properly appreciate the ugliness of a bright green lake if one knows nothing about eutrophication. To someone unversed in heathland ecology, a stretch of fire-blackened gorse stumps might seem to present a scene of terrible devastation. But to someone who knows that the plants require fire in order to flourish, the area might seem charged with the promise of new life.

Carlson urges that, in all such cases, properly appreciating the aesthetic qualities of X requires knowledge of the category to which X belongs – the sort of knowledge that is provided by sciences such as biology, geology and meteorology. He suggests that this knowledge plays a number of important roles. Amongst other things, it tells us which of nature's aspects should be the objects of our appreciation, and it tells us how they should be appreciated. Thus:

in appropriately appreciating a natural environment such as an alpine meadow it is useful to know, for instance, that it has developed under constraints imposed by the climate of high altitude, and that diminutive size in flora is an adaptation to such constraints. This knowledge can guide our appreciation of the environment so that, for example, we avoid imposing inappropriately large frames, which may cause us to simply overlook miniature wild flowers. In such a case, we will neither appreciatively note their wonderful adjustment to their situation nor attune our senses to their subtle fragrance, texture, and hue. (Carlson 2009: 135–6)

Carlson's carefully argued works have certainly helped to undermine the popular but mistaken notion that aesthetic appreciation is a frivolous and – as it is often put – merely subjective affair. Furthermore, knowledge of sciences such as biology or geology certainly can enhance the aesthetic appreciation of nature. As Carlson says, it is useful to know something about the effects of altitude on plant growth if one wishes

to judge the aesthetic qualities of, say, alpine meadows. In some cases, indeed, it may be *necessary* to have such knowledge, if one is properly to appreciate the aesthetic qualities of some natural object. Yet Carlson goes further. He maintains that if one is to properly appreciate the aesthetic qualities of *any* natural X, then one *must* have some scientific knowledge of X.⁴

However, even if it is granted that one must know something about an object if one is to properly appreciate its aesthetic qualities, it is a further question whether only knowledge obtained by means of the natural sciences will do. What of historical or archaeological knowledge, for instance? To be sure, it may be objected that to appreciate nature for its historical or archaeological associations is to regard it as a ‘prop for a human drama’ and so not to appreciate it ‘on its own terms’ (Saito 1998: 141). But what then of the knowledge of farmers? If, as seems likely, a farmer’s knowledge of her land cannot be entirely cashed out in terms of natural science, does that mean that it cannot enhance her appreciation of the aesthetic qualities of the fields and hedgerows on which, in which and with which she works?

In some cases, indeed, scientific knowledge would seem to be irrelevant to aesthetic appreciation. Take the following poem from Saigyō, the twelfth-century Japanese poet:

Inviting the wind to carry
Salt waves of the sea,
The pine tree of Shiogoshi
Trickles all night long

Shiny drops of moonlight.

(Quoted in Bashō 1966 [1702]: 138)

The references to beckoning trees and trickling light seem to have no scientific basis at all. In fact, taken literally, they seem to be at odds with what we know about the behaviour of trees and light. But that, surely, does not mean that Saigyō’s aesthetic appreciation of nature was impaired.

Alternatively, consider the example of a giant panda. It is a beautiful creature. But in order to appreciate it as such, must one know that it is a kind of bear? Until fairly recently, it was classified with the raccoon as a member of the family Procyonidae. Does that mean that, until a few decades ago, all aesthetic judgements of the creature were off mark? Surely not. But even if the knowledge that pandas are bears is aesthetically irrelevant, can one properly appreciate the creatures’ beauty only if one knows that,

⁴ This conception of the importance of scientific knowledge leads Carlson to endorse ‘positive aesthetics’ – the thesis that wild nature is of uniformly positive aesthetic value. Briefly stated, he argues that the more we know about natural science, the more we will come to see a wondrous (i.e., aesthetically valuable) order manifested in each and every part of nature, even those of its parts which, to an untutored eye, might look repellent. For a helpful discussion of the arguments Carlson provides in support of that conclusion, see Budd (2002: section 3.4).

despite their predominantly vegetarian diet, they belong to the order Carnivora? Again, there is no good reason to suppose that one needs to know that. Or does one need to know that they are mammals, at least, rather than, say, curiously furry reptiles? Well, perhaps – but with this ridiculous proposal we find ourselves very far from the findings of natural science. After all, one does not need any training in biology to be able to tell that pandas and lizards are very different sorts of creature.

In response to these sorts of criticism, Carlson might propose that in order to appreciate – that is, properly appreciate – nature’s aesthetic qualities one needs only some commonsense understanding of natural history. And in support of this claim he could maintain – as he does in another context – that ‘our scientific knowledge of the natural world’ is ‘only a finer-grained and theoretically richer version of our common, everyday knowledge of it’ and ‘not something essentially different in kind’ (Carlson 2000: 7). But the notion that scientific knowledge is nothing more than refined common sense is open to question (see Wolpert 1992). For instance, there is nothing commonsensical about the notion that the earth is a roughly spherical object orbiting the sun. However, fortunately, one doesn’t need to know anything about celestial mechanics in order to appreciate the beauty of a sunset.

But suppose – again for the sake of argument – that Carlson is right and that one must have some scientific knowledge of a natural object if one is to properly appreciate its aesthetic qualities. The question remains of how much scientific knowledge is required. How much do I need to know about biology in order to appreciate the aesthetic qualities of a blackbird’s song, for example? Do I need to know how exactly it produces the sound? Do I need to be acquainted with the latest theories of why it sings (cf. Budd 2002: 136)? It is up to the cognitivist to provide answers.

In sum, it would seem that Carlson is partly right. In many cases, knowledge of a natural object enhances our appreciation of its aesthetic qualities. In some instances, moreover, one must know something about the object if one is to properly appreciate those qualities. But even in these cases, it is likely that only a minimal amount of knowledge will typically be required – for example, the knowledge that *X* is natural rather than artefactual. At any rate, it is not at all clear that only *scientific* knowledge will do.

Indeed, some have argued that Carlson’s emphasis on the importance of scientific knowledge threatens to impoverish our aesthetic appreciation of some natural phenomena. Take clouds, for example. As Malcolm Budd points out, scientific knowledge can play a role in one’s appreciation of their aesthetic qualities. If you recognize a particular cloud as a cumulonimbus, a *thundercloud*, your impression of it might change, for ‘you might now have a sense of the *power* in the cloud and see it *as* shaped by powerful forces at work in it; and this sense of power will inform your experience and change the nature of your aesthetic response’ (2002: 21; for a very different interpretation, see Zangwill 2013: 587–8). But Carlson’s point, recall, is not simply that scientific knowledge *can* enhance our aesthetic appreciation of natural objects such as clouds. It is that

one *must* have such knowledge if one is to properly appreciate the relevant aesthetic qualities.

Nick Zangwill argues that that claim should not be accepted – not simply because it is implausible, but also because it would ‘destroy our experience of the beauty of clouds’ (2013: 586). His reasoning is as follows. The beauty of clouds, he proposes, ‘depends only on how they appear to us, where how they appear to us is not informed by our beliefs about how they really are’ (2013: 595). And in many cases clouds appear solid. Of course we know that they are not really solid, but that is beside the point: ‘The beauty of clouds is the beauty of things that look solid, in a fluffy, bouncy way’ (2013: 585). Now suppose one came to accept Carlson’s cognitivism. One would now be tempted to dismiss references to the solidity of clouds as ‘misleading, frivolous and irresponsible’ since they do not reflect what the natural sciences tell us about what clouds are really like (2013: 586). But, Zangwill concludes, adopting such a stern and forbidding standard would rob us of the opportunity to see clouds as beautiful (cf. Heyd 2001: 128).

Zangwill believes that what holds true of the aesthetics of clouds holds true of the aesthetics of all inorganic nature. Whether one is considering the aesthetic qualities of clouds, lakes, stalagmites or sandy beaches, it is only, he suggests, the ‘bare appearances’ that matter. As Carlson’s examples show, that claim is very implausible. Nevertheless, Zangwill does seem to be right about clouds.⁵ And if he really is right about our appreciation of clouds, then cognitivism cannot provide a complete account of what it means to properly appreciate nature’s aesthetic qualities.

Aesthetics and morality

Some environmentally minded people will find all this talk of aesthetics rather dubious. For surely – they will protest – to talk about the aesthetic qualities of natural things is to refer to the tastes of human beings. And to focus one’s attention on the tastes of human beings is to have succumbed to a morally troubling kind of anthropocentrism. It is to have forgotten that the natural world is valuable for what it is in itself, and not merely because it provides aesthetic pleasure for us.

Keekok Lee (1995) develops an argument of this sort. To value nature on account of its aesthetic qualities is, in her view, to endorse a certain kind of ‘instrumentalism’, for it is to suppose that nature is not ‘valuable per se’ but only insofar as it is ‘capable (or potentially capable) of triggering aesthetic satisfaction’ in us humans (1995: 220, 222). To value nature for its aesthetic qualities is to have adopted a form of ‘strong anthropocentrism’ (1995: 222); and this, she implies, is a view that ought to be rejected on moral grounds.

⁵ In other words, I endorse ‘moderate formalism’ about the aesthetics of clouds – a position Zangwill himself rejects (see 2013: sections VIII and IX).

Yet Lee's argument is vulnerable to several objections. For one thing, it presupposes an implausible account of aesthetic appreciation. One can often derive pleasure from appreciating something's aesthetic qualities, of course. But not all acts of aesthetic appreciation involve the taking of pleasure. Francis Bacon's remarkable *Triptych, May–June 1973*, a trio of paintings created in response to the suicide of his former lover, is an appropriate object of aesthetic appreciation. But such dark material does not put a smile on one's face. Likewise, to appreciate a trumpet solo for the intricacy of its lines and the way that it challenges conventional notions of rhythm is not to value it as merely a source of aesthetic pleasure or satisfaction (cf. Cooper 1998: 104). And even when appreciating something does generate pleasure, the thing in question cannot be valued solely as a means to obtain pleasure. As Kant insisted, aesthetic appreciation must be free from such instrumentalist concerns.

So, against Lee, aesthetic appreciation is not inherently instrumentalist. Nonetheless, isn't it an inherently *human* activity? And so doesn't a focus on aesthetic appreciation betray a pernicious kind of anthropocentrism?

It does not. To begin with, it is not obvious that humans are the only beings capable of aesthetic appreciation. But even if they are, a concern with that sort of appreciation is not anthropocentric in any sense that should perturb those who believe that nature deserves our care and respect for its own sake. Granted, if the possibility of nonhuman aesthetic appreciators is set aside, then matters pertaining to aesthetics are anthropocentric in the merely formal sense that they refer, ultimately, to human beings and their concerns. However, when environmental thinkers inveigh against anthropocentrism, they are usually targeting a narrower conception: the view that 'the nonhuman world has value only because, and insofar as, it directly or indirectly serves human interests' (McShane 2007: 170). It is clear that something can be anthropocentric in the first (formal) sense without being anthropocentric in the second (substantive) sense. Take Henry David Thoreau's claim that 'No humane being, past the thoughtless age of boyhood, will wantonly murder any creature, which holds life by the same tenure that he does' (1997 [1854]: 191). Thoreau is considering what it is to be humane; he is addressing a matter that is formally anthropocentric. Yet, whether or not it is true, his claim is not substantively anthropocentric. The same may be said of aesthetic appreciation. If the possibility of nonhuman appreciators is set aside, then all such acts of appreciation are anthropocentric in a formal sense; yet only some of them (if any) will be anthropocentric in a substantive sense.

To appreciate nature's aesthetic qualities is not, therefore, to survey the wide green earth in the hope of obtaining aesthetic satisfaction. More generally, we have so far been presented with no good reason to think that a moral concern for the natural world must be at odds with a disposition to value its aesthetic qualities. In many cases, indeed, those demands seem perfectly in accord. Wordsworth's opposition to the plan to extend a railway into the Lake District sprang in large part (if not entirely) from his keen sense of the area's beauty. Similarly, for Muir, the Yosemite Valley was too beautiful to be dammed. A halfcentury later, Leopold urged his readers to

maintain the ‘integrity, stability and *beauty* of the biotic community’ (1949: 224–5; my emphasis).

In such instances, aesthetic and moral considerations appear to point in the same direction. Yet, as the following example from Cheryl Foster shows, they sometimes seem to conflict:

If I am witnessing a spectacularly-coloured sunset from my kitchen window and am taking great pleasure in its beauty, how shall I respond when a friend drops in and informs me that the reason for all the colour is the proliferation of sulphur dioxide in the air? Suppose that the friend also tells me that the sulphur, the result of a factory operating up river, is a pollutant, one with grave consequences for the creatures in the marsh downstream. (1992: 212)

Should this new information change one’s aesthetic judgement? Would the sunset cease to be beautiful? Foster argues that someone who continues to admire the sunset even after they learn that it is the result of anthropogenic pollution is likely to be ‘irrational’ (1992: 210). For to derive ‘aesthetic pleasure’ from a thing is, she suggests, implicitly to ‘endorse’ it or ‘approve’ of it and, moreover, the processes by which it was formed (1992: 210, 213). To see the sunset as beautiful is therefore to ‘perpetuate a form of life-denial’ by endorsing processes which involve the destruction of life (1992: 213). For this reason, she concludes that someone who has ‘a sufficient idea of life’s worth’ cannot, on pain of irrationality, endorse or approve of the sunset by finding it beautiful (1992: 213, 210).

Is this argument persuasive? Well, as we saw above, it is not clear that appreciating the aesthetic qualities of a thing must involve the derivation of ‘aesthetic pleasure’. Nor is it clear that to derive such pleasure from a thing must be to ‘endorse’ it or ‘approve’ of it, still less the processes by which it was formed. For instance, I can enjoy early twentieth-century blues recordings without endorsing the social injustice that inspired musicians like Blind Willie Johnson.

Furthermore, one wonders whether irrationality is the right charge to level at the man who finds beauty in what he knows to be destructive and life-denying processes. Perhaps, as Foster suggests, he is being inconsistent, and to that extent irrational, if he also has a sufficient idea of life’s worth. But is inconsistency his main failing? Virtue ethicists, for their part, would say that the man who finds beauty in phenomena he knows to be morally dubious has a flawed *character*, that he lacks *virtue*.

Could a man who finds beauty in a morally dubious thing still qualify as virtuous? The answer will depend on the particular case. Nonetheless, it seems that virtue, in this kind of context, must lie on what Aristotle would have called a ‘mean’ between two extremes of vice. On the one hand, the virtuous person will not be *too* ready to bracket moral considerations. Someone who does that – who, for example, admires what they call the ‘beautiful’ pattern of blood at a murder scene – is clearly not

virtuous. Yet, on the other hand, it is possible to be *too* moralistic when it comes to aesthetic appreciation. Someone who allows their distaste for a painter's morally dubious lifestyle to interfere with their appreciation of his paintings might simply be moralistic or prudish (though not, perhaps, if the painter's lifestyle was *very* dubious).

What, then, should we make of Foster's 'sunset' example? A virtuous person would no doubt be dismayed to learn that the sunset is the result of anthropogenic pollution. But to what extent, if any, would that moral consideration affect her aesthetic judgement? It is not clear to me that someone who brackets that consideration must lack virtue. Perhaps a virtuous person could put her knowledge of the sunset's origins to the back of her mind and focus her attention on the sensuous surface of the phenomenon. And even if that knowledge does influence her aesthetic judgement, it is not obvious that it must influence it for the worse. On the contrary, maybe the sunset would acquire a certain pathos in the light of this new knowledge – a pathos which enhances rather than detracts from its beauty.

In other cases, to be sure, it is hard to see how a morally virtuous person could possibly set moral considerations aside in favour of aesthetic ones. Take bullfighting. In the traditional Spanish form of the ritual, a bull is released into an arena where a number of professional *toreros* pierce it with lances and barbed sticks called *banderillas*. When it is sufficiently weakened, the *toreros* execute various formal moves, culminating with the most senior of their number, the *matador*, stabbing the bull through the heart.

Some regard such events as aesthetic spectacles. For instance, Alain Renaut maintains that, like all 'artistic creation', a bullfight is 'in some way connected to the submission of unreasoning matter [i.e., the bull] to a will that gives it form'. This, he suggests, is 'the true aesthetic dimension of bullfighting' (quoted in Ferry 1992: 51). Similarly, Alexander Fiske-Harrison contrasts bullfighting with 'mere gladitorialism' (2011: 31):

[The *matador*] must not only stand fast and use his training with the bull, but he must dance with it, linking a series of passes with the cape into a deliberately chosen *faena* [a final series of passes] which contains within its graces an exquisite and esoteric death. Art is the order of the day, not assassination, although it all too often stoops to mere butchery (and lack of bravery, lack of skill, lack of taste – all these are the reasons for this). (2011: 163)

It is, Fiske-Harrison suggests, the 'artistic quality' of a bullfight 'which mitigates and justifies the undeniable suffering the bull undergoes in the ring' (2011: 73–4).

Would a virtuous person be inclined to regard a bullfight in these ways? In addressing this question, the immediacy of the bull's suffering is surely relevant. It is that immediacy, amongst other things, which distinguishes the bullfighting case from that of Foster's imaginary sunset. For even if someone's appreciation of a sunset's aesthetic qualities is influenced by their knowledge that it has been produced by some factory,

the factory itself, and the yellow gas that belches from it, remains experientially distant. The person is viewing a sunset, not a factory. But to attend a bullfight is, presumably, to be directly confronted with the suffering of an animal. Someone who revels in that suffering is plainly cruel. Someone who is unmoved by it is plainly callous. Someone, moreover, who finds it easy to suspend their repugnance at the creature's torment and regard the scene as an aesthetic spectacle is, I would suggest, more likely to be morally vicious than morally virtuous. They are, in this respect, more like the person who admires the pattern of blood at a murder scene.

Summary

Some natural things are beautiful, others are ugly; some are clumsy, others elegant; some are cute, others overwhelmingly impressive. Environmental *aestheticians* address the philosophical issues raised by these sorts of judgements. Some of them follow Kant in maintaining that aesthetic judgements of nature (or indeed of anything else) must be *disinterested*. On this conception, the person who is judging the aesthetic qualities of a thing must have put out of mind all thoughts about how the thing in question might be *used*, for instance. She will, as it is often said, regard the thing with disinterest. The contemporary aesthetician Arnold Berleant rejects these claims, arguing that our aesthetic appreciation of anything, nature included, is marked by engagement and participation, rather than distance and disinterest. Berleant is surely right to hold that our aesthetic appreciation of nature is always, in this sense, engaged. Yet some have challenged his claim that it cannot, at the same time, be disinterested.

Cognitivists, such as Allen Carlson, typically argue that one needs a certain amount of scientific knowledge about natural objects if one is to properly appreciate their aesthetic qualities. Various examples seem to support Carlson's thesis. To someone who doesn't realize that it's a mammal, a whale might look like a clumsy fish. To someone who knows nothing about heathland ecology, a stretch of blackened stumps might seem to present a spectacle of terrible death and devastation. Yet several writers have contended, against cognitivists such as Carlson, that it isn't necessary to know much (or indeed any) science at all in order to properly appreciate the aesthetic qualities of many parts of the natural world.

The relations between environmental *aesthetics* and environmental *ethics* – to turn to a third issue – are complex. Even so, it is clear that it would be a mistake to dismiss the aesthetic appreciation of nature as an inherently acquisitive and anthropocentric practice, aimed at the obtaining of pleasure for human beings. It is, however, another question whether a morally good person would be disposed to appreciate the aesthetic qualities of bullfights and other morally questionable phenomena.

Further reading

- Brady, E. (2003). *Aesthetics of the Natural Environment* (Edinburgh: Edinburgh University Press). A clearly written, comprehensive and balanced account of the field.
- Carlson, A., and A. Berleant (eds.) (2004). *The Aesthetics of Natural Environments* (Toronto: Broadview). An anthology of influential essays by writers such as Hepburn, Carlson, Saito and Berleant. (Hepburn's essay, in particular, is a must-read.)
- Cooper, D. E. (1998). 'Aestheticism and Environmentalism', in D. E. Cooper and J. A. Palmer (eds.) *Spirit of the Environment: Religion, Value and Environmental Concern* (London: Routledge): 100–12. Appeals to a wide range of sources, from Kant to Japanese aesthetics, to argue that the aesthetic appreciation of nature has much in common with the aesthetic appreciation of art.
- Fowles, J. (2000 [1979]). *The Tree* (London: Vintage). A set of reflections on what it is like to experience the natural world.

7. Nature, Wild and Restored

Nature, revisited

In the Introduction, I suggested that environmental philosophy tends to be about *nature* or *the natural world*, where these terms should be taken to denote the nonhuman part of the biosphere.¹ My aim in saying this was not to identify necessary and sufficient conditions for something's counting as natural. That would have been too ambitious a task for an introductory chapter. My intention was merely to indicate, albeit in a rough and ready way, what I am referring to when I use the term 'nature'. Even so, some readers will worry that my account of nature as a realm that is to be distinguished from the world of human beings is not simply incomplete and imprecise, but seriously confused.

Such worries can be developed into several general lines of criticism, of which, in this section, I consider two.

The 'everything's natural' objection

To contrast what is natural with what is human is to betray one's allegiance to an implausible variety of metaphysical dualism. This dualism is not exactly between nature and *humans*, but between nature and the soul- or mind-like *essence* of humans. The human body, on this conception, belongs to the category of nature, as do its various products, such as breath, saliva and faeces. The human mind, by contrast, is regarded as being non-natural. And the same is thought to hold true of the things we employ our minds to produce. So while saliva and faeces are held to belong to nature, bicycles, gas-fired barbeques and other artefacts are not. As Steven Vogel (2011: 93) points out, human–nature dualists tend to believe that 'When *thought* is employed in the production of something, the product is thereby rendered "artificial" and not natural.'

To endorse these dualistic claims is, however, to fail to appreciate the fact that human beings and their works are parts of nature, just like everything else. Amongst other things, it is to fail to recognize that human beings are the products of the same general physical processes that gave rise to porpoises, parsley and protozoa, and that

¹ I distinguish nature from *the world of human beings* rather than from *culture*, since there is evidence to suggest that some nonhuman animals have cultures (see, further, Laland and Galef 2009).

their works, from poems to power plants, ‘are no less natural than beaver dams or spider webs’ (Vogel 2011: 88).

To contrast what is natural with what is human is bad metaphysics. But it is also morally pernicious. For the misguided metaphysical notion that human beings and their works are separated by an ontological gulf from natural things encourages the misguided thought that the former are in some sense superior to the latter, which, in turn, lends support to the notion that we human beings are morally entitled to use ‘merely’ natural things in any way we see fit (Warren 1990). There is, in short, a clear line of implication leading from (a) the seemingly innocuous contrast between nature and humans to (b) metaphysical dualism to (c) anthropocentric ethics to (d) the real-world devastation of the earth.

According to this objection, human beings are essentially natural, in the sense that they have no supernatural essences. Not everyone would endorse that naturalistic thesis. Some, indeed, would reject the assumption that humans must be either (a) imbued with supernatural essences or (b) entirely natural.² But suppose, for argument’s sake, that the advocate of the ‘everything’s natural’ objection has things right. Suppose that human beings really are entirely natural, in the sense specified. How, then, should we conceive of ourselves? It might be thought that to deny that we have supernatural essences must be to affirm that we are basically nothing more than complicated material objects. This, however, would be a mistake. To be sure, if nature, in the very general sense we are considering, *were* basically a collection of material objects, and if, moreover, we humans really *were* natural through and through, then it would indeed follow that we are at root nothing more than material objects. But it is another question whether nature really is, as some believe, ‘merely the hurrying of material, endlessly, meaninglessly’ (Whitehead 1925: 54).³ Scientists have certainly not proven the truth of any such crude form of materialism. When modern physicists speak of superstrings, for instance, or of quantum fields, they are not talking about material objects. In fact, science could not prove materialism to be true, for materialism is, like its near relative, physicalism, a philosophical position. So to assess its plausibility one cannot simply appeal to scientific findings. One must do philosophy (see, further, Ratcliffe 2013). And, turning to philosophy, one finds a number of interesting non-materialist conceptions of what the natural, as opposed to the supernatural, might be.⁴

² Martin Heidegger might be one example. Although he rejects the notion that we have supernatural essences, he claims that our way of being is ‘separated’ from that of other ‘living creatures’ by an ‘abyss’ (Heidegger 1993: 230; for a good discussion of Heidegger’s views on ‘animal being’, see McNeill 1999: 197–248). I am grateful to David E. Cooper for pointing this out to me.

³ Whitehead is describing a view he finds in the works of early modern thinkers such as Descartes. He is not endorsing that view.

⁴ See, further, Foltz and Frodeman (2004). Ted Toadvine has appealed to the works of the phenomenologist Maurice Merleau-Ponty to develop a particularly interesting account of nature – one in which ‘our own meaning-making is an event within the larger process of nature’s production of sense’

To maintain that ‘everything’s natural’ is therefore to hold that human beings are entirely natural, in one sense of the term ‘natural’. It is also to postulate a strong connection between human–nature dualism and a morally troubling sort of anthropocentrism. How strong a connection? Advocates of the ‘everything’s natural’ objection do not suggest that it is *only* dualists who disparage nature. That is just as well, since examples of non-dualist anthropocentrists are not hard to find. Take Baruch Spinoza, for instance. He contended, against Descartes, that everything that exists is part of a single great substance, which, upsetting the religious establishment of his day, he called ‘God or Nature’. Nevertheless, he maintained that ‘the lower animals’ may justifiably be used ‘at our pleasure’ and treated ‘as is most convenient for us’ (1996 [1677]: 135). Alternatively, consider materialist varieties of monism. The hard-nosed materialist who maintains that human beings, along with everything else, are ultimately nothing more than material objects might not give a damn about green and growing things. So anthropocentrists aren’t necessarily dualists. Nor are dualists necessarily anthropocentrists. Think of those dualists who maintain that we ought to act as responsible stewards of nonhuman things, notwithstanding the ontological gulf between us and them. Or, if that sort of position still seems too anthropocentric, imagine a dualist who takes to worshipping nature precisely because he is ashamed of his own humanity. Such a dualist would clearly have ‘issues’. But anthropocentrism wouldn’t seem to be one of them.

So human–nature dualism doesn’t *necessarily* lead to anthropocentrism. But does it nonetheless *encourage* it? In considering this question, it is crucial to realize that our thoughts about humanity and nature are to a large extent conditioned by our cultural context. For those of us in the West, they have been shaped by an intellectual heritage which has tended to elevate the human – or the essentially human – and disparage the natural. Indeed, when nowadays we hear dualistic claims, our thoughts tend to run along intellectual tramlines which were laid down thousands of years ago. Thanks to the Neoplatonists and their dim view of matter, to those they influenced in the medieval Church, to Descartes and the position that subsequently became known as Cartesian dualism – thanks to all these influences and more, we are led to suppose that the transhuman world is merely so much material stuff that may permissibly be used in any way we see fit (see, further, Plumwood 2002: 106–9). So, although more argument would be needed to prove the point, the dualist’s suite of concepts really does seem to be morally troubling. When accompanied by certain other ontological and ethical assumptions, human–nature dualism really does seem to encourage the view that nature is merely so much stuff to be felled, burned, mined, hunted, skinned and eaten.

It is, however, another question whether using the term ‘natural’ in the sense specified at the beginning of this chapter commits one to that troubling sort of dualism.

(Toadvine 2009: 131). For an introduction to the relations between phenomenology and what Toadvine calls the philosophy of nature, see James (2009).

That is to say, it is a further question whether simply accepting a contrast between what is natural and what is human commits one to a dualistic and anthropocentric conception of reality.

In addressing this question, it is important to note that ‘dualism’ suggests two *radically* different kinds of entity. Thus when Descartes set out his arguments in support of mind–body dualism, his point was not merely that minds and bodies are different sorts of entity. It was that they are radically different sorts of entity – so different, in fact, that he had a great deal of trouble trying to explain how they could interact (though for a different view, see Baker and Morris 1996). But not all distinctions amount to dualisms, and indeed a distinction can be made between two items that are very closely related. Consider the distinction between England and Scotland, for instance, or that between Martin Sheen and his son, Charlie. Similarly, it is possible to distinguish between the human and natural worlds without postulating the sort of dualism – the sort of ‘deep ontological difference’ – that worries nature-sceptics such as Vogel (2010: 263).⁵

So the fact that a line may be drawn between the categories of ‘the human’ and ‘the natural’ does not entail that the entities that belong to the former are radically unlike those belonging to the latter. Furthermore, the line need not be sharp. Many entities will fall into a grey (or greyish-green) area, being partly human and partly natural. Compare Yellowstone National Park and New York City. Both are natural in the sense that neither is supernatural. Nonetheless, Yellowstone is, in a different sense of ‘natural’, more natural than New York City, since its current state is to a lesser extent the intended product of human actions. Conversely, although New York City, with its London planes, Norway maples and numerous nonhuman residents, is not entirely ‘human’, it is clearly more so than Yellowstone. There’s no confusion or inconsistency in such claims – simply two different meanings of the term ‘natural’.

The ‘everything’s human’ objection

We tend to suppose that the word ‘nature’ refers to a realm that exists independently of the thoughts, feelings and practices of humans. To visit a national park or watch a wildlife documentary is, we assume, to be granted a peek into a starkly nonhuman world, in which nonhuman things go about their business in their own nonhuman ways. But these assumptions are sociologically naive. What we take to be nature is always conditioned or mediated by the human world – by our culture and, more broadly, by the distinctly human forms of perception and categories of thought that shape our experience. This seems obvious when we read antiquated commentaries on the natural world. For instance, when Douglas Freshfield, a nineteenth-century British mountaineer, refers to the peaks of the Caucasus range as being ‘of steep writing desk

⁵ Vogel himself (2011: 96) is unpersuaded by this sort of response. For an introduction to Vogel’s interesting views on environmental philosophy, see Vogel (2002).

form' or of a hollow at the head of a valley as being 'as flat as a cricket ground', it is clear to us 21st-century observers that his experience was shaped by the cultural forces of Victorian Britain (see Macfarlane 2003a: 195). But the same holds true of *our* encounters with nature as well. So when I – a white, middle-class, educated, male suburbanite – visit some remote and supposedly natural place, such as Yellowstone National Park, I see it through the eyes of a white, middle-class, educated, male suburbanite. My experience is shaped by the writings of Henry David Thoreau and John Muir; by the paintings of J. M. W. Turner and Thomas Cole; by the photography of Ansel Adams; by countless television documentaries I have watched; by various notions about masculinity, colonialism and private property. At first sight, I might think that I am face-to-face with nonhuman nature. But, in reality, what I experience reflects a thoroughly *human* world.

In light of such thoughts, the notion of a natural world which may be contrasted with that of humans is exposed as being naive. There are, instead, many different *natures*, each of which is an 'invention', or a 'social construction', or the outcome of a 'negotiation' between interested parties, or in some other way a reflection of what goes on in the human world.

It would be a mistake to suppose that this kind of charge can be defused simply by refuting the claim that reality – 'nature' included – is a mere social or cultural construction. For sure, claims to that effect *are* extremely implausible. The claim that all our thoughts and perceptions are shaped by social factors does not entail that everything we could think about or perceive is a mere social construction (see, further, O'Neill 2008: 539). However, when pushed on the point, very few advocates of the 'everything's human' objection endorse full-blown constructivism (see Cronon 1996: 21). So, for instance, although Neil Evernden makes the striking claim that 'before the word was invented, there was no nature', he goes on to make it clear that he is not suggesting that the coining of that word miraculously brought the world of roots, rock and soil into being (1992: 89). Despite the generally constructivist tone of his discussion, he does not believe that the world is simply what we humans make of it. Likewise, though Roger J. H. King (1990: 102) maintains that nature is 'an artefact of human cultural life', he quickly adds that this is merely 'to say that we have no access to a Nature in itself; our interpretation of Nature can never be independent of the intellectual, artistic, emotional, and technological resources available to us'. Like Evernden, he stops short of endorsing global constructivism.

So to object to the use of the term 'nature' on the grounds that 'everything's human' is not necessarily to suppose that the world is merely what we humans make of it. How, then, should we interpret that objection? It seems to me that those who maintain that 'everything's human' think that the habit of referring to a natural (as opposed to human) world encourages a false and sociologically naive assumption. In their view, it encourages one to assume that trees, mountains and other supposedly natural things are features of reality as it is 'in itself', independent of the thoughts, feelings and practices of us humans. But to assume *that* (the nature-sceptic continues)

is to forget the first lesson of Sociology 101: that our conceptions of nature have *always* been shaped by social, political and other ‘human’ factors.

That charge seems to have force against some of those who contrast what is natural with what is human. Think of those cases in which conservatively minded people condemn certain practices as unnatural. Such people seem to think that they have a direct line to nature (or, more usually, ‘Nature’), as others think they have a direct line to God. And believing that they know what nature itself has to say on the issue, they feel no need to defend their position in free and open debate. What nature has to say on the matter is, in their view, crystal clear: the practice in question – be it homosexuality, veganism, eyebrow piercing or whatever – is contrary to the natural course of things and hence (by another outrageous leap of reasoning) morally wrong.

Social scientists rightly point out that those who make such arguments are not referring to what they think they are referring to: nature, construed as a realm that is entirely independent of the thoughts, feelings and practices of human beings. Instead, they are appealing to their own culturally conditioned notions of what nature is. Yet not all talk of nature is so sociologically naive. The genre of nature writing provides some good counterexamples. Consider, first, Richard Mabey’s record of his impressions upon visiting the Fortingall Yew in Scotland, a tree so old that Pontius Pilate was said to have played underneath its branches. Pondering our sense of wonder at the vast age of such trees, he worries that this ‘veneration of antiquity – which is only ancientness by comparison with our own brief span – is about *us*’. These matters, he adds, ‘are more about us than the yews ... The tree itself, *for* itself, recedes, already resembling an inanimate standing stone, and not far off being the next piece of paving in the tourist trail’ (2008: 90; cf. Fowles 2000 [1979]: 94). Mabey writes about our encounters with the natural world; however, he is well aware that those encounters are always shaped by social and cultural forces. A second example is provided by Robert Macfarlane’s book *Mountains of the Mind*. Although, like Mabey’s writings, that book sits squarely within the genre known as nature writing, Macfarlane’s main point is to show that even things as overwhelmingly vast, ancient and altogether nonhuman as mountains are in part the products of ‘our own experience and memory, and ... our shared cultural memory’ (2003a: 18). Although they exist ‘over and beyond human perceptions of them’, they are, he writes, to some extent ‘the products of human perception; they have been *imagined* into existence down the centuries’ (2003a: 19). Macfarlane is no constructivist: he realizes that when we encounter a mountain, what we encounter is not entirely a social or cultural construction. But he acknowledges that our impressions have to some extent been shaped by social, political and other ‘human’ factors. More generally, while Macfarlane champions nature writing, he is well aware that what we take nature to be has been shaped by such factors.⁶ And the same may be said not just of many other nature writers, but also of many of those environmental philosophers

⁶ See, e.g., Macfarlane (2003b). For a rather different assessment of Macfarlane’s work, see Jamie (2008).

who distinguish between the ‘natural’ and ‘human’ worlds. One can make that sort of distinction without supposing, naively, that when we encounter such things as yew trees and mountains we have been afforded a glimpse into how reality is ‘in itself’, independent of the thoughts, feelings and practices of human beings.

What, then, should we make of the ‘everything’s human’ objection? It would be unwise to outlaw all distinctions between the natural and human worlds. However, the considerations set out above show that such distinctions must be handled with care. It is all too easy to forget the ways in which our impressions of the world around us have been conditioned by social, political and other more or less ‘human’ factors. In the following sections, we will consider how such factors have shaped our conceptions of wilderness.

A very short history of the received wilderness idea

When, pushed by religious oppression and pulled by vague promises of an earthly paradise across the sea, the Pilgrim Fathers embarked for the New World, they left behind them a land which had been largely domesticated. In Britain and the Netherlands, the primeval forests were long gone and almost every patch of earth had been visited, lived on or worked since prehistoric times. The world the pilgrims eventually came to in the west was very different. Far from being an earthly paradise, it quickly revealed itself to be a wild, untamed land – mile upon mile of sucking swamps and dark tangled forests. To the pilgrims, it was a ‘waste and howling wilderness’ (quoted in Nash 1982: 36; cf. Deuteronomy 32: 10). The Israelites had to wander the wilderness of Sinai; the pilgrims concluded that their faith would be tested by the wild lands of New England.

It proved a tremendous test. The wild lands were thought to harbour strange and terrible beasts: not just grizzlies, rattlesnakes and the always-watching malevolent natives, but also ‘Dragons’, ‘Droves of Devils’ and ‘Fiery flying serpents’ (Nash 1982: 29). Summers were stiflingly hot and humid, winters unbearably cold. Under such pressures, a man’s faith could crack and split; he could even revert to a state of savagery himself.

So the promises were empty: America was no earthly paradise. But that, the pilgrims resolved, did not mean that it could not be made into one. The notion took root that if they were to enjoy an idyllic environment in the New World, ‘they would have to *make* it by conquering wild country’ (Nash 1982: 26). In this story, the wilderness would play the role of adversary: an enemy to be ‘conquered’, ‘subdued’, ‘vanquished’ – and transformed, by the axe and the plough, into productive land.

For the pilgrims, this was a religious duty. Wasn’t God’s very first commandment to humankind to be fruitful, to multiply and to subdue the earth? So, as the forest was cleared and the land cultivated, the Good News spread west, and those who resisted its ‘glorious gospelshine’ were driven ever deeper into ‘forrests wide & great’ (Nash

1982: 37). The old superstitions gradually lost their hold on the settlers' minds. The wilderness came gradually to be seen not as the haunt of dragons, demons and devils, but rather as 'wasteland' or 'unimproved land', waiting to be made productive.

But what of the natives? How could the settlers, these god-fearing men and women, justify taking their land? John Locke provided one reason. A one-time secretary to 'the Lord Proprietors of Carolina and the Council of Trade and Plantations', Locke argued that one could only be said to own a piece of land if one had 'mixed' one's labour with it (1980 [1689]: 19; see, further, O'Neill 2008: 530). And since, in his judgement, the natives, being mere hunters and gatherers, had not done that, the land they inhabited was not theirs at all, but rather there for the taking. Granted, the 'wild Indian' owned whatever he could trap, spear or pick from trees. But he was, in Locke's view, a mere 'tenant' of the land (1980 [1689]: 19).⁷

So the settlers pushed on towards the setting sun. And after just a few centuries of civilization, little of what Locke had once called 'the wild woods and uncultivated waste of America' was left (1980 [1689]: 24). Only a few inaccessible places had managed to escape the march of civilization. But by then, in the eighteenth and nineteenth centuries, they had come to be regarded rather differently. For genteel observers, their minds and senses ignited by Romantic literature, America's wild places were oases in a fast-spreading desert of civilization. Wilderness, in their eyes, was no godless realm. It was a place where the gentleman explorer might still find creation in its pure state – fresh from God's hand (Nash 1982: 29). Wildernesses, indeed, were places where God's 'wisdom and power' were manifested, where one could converse with Him (Nash 1982: 54, 58). Their mountains were no longer 'warts, pimples, blisters', but symbols of God's power (Nash 1982: 45, 61–2). Their forest groves were 'temples' and 'cathedrals' (see Schama 1995: ch. 4, section i).

This sanctification of wilderness was accompanied by a change in aesthetic appreciation. Commentators admitted that New World landscapes lacked the classical and historical associations of their Old World counterparts. American landscapes had not provided the backdrops to ancient epics and medieval romances. There were no Thermopylae, no Tintagels. But what they lacked in historical pedigree they more than made up for in sheer *scale*. True, the landscapes of Europe could be historically interesting. They could be pretty, even beautiful. But for their capacity to provoke the sublime, patriots insisted that America's great wildernesses could not be beaten. This was the New World as portrayed by the Hudson River School: a magnificent and awe-inspiring landscape, depicted on huge canvases by men such as Thomas Cole and Frederic E. Church. The belief grew that this was a great land, one that could inspire great thoughts and create great men. In the wilderness, there was no room for the soft, the flabby, the urbane; no room for the slavish following of fashion and the accumulation of trinkets. The wild offered a chance to escape the paraphernalia of

⁷ On the relations between Locke's account of property and colonialism, see O'Neill (2008: 547, n.11).

consumer culture, a place in which to develop quintessentially American virtues such as toughness and self-reliance.

These ideals were expressed in the works of men such as John Muir and Theodore Roosevelt. And, through such men, they eventually came to be expressed in policy. Yellowstone National Park was founded in 1872, the National Park Service in 1916 and the Wilderness Society in 1935. In 1964, the Wilderness Act was passed by the United States Congress and signed by President Lyndon B. Johnson. Its purpose was to preserve and protect those areas which are ‘untrammelled by man, where man himself is a visitor who does not remain’.⁸ As a direct result of that Act, we can nowadays visit places like Yellowstone, Yosemite and Glacier. In so doing, we think we see America as it once was: a great wilderness, for the most part untouched by human hand.

Sceptical responses

That is a *very* brief history – and it leaves out lots of important things. Still, it gives some sense of how we arrived at what Michael P. Nelson and J. Baird Callicott (2008) call the ‘received wilderness idea’: the notion that, although most of the world has been civilized, pockets of pristine wilderness remain.

In recent decades, that notion has come under attack – and from several directions. Some writers have pointed out that the idea of wilderness, conceived as an area untrammelled by man, is culturally specific, the product of certain distinctively Western assumptions about, amongst other things, masculinity, religious evangelism and the moral permissibility of subjugating indigenous peoples. And this, they contend, is borne out by the fact that people from some non-Western cultures have no need, and can make little sense, of the notion of wilderness. Consider, for example, the following statement from Chief Standing Bear of the Oglala Sioux: ‘We did not think of the great open plains, the beautiful rolling hills and the winding streams with tangled growth as “wild”. Only to the white man was nature a “wilderness”’ (quoted in Nash 1982: xiii). But although this observation is of anthropological interest, it is difficult to see why it constitutes a *criticism* of the wilderness idea. That idea may indeed be suspect. However, one cannot prove that it is simply by pointing out that it only tends to have purchase in Western cultures. Further argument is required to show that there is something dubious about the received wilderness idea (cf. Wood 2001: 358).

Such arguments have been provided. Consider, first, the notion that a wilderness is a place that belongs to no one – *terra nullius*, as classically trained colonial administrators put it. That is not a ridiculous notion. Even nowadays, many so-called ‘wilderness areas’ are largely uninhabited. However, as historians such as William Cronon (1996) and David Spence (1999) have pointed out, this is usually because their original inhabitants were evicted. And, contrary to the views of the colonists, those people were in many instances not simple hunter-gatherers. For example, it has been revealed that

⁸ http://www.wilderness.net/NWPS/documents//publiclaws/PDF/16_USC_1131-1136.pdf.

many of the First Nation peoples of the Americas had in fact ‘mixed’ their labour with the land. In such cases, they could, even by Locke’s disputable standard, be said to be owners of the land and not mere tenants on it. Yosemite provides a good example. When, in 1851, the Ahwahneechee people were hounded from the area that would subsequently become the national park, they left behind a landscape that was to some extent their own creation. The lush meadow floor of Yosemite Valley, which to John Muir and others had seemed a pristine wilderness, was partly the product of the Ahwahneechee practice of burning the brush in order to create space for grazing (see Schama 1995: 186; cf. O’Neill et al. 2008: 133).

In North America, then, many of the places we might think of as being untrammelled had in fact been significantly trammelled (or at least impacted), and if nowadays they are largely free of people, this is because the original inhabitants were long ago booted out. The same story has been repeated in many of those parts of the world to which the North American practice of wilderness preservation has been exported. In this regard, much attention has been paid to the ambitious attempts to protect Bengal tigers by creating reserves in various parts of India. In order to establish reserves large enough to support viable populations of tigers, entire villages have been uprooted and removed. The reserves thus created may not always qualify as wildernesses: in some cases, they may have been closed to tribespeople but opened to scientists and tourists. But even if they do so qualify, they will not have been *preserved* so much as *created* (see, further, Dowie 2009: ch. 9).

A similar story can be told about Etosha National Park in Namibia. The land that now falls within the park’s boundaries was for many centuries home to the Hai//om people.⁹ In 1907, when the area was declared a game reserve, the Hai//om were permitted to remain – partly because they were thought to be sufficiently uncultured to form part of the natural environment (see Suzman 2004: 225). For early visitors to the park, they provided what one commentator calls ‘a touch of ethnographic spice’ to the otherwise ‘wildlife-focused safaris’ (Suzman 2004: 225). Yet as time went on it was increasingly felt, both by tourists and by the park administration, that the Hai//om were a blot on the landscape – a distracting reminder of the ‘human’ in what was supposed to be a pristine wilderness. In January 1954, the Hai//om were given 30 days to get out. And, apart from the few Hai//om who are park employees, they have for the most part remained out ever since. Evicted from their land, many took up work as farm labourers. Yet, with recent changes in the farming industry, more and more have been reduced to begging, prostitution and reliance on welfare support (Suzman 2004: 227). As with the Indian reserves, the land lying within Etosha National Park has to some extent been shaped by human actions.

So wildernesses, conceived as areas that have been untrammelled by human beings, are less common than is usually supposed. Even so, it might seem that *some* such

⁹ ‘//’ represents a sound known as a lateral click. It is sometimes rendered as ‘k’ (as in ‘Haikom’ rather than ‘Hai//om’).

places must exist. It might seem that some remote corner of the great wide earth – the frozen deserts of the Antarctic, perhaps, or the most inaccessible parts of the Siberian taiga – must always have been not just uninhabited, but entirely unaffected by the actions of humans.

But not everyone is so optimistic. Here, for instance, is Bill McKibben's verdict, as presented in *The End of Nature*: 'We have changed the atmosphere, and thus we are changing the weather. By changing the weather, we make every spot on earth man-made and artificial. We have deprived nature of its independence, and that is fatal to its meaning. Nature's independence *is* its meaning; without it there is nothing but us' (1990: 54). Many have been convinced by McKibben's claims. Indeed, in recent years some have gone as far as to claim that human effects on the earth's ecosystems have become so pronounced that we must think of ourselves as having entered a new geological period, the Anthropocene.

Assume for the sake of argument that these sorts of claims are correct and that anthropogenic climate change has brought about the end of nature (in McKibben's sense of 'nature'). Has it sounded the death knell for wilderness too?

There are reasons to think that it has not. Consider McKibben's claim that we have made 'every spot on earth man-made and artificial'. If he is right about that, then it would indeed seem to follow that no place on earth could qualify as wild. But it is not at all clear that he is right. For even if every place on earth has been *affected* by human actions, not all of them are the *intended products* of such actions. Take the remote mountain known as Valkyrie Dome on the East Antarctic Ice Sheet. Like the rest of Antarctica, that place has been affected by anthropogenic climate change. Nonetheless, it is clearly not 'manmade and artificial', an intended product of human actions. The same holds true of Yosemite. Unlike Valkyrie Dome, the area was deliberately shaped by the actions of human beings (the Ahwahneechee). Furthermore, a great deal of human intervention – from the formulation of laws to their enforcement by park rangers – is required to preserve the area in its present state. Still, it is clear that what goes on within the park's boundaries is to a large extent the result of natural rather than human forces (see, further, Elliot 1997: 125). The mere fact that humans had a hand in its making and preservation does not entail that the place is an artefact.

But does the mere fact that such places have been affected by human actions entail that they are not wildernesses? In considering this question, it is important not to be misled into thinking that everything on earth is either 100 per cent wild or not wild at all. For it is surely more reasonable to suppose that some places are wilder than others: that, although neither the thick rainforests of Borneo nor the lightless depths of the Mariana Trench are pristine wildernesses, both are wilder than either Times Square or downtown Tokyo. And once it is recognized that wildness, like naturalness, comes in degrees, one can concede that the fact that something has been affected by humans reduces its wildness without holding – implausibly – that any sort of anthropogenic influence, even a very minor and unintended effect, automatically reduces its wildness to zero. And once that is admitted, one can acknowledge that while the all-pervading

effects of anthropogenic climate change have doubtless reduced the amount of wildness in the world, they have not obliterated it.

One final point: as we have seen, wilderness-sceptics object, on scientific, metaphysical, moral and political grounds, to the notion that wildernesses, conceived as areas that have been unmodified by human activity, exist. Many of them also reject calls to preserve those places that are usually referred to as wildernesses (see, e.g., Turner 1994 and Jordan 1994). But not all do so. Take J. Baird Callicott. He is thoroughly opposed to the received wilderness idea: to its ‘macho baggage, its neo-Puritan theological freight, its connotation of a resource for either virile or meditative recreation, its penumbra of Arcadian ecology, its undercurrents of ethnocentrism and racism’ (2008: 370). But he does not argue that those places usually referred to as wildernesses are without value, or that we should give up trying to preserve them: ‘I have criticized a name’, he writes, ‘not the places ... that bear that name’ (2008: 373). So, for wilderness-sceptics like Callicott, we should continue to protect places such as Yellowstone and Yosemite from development. We should simply give up calling them wildernesses. ‘Wildlife sanctuaries’ might, he suggests, be a better term (2008: 373).

Wildness

In the previous section, we considered the suggestion that a wilderness is a place that has been entirely unaffected by humans. We then moved on to discuss the alternative suggestion that even if no places on earth are entirely wild, some are wilder than others, in the sense that they are for the most part not the intended products of human agency. In both cases, however, we construed wildness in terms of independence from human actions. Yet should wildness be construed in such terms?

Henry David Thoreau, for his part, appeals to etymology, suggesting that *wild* has its roots in the verb *will*, and that something is wild to the extent that it does what it wills or wishes (2007 [1906]: 179). This sort of wildness is, he suggests, evident in domesticated nature, and not simply in the wild: ‘I love ... to see domestic animals reassert their native rights – any evidence that they have not wholly lost their original wild habits and vigor; as when my neighbor’s cow breaks out of her pasture early in the spring and boldly swims the river, a cold, gray tide, twenty-five or thirty rods wide, swollen by the melted snow’ (Thoreau 2010 [1883]: 95).

Thoreau-esque notions of wildness have struck a chord with a number of modern thinkers. For example, Jay Griffiths writes that ‘What is wild is not tilled. Self-willed land does what it likes, untilled, untold, while tilled land is told what to do’ (2006: 41). Similarly, Macfarlane, who is not just a lecturer and nature writer but also a mountaineer, explains that wildness need not mean the ‘tutelary harshness’ of ‘rock, altitude and ice’, for it can also denote ‘the sheer force of ongoing organic existence, vigorous and chaotic’ (2007: 176, 316). This is not wildness construed in terms of independence from human concerns, or as any sort of place. It is wildness as process:

the spontaneity of the buddleia exploding from the railway sidings or of the tree root pushing up through the suburban patio. It is, moreover, a wildness that can manifest itself in distinctively *human* practices, such as poetry, freeform jazz and, more generally, the sorts of activities which Daoists sometimes laud as being in tune with the basic ‘way’ or *dao* of things.¹⁰ For Gary Snyder, that sort of wildness is there at the very core of the human psyche. While the ‘conscious agenda-planning ego occupies a very tiny territory’ in our minds, the ‘depths of the mind, the unconscious, are’, he writes, ‘our inner wilderness areas’ (1992: 32).

To what are we to attribute the recent popularity of these notions of wildness? One answer is suggested by the works of the British naturalist and nature writer Richard Mabey. In *Beechcombings*, he wonders whether ‘the tangle of thorn and bramble that young trees grow through’ is ‘beyond the pale in modern conceptions of the natural ... Too wild, too wilful’ (2007: 125). In *Nature Cure*, he considers public perceptions of scrubland. Perhaps, he speculates, it is ‘its ragged, unpredictable luxuriance – the result not of management but of spontaneous growth’ that has ‘blackened its image’ (2005: 125–6). In a society in which ‘Management by Objectives’ reigns supreme, there can be no place for the ‘the unmanaged energy of nature’ (2005: 200, 219).

Though Mabey is a naturalist, these are not the dispassionate observations of the natural historian. They have a political message. That message is, to be sure, one that would not be welcomed by everyone. It would not be met with open arms by those who regard themselves as managers of nature, for example. The wildness of which Mabey writes strikes a discordant note in discussions of ecosystem services or natural capital. Furthermore, some will rightly complain that they have no need of a shot of such wildness, since they have more than enough of it in their lives already. Perhaps an inhabitant of a rundown area of West Baltimore or one of Rio’s favelas would not take heart from nature’s unmanaged energy. But for those of us who live in the world of emails, deadlines, committees and key performance indicators, for those of us whose existence seems to be dominated by what Martin Heidegger (1966: 56) once called ‘calculative thinking’, nature’s exuberant, subversive wildness can serve as a salutary reminder.

Environmental restoration

Environmental (or ecological) restoration is the practice of restoring an environment to a previous healthy state, usually one prior to some form of human disturbance. This can involve a number of different sorts of projects: from the reintroduction of species (e.g., wolves to Yellowstone) to the removal of invasive ones; and from the clean-up operation after an oil slick to a business deviously guaranteeing restorative measures in order to obtain permission to drain a wetland.

¹⁰ Daoism-influenced environmental philosophies are developed in Mathews (1999) and Cooper (2012).

The philosophical issues concerning restoration are best introduced by means of a real-life example. So: consider the case of the Denniston Plateau on the South Island of New Zealand. The plateau provides a harsh, high-altitude environment. Centuries of wind and rain have worn away much of the topsoil to expose a pavement of sandstone. Though thin and depleted, the soil that remains is able to support hardy snow tussock grass and miniature forests of bonsai pine and rata trees. Indeed, the area has what the New Zealand government's Department of Conservation describes as a 'unique biodiversity'.¹¹ It harbours a range of animals, including carnivorous giant snails, enormous cricket-like ground weta, freshwater crayfish, fernbirds, great spotted kiwis, speckled skinks (a kind of lizard) and green geckoes.¹²

On 23 May 2013, several years after applying, the mining company Bathurst Resources obtained permission to excavate an open-cast coal mine on the plateau. According to Nick Smith, the government minister who approved the project, the operation will provide a \$1 billion boost to the New Zealand economy and create over 200 jobs (Bayer 2013). In return for this approval, Bathurst Resources have had to agree to mitigate and offset the environmental impact of their mining. In particular, they have promised to restore the area to something close to its pre-mining state. As the company's chief executive, Hamish Bohannon, put it in a television interview: 'It's a bit like farming, the difference is, once mining's finished you put it back ... and what we can do today is put things back pretty well as they were before, and make improvements' (quoted in Mills 2013).¹³ Not everyone shares Mr Bohannon's optimism. Environmental organizations, such as New Zealand's Royal Forest & Bird Protection Society, have remained unconvinced. But suppose for the sake of argument that Bathurst Resources makes good on its promises and the excavated area is returned to something close to its original state. Would environmentalists have any reason to object that something of value has nonetheless been lost?

Robert Elliot, for one, would say that they would. Even if the plateau's contours and vegetation were to be meticulously restored and even if, moreover, its various nonhuman inhabitants were to return – even if all this were to be achieved, Elliot would argue that something would nonetheless be lacking. For, whatever it would have by way of habitatrichness and biodiversity, the restored environment would lack *naturalness* – and to that extent it would, in Elliot's view, lack value.¹⁴

¹¹ www.doc.govt.nz/about-doc/news/media-releases/denniston-coalmine-gains-access-approval.

¹² www.forestandbird.org.nz/campaigns/save-the-denniston-plateauours-not-mine.

¹³ Bathurst Resources provide a more considered statement on the issue at www.bathurstresources.com.au/sustainability/environmental.

¹⁴ It is true that Denniston Plateau is not an entirely natural environment (a point made by Nick Smith in his press release on the issue at www.doc.govt.nz/about-doc/news/mediareleases/denniston-coal-mine-gains-access-approval). Nonetheless, as we saw above, naturalness is not an all-or-nothing affair, and it is reasonable to think that the restored environment – as *restored* – would be less natural than the environment it replaced.

In developing his general case against environmental restoration, Elliot begins with some reflections about the value of natural environments. He argues that to give a full account of the value of any particular environment, one must do more than list its intrinsic properties – those that can be specified without referring to any entities other than itself. It is not enough simply to measure the environment’s biodiversity, for instance, or its capacity for selfrenewal. Elliot maintains that one must also pay attention to its *history*.¹⁵ For, in his view, an environment’s value is typically higher if it developed as a result of *natural* rather than human causes. So, by the lights of Elliot’s account, those environments that have evolved with minimal interference from humans qualify as highly natural and, all things being equal, highly valuable. Conversely, environments that were recently modified by humans will tend to have lower naturalness – and to that degree, lower value – than those that underwent similar modifications long ago (see 1997: 93). As Elliot puts it, ‘other things being equal, value increases as naturalness increases’ (1997: 124).

In appraising Elliot’s account, it is important to note what he is *not* claiming. Unlike Eric Katz, he does not suggest that to restore an environment is necessarily to transform it into ‘an artefact created for human use’ (Katz 1997: 97). On the contrary, he argues that, to the extent that an act of restoration involves natural processes (such as ecological succession) rather than human ones (such as the planting of trees), the environment produced counts as natural rather than artificial (Elliot 1997: 109). Indeed, Elliot concedes that ‘a restored natural environment ... may possess considerable intrinsic value, and certainly much more than the degraded environment which was the object of restoration’ (1997: 108). Nevertheless, in Elliot’s view, naturalness adds value: hence, all things being equal, restored environments lack value to the extent that they lack naturalness.

For Elliot, then, uncovering the history of an environment is a matter of revealing the sequence of causes which led to its present state. And assessing how that history bears upon the environment’s value is a matter of determining whether those causes were ‘natural’ or ‘human’. This emphasis on the importance of history seems right. The value of an environment really does seem to depend, to some extent, on its historical origins (but see Belshaw 2001: 248). However, Elliot’s account of the relations between value and history, resting, as it does, on the twin pillars of *causation* and *naturalness*, is not entirely convincing.

The point is best made by means of an example.¹⁶ So, to appeal to just one more very middle-class scenario, imagine that Briar Wood is of value to Penelope on account of its history: because it is where her parents first met; because it is where she used to climb trees and hunt for wild strawberries as a child; because it is where she used to walk the family dog; because it is where her husband proposed to her; and because

¹⁵ He maintains that, in this respect, environments are like works of art. A real Vermeer and a well-crafted replica might be indistinguishable to non-experts. But the former will have the higher aesthetic (and financial) value because it was actually painted by Vermeer, rather than by some skilled imitator.

¹⁶ The following (fictitious) example is inspired by O’Neill et al.(2008: 176).

it is where she and Mark still walk on warm summer evenings. A substitute wood – even one that was dug in and carefully arranged by a team of expert ecological restorationists – would not have the same value to Penelope because its history would not be ‘right’. But although Briar Wood has value to Penelope because of its history, it is not (or not only) the *naturalness* of that history which is important to her. She might happily accept that, having been managed by humans for centuries, Briar Wood isn’t very natural at all. What is more, the part of the wood’s history that matters to her cannot be adequately conceived as a *causal* sequence. When Penelope reflects on the history of Briar Wood, she does not think of it as a series of causes and effects (A causing B, B causing C, C causing D, and so on). On the contrary, Briar Wood is of value to her because it has, so to speak, played a role in the story of her life. *This*, she might say, is the wood in which I used to walk Rex, in which Mark proposed to me, and so on. A replica, however meticulously planned, however skilfully executed, would simply not be the same.

That’s only one example, of course, and a made-up one at that. However, it illustrates what is, I believe, a more general truth: that when people value particular environments they often do so not because those environments’ histories are largely natural rather than human, but because the environments in question have played significant positive roles in their lives. As I put it in chapter 4, environments (or places) are often of *constitutive* value to people. Admittedly, the fact that particular environments have this sort of value for certain people (such as Penelope) does not entail that they have value for everyone.¹⁷ Still, the fact that environments are valued for these reasons is, I believe, something that should be taken into account in discussions of restoration.

To sum up, it would seem that Elliot’s account is only partly true. He is right to criticize what he calls the ‘replacement thesis’, the notion that ‘destruction of a natural area is permissible, because the value lost can be ... restored’ (1997: 75–6). And he is, I think, right to base his criticism on an appeal to historical origins. The history of a restored environment would indeed be ‘wrong’, and that really does provide an overridable reason against restoration. However, Elliot’s focus on naturalness seems too restrictive. It is true that an environment can be of value because of its history, but that history need not be one in which human actions played a minimal role. Furthermore, in many of those cases in which environments are of value on account of their histories, those histories should be conceived not as causal sequences, not even as very complicated causal sequences, but as series of events which have meaning in the context of certain stories or narratives.

¹⁷ Recall the discussion of Jane and Ryland’s Fell in chapter 4; for more on this issue, see McShane (2012).

Summary

Not everyone likes the term ‘nature’. Some object to its use on the grounds that *everything*, humans and their works included, is natural. Others contend that since we can only encounter the world through the medium of our own, distinctively human conceptual schemes, *nothing* counts as natural. Arguably, neither criticism provides a good reason to give up using the term. In response to the first, it could be argued that using the term ‘nature’ does not commit one to the sort of human–nature dualism to which Steven Vogel and others rightly object. The second criticism, for its part, does not seem to justify abandoning all uses of the term ‘nature’, though it does serve to remind us that our conceptions of what nature is will always be conditioned by social and cultural factors.

The concept of wilderness raises a number of different though related issues. Various writers have pointed out that most of those areas that are referred to as wildernesses were in fact formed, and are in fact still maintained, by human beings. The ‘wilderness’ of Yosemite, for example, was created when its inhabitants were booted out, and it continues to be maintained through the efforts of rangers, volunteers and other human beings. Nonetheless, even if no places on earth qualify as 100 per cent wild, it is clear that some are *wilder* than others. But what is wildness? Opinions differ; however, for writers such as Jay Griffiths, nature’s wild exuberance is a refreshingly subversive force in today’s increasingly ordered and domesticated world.

Robert Elliot argues that restoring a natural environment to some former, healthy state destroys its naturalness. And since naturalness is a value-adding property, the restored environment will, he maintains, to that extent lack value. Elliot seems to have got something right: the value of particular environments really does seem to depend on their histories. Yet it is not clear that he is correct to assume that a history only adds value if it is natural – if, that is, humans had little or no part to play in it. Moreover, some have questioned Elliot’s decision to conceive histories in terms of merely causal connections. Writers such as John O’Neill, Alan Holland and Andrew Light contend that when we care about environments on account of their histories, we tend to conceive of those histories as narratives or stories, rather than as causal sequences.

Further reading

Mill, J. S. (2010 [1874]). ‘Nature’, extract reprinted as ‘The Amoral Status of Nature’ in D. R. Keller (ed.) (2010) *Environmental Ethics: The Big Questions* (Oxford: Wiley-Blackwell). A classic study of the various meanings of ‘nature’ (amongst other things).

- Nelson, M. P., and J. B. Callicott (eds.) (2008). *The Wilderness Debate Rages On: Continuing the Great New Wilderness Debate* (Athens, GA: University of Georgia Press). Gathers together some of the best work on wildness and wilderness. Its predecessor, *The Great New Wilderness Debate* (Athens, GA: University of Georgia Press, 1998, edited by Nelson and Callicott), is also superb.
- O'Neill, J., A. Holland and A. Light (2008). *Environmental Values* (Abingdon: Routledge). Part 3 of this outstanding introductory text is particularly relevant.
- Plumwood, V. (2002). *Environmental Culture: The Ecological Crisis of Reason* (Abingdon: Routledge). Challenges human–nature dualism and traces out a new vision of our ethical relations with the more-thanhuman world.

8. Climate Change

To ask if it will rain tomorrow or if last November was milder than usual is to inquire about the weather. To speak about climate is, by contrast, to refer to long-term patterns in the weather. So while one unusually mild November might count as exceptional weather, it would take a long string of them to indicate a change in climate. In short, one cannot discern a change in the climate of a particular place by looking out the window. One must consider long-term trends; and if one is to do that with any rigour, one needs the tools of statistical analysis.

The climate of the earth as a whole is affected by a number of factors, including the strength of the sun and the planet's trajectory through space. Amongst these, the greenhouse effect plays a key role. It works like this. Energy from the sun reaches the earth's atmosphere in the form of shortwave radiation (mostly sunlight). Some of it is reflected back out into space; however, approximately half passes through the atmosphere and is absorbed by the earth's surface. Some of this absorbed energy is then re-emitted in the form of longwave (or more precisely, infrared) radiation. Much of this energy gets absorbed by so-called 'greenhouse gases' in the atmosphere, such as water vapour, methane, nitrous oxide and carbon dioxide. This energy is then reemitted in all directions. Part of it heads back towards the surface of the earth. As a result, the lower atmosphere heats up and the climate changes.

The greenhouse effect is not a recent phenomenon: greenhouse gases were absorbing the solar radiation emitted by the earth's surface long before *Homo sapiens* evolved. Yet over the last century or so it has become much more pronounced. Human activities such as agriculture have resulted in the release of vast amounts of methane and nitrous oxide into the atmosphere. The burning of fossil fuels such as coal, oil and natural gas has added even greater quantities of carbon dioxide. As a result, the greenhouse effect has stepped up a gear, the atmosphere has warmed, and we have entered an era of human-caused or *anthropogenic* climate change.

One of the best sources of information on global climate change is the Intergovernmental Panel on Climate Change (IPCC), a United Nations body to which thousands of the world's leading researchers on the topic contribute. According to its 2013 'Summary for Policymakers', mean surface temperatures on the earth increased by 0.85 °C (1.53 °F) between 1880 and 2012 (IPCC 2013: 5). The main cause of this change was 'the increase in the atmospheric concentration of CO₂ since 1750' (IPCC 2013: 13). To predict future changes with any degree of precision, we would need a crystal ball. As things stand, we can only make educated guesses about what technological, social and economic changes the next few decades will bring. In view of this uncertainty,

the IPCC developed four ‘Representative Concentration Pathways’ (RCPs), each of which represents one way that greenhouse gas concentrations might evolve over the next century or so in response to political, social and economic changes. On the most optimistic of these RCPs, in which great efforts are made to address the problem of climate change, mean temperatures are expected to rise by a further 1.0 °C by the end of the twenty-first century. On the least optimistic, a 3.7 °C rise is predicted (IPCC 2013: 23).

Those changes might sound small; yet small changes in temperature have huge effects on the environment. In fact, we are already witnessing the effects of anthropogenic climate change. As surface temperatures have increased, much of the extra heat has been absorbed by the oceans. When warmed, water expands; hence, the increase in temperature has caused a rise in sea levels, a trend which has been exacerbated by the melting of glaciers and ice caps (IPCC 2013: 11). In addition to this, it is likely that climate change has increased the frequency of some extreme weather events (such as heat waves in Australia) and the intensity of others (such as storms in the North Atlantic) (IPCC 2013: 5, 7). Over time, these extreme weather events are likely to become more and more frequent and more and more intense. Sea levels will continue to rise, the Arctic ice cap will continue to shrink, and glaciers will retreat still further (IPCC 2013: 24–6).

These changes will not be uniform. Different parts of the world will be affected by climate change in different ways and to different extents. Some places will receive more rain, others less. Some will get warmer, others cooler (the phrase ‘global warming’ only refers to what will happen on average). And not all of these changes will be linear. Consider the effects of climatic change on tundra, for example. Historically, much of the soil in such areas is frozen. Yet in recent years climate change has caused this layer of ‘permafrost’ to thaw. As it has thawed, the soil has released carbon: both vast amounts of carbon dioxide and smaller volumes of methane, a more potent carbon-based greenhouse gas. In turn, these gases have contributed to the greenhouse effect and thus to the further thawing of permafrost (see Schuur and Abbott 2011). A positive feedback loop has been established, in which the effects of climate change exacerbate climate change. The Arctic ice cap also appears to be changing in a nonlinear manner. The ice cap reflects solar radiation out into space; yet as mean temperatures have increased, its volume has decreased dramatically. In 2013, for instance, it was found that the volume of Arctic sea ice had halved since 2007, the year of the previous record low. This trend is particularly worrying since the ice caps help to offset the greenhouse effect. Whereas a calm ocean absorbs about 93 per cent of solar energy, snow-covered ice *reflects* more than 90 per cent (Kramer 2013). Once again, a positive feedback loop is created. Once again, the effects of climate change exacerbate climate change.

Climate change as a moral issue

Most of the claims made in the previous section were based on the IPCC's 2007 and 2013 reports. Climate sceptics believe that many of those claims are false. But amongst those who are best placed to assess the evidence, there is very little disagreement. One study found that more than 97 per cent of the 1,372 climate researchers actively publishing in the field either broadly agreed with or directly endorsed the IPCC's 2007 claim that 'it is "very likely" that anthropogenic greenhouse gases have been responsible for "most" of the "unequivocal" warming of the Earth's average global temperature in the second half of the 20th century'.¹ What is more, it was found that 'the relative climate expertise and scientific prominence' of the researchers who did not endorse that statement were 'substantially below that of the convinced researchers' (Anderegg et al. 2010).

So, while there is room for disagreement about the details, the IPCC's basic findings are beyond reasonable dispute. The key question is what should be done in light of them. And to answer *that* question, one must do more than identify what it is technologically or politically feasible to do in response to global climate change. One must also consider the demands of morality.

For climate change is clearly a moral issue. Most obviously, many of its effects will harm humans; in fact, as long ago as the year 2000, the World Health Organization estimated that climate change was resulting in 150,000 deaths every year (Broome 2008: 69). Rising sea levels mean floods for low-lying inhabited areas, and such floods are accompanied by the loss of lives, homes and livelihoods, as well as mental trauma, the contamination of water supplies and the spread of disease. And of course, heat waves, droughts and storms cause a range of serious harms, too. It is clear, in short, that climate change bears upon human *welfare* in ways that are morally relevant. Furthermore, those who contribute the most to climate change tend not to be those who suffer its worst effects – and this fact raises questions of *justice*. On the one hand, those who have to pay the highest price for climate change tend to be socially, and in most cases spatially, distant from those who bear primary responsibility for the emission of greenhouse gases. The man who drives his gas-guzzling SUV to work is likely to be socially and spatially distant from the poor people whose homes will be washed away and whose crops will fail as a direct result of climate change. Although it is the rich who bear the greatest responsibility for climate change, it is the poor, and, in particular, poor people in poor countries, who tend to bear the costs. On the other hand, those who contribute the most to climate change tend to be *temporally* distant from those who suffer (or rather, will suffer) its worst effects. Since greenhouse gases such as carbon dioxide remain in the atmosphere for long periods of time, the costs of

¹ The 2013 report provides an even stronger statement: that it is '*extremely likely* that human influence has been the dominant cause of the observed warming since the mid-20th century' (IPCC 2013: 17; emphasis in original). 'Extremely likely', here, means that the IPCC's experts are at least 95 per cent certain that the claim is true.

our profligate lifestyles will for the most part be borne by people in the distant future (on which, more in a moment).

Responses

We will return to the moral ramifications of anthropogenic climate change below. Yet even on the basis of this brief sketch, it should be clear that something needs to be done about our rapidly changing climate. But what?

One option is to try to modify the earth's atmosphere by means of geoengineering. This can involve a number of different measures. For instance, a great deal of attention has recently been paid to the capture and long-term storage of atmospheric carbon dioxide – by, say, seeding the oceans with iron and thus encouraging the growth of carbon-absorbing phytoplankton. Other geoengineers believe that our efforts would be better directed towards reflecting solar radiation back into space – by, for example, painting large areas of urban space in radiation-reflecting white, installing giant mirrors on land (or even in space), permeating the atmosphere with light-reflecting aerosols, or spraying fine mists of seawater over the ocean in order to create denser and more reflective clouds.

Not all of those people who regard global climate change as a problem think it ought to be addressed in such ways. In Vandana Shiva's view, for instance, aspiring to engineer the earth's climate is nothing more than 'technological hubris' (2013: 18). While that seems to be an appeal to virtue ethical considerations, others object to geoengineering on consequentialist grounds. And one can see why. By their very nature, climate-altering geoengineering projects involve large-scale interventions into highly sensitive climatic and environmental systems. Given the gaping chasms in our knowledge of such systems, the possibility of calamitous side-effects cannot be dismissed. Granted, the probability of calamity might be very low. Yet those who endorse what has become known as the precautionary principle would contend that even a very low probability of calamity presents too great a risk.² And in support of these claims, more cautious commentators could point to a variety of warnings from history, such as the widespread destruction caused by the use of DDT or the disastrous attempts to control rabbit populations by means of the *myxoma* virus.

So one way to tackle global climate change is to engineer the climate. Another is to reduce greenhouse gas emissions. Again, this can be done in a number of different ways. One option is to switch to cleaner energy sources. In this connection, a great deal of attention has been paid to shale gas. This is a form of natural gas that can be obtained by means of induced hydraulic fracturing or 'fracking', a process in which highpressure fluid is injected into the ground to fracture rock formations and release the gas (or in some cases, oil) they contain. Although it is a carbon-based compound,

² I'm skirting over a number of issues here. For one thing, precautionary principles can be formulated in many different ways. Gardiner (2006) provides a helpful introduction to the relevant issues.

natural gas is a cleaner fuel than coal; amongst other things, it generates less carbon dioxide when burned. Still, from an environmental point of view, the extraction of gas by means of fracking raises serious concerns. For one thing, the process requires huge quantities of water; for another, there is some evidence to suggest that fluid pumped into the ground can contaminate water supplies (Johnson 2011). In addition to this, the practice can cause the release of methane, an especially potent greenhouse gas – a fact which partly undermines fracking’s ‘green’ credentials.

For these and other reasons, some have pinned their hopes to another source of non-renewable energy – nuclear fission. One can see why. Nuclear fission produces truly vast amounts of energy, and although the process of harnessing that energy has a substantial carbon footprint, that footprint is much smaller than the one produced by, say, coal-fired power generation. Again, however, there are grounds for caution. The production of nuclear energy typically involves the mining of uranium, which is an environmentally destructive process; moreover, it generates waste products that remain toxic for centuries. In addition to this, as the former residents of Chernobyl and Fukushima Prefecture well know, the risk of terrible accidents cannot be dismissed. In the light of these concerns, many of those who are concerned about climate change have turned their eyes to sources of renewable energy, such as wind, wave or solar power. There is a vital need to continue research into these relatively clean alternatives; however, one must be realistic: none of them, neither separately nor in combination, are currently able to generate nearly enough gigajoules to fuel today’s energy-hungry societies (see Garvey 2008: 104).

So far, we have considered the possibility of tackling climate change by either geo-engineering or the use of alternative energy sources. It would be foolish to rest all of one’s hopes on these options, however. It would be a mistake to suppose that the high levels of energy consumption in the world’s richer nations can continue unabated as long as new, cleaner energy sources can be brought online or the damaging effects of older, dirtier ones can be lessened. No: if we are effectively to respond to climate change, levels of energy consumption will almost certainly need to be reduced.

Which nations should make the reductions? One suggestion would be that the biggest cuts should be made by those nations that are *able* to make the biggest cuts – namely, the world’s richer nations. This seems a reasonable proposal. The total amount of greenhouse gases emitted by a wealthier nation will be greater than the total amount emitted by a poorer one. Furthermore, it is likely that a smaller proportion of a richer nation’s emissions will be the result of the provision of essential services. Governments of richer countries may be able to reduce consumption by encouraging their citizens to fly less and better insulate their homes. By contrast, the government of a poorer country may need to maintain certain levels of consumption in order to provide its citizens with essential services such as food and clean water (see, further, Garvey 2008: 81).

However, to assess which nations should make the greatest cuts to their energy consumption, and hence their emissions, one must take account of more than just their capacity to do so. One must also consider certain issues concerning *justice*.

One such issue is as follows. Imagine that the year is 1700. Unbeknownst to even the world's greatest scientists, the planet earth has a certain finite capacity to absorb greenhouse gases before drastic climatic changes occur. Think of that capacity as a global commons – a resource which, like breathable air, is owned by no one in particular and so is (at least in principle) available for everyone's use. Back in 1700, that global commons had not all been used up, which is to say that the planet was still able to deal safely with greenhouse gas emissions. Yet now, 300 or so years later, the situation is very different. Nowadays, the planet's absorptive capacity has been entirely used up, which is to say that levels of greenhouse gases have risen so high that dramatic climatic changes can no longer be avoided. The culprits, moreover, are not hard to identify. It is as if wealthier nations such as Britain and Germany had used up all the world's breathable air, leaving none for poorer ones such as Rwanda and Nepal. The richer nations, one might say, have unjustly appropriated more than their fair share of the planet earth's absorptive capacity (see, further, Shue 2001).³ And for this reason (one might add) they are obliged, on grounds of justice, to do what they can to remedy the situation – by, for example, curtailing their greenhouse gas emissions.

That argument rests on the basic principle that you shouldn't take more than your fair share of something that is owned by all, especially if the something in question is needed by others. An alternative argument is based on the principle that if you broke something, then it's your responsibility to fix it. The something in question is, of course, the earth's climate. And the guilty parties are, once again, easy to identify. The anthropogenic climate change we are currently experiencing is largely the result of the greenhouse gases that were generated by agricultural and industrial activity in the world's first industrialized nations – countries such as Britain, France and the USA. It could therefore be argued that, since those nations 'broke' the climate, it is their responsibility to fix it – by, amongst other things, drastically reducing their greenhouse gas emissions. It is true that in response to such arguments the representatives of richer nations could plead ignorance, claiming that the existence and effects of anthropogenic climate change have only recently come to light. Yet such arguments can only take one so far. For it is not at all clear that one is only responsible for fixing something if one *knowingly* broke it. (If I accidentally dent the door of a parked car, am I not morally obliged to leave my contact details so that I can pay for the repair (cf. Garvey 2008: 78)?) In any case, after 1990 and the publication of the IPCC's 'First Scientific Assessment of Climate Change', no one could legitimately claim ignorance about anthropogenic climate change.

³ The point can be made in terms of *sustainability*. If, as the famous Brundtland formulation had it, sustainable development 'meets the needs of the present without compromising the ability of future generations to meet their own needs', then development in the world's richer countries has not been sustainable (see World Commission on Environment and Development 1987: 8).

To recap: we considered the possibility of responding to climate change by (1) geo-engineering, (2) switching to alternative sources of energy, and (3) reducing levels of consumption. Focusing on (3), we asked which nations are obliged to make the biggest reductions. And in trying to answer this question, we appealed to three considerations: (a) ability to reduce emissions; (b) responsibility for ‘using up’ the planet’s absorptive capacity; and (c) responsibility for ‘breaking’ the earth’s climate. These considerations all point towards one conclusion: that the world’s wealthier countries should make the greatest reductions in their greenhouse gas emissions. Take the USA. Although China emits a greater volume of greenhouse gases, the USA’s per capita consumption is higher, which is to say that the average US citizen is responsible for more emissions than the average Chinese citizen. Furthermore, in the USA a large proportion of these emissions will count as ‘luxury’ rather than ‘subsistence’. Hence, compared to poorer countries such as Malawi and Haiti, the USA is able to make greater reductions without harming its citizens. Moreover, the USA was responsible for the greatest proportion of emissions between 1850 and 2002, which means both that it has used up more than its fair share of the planet’s absorptive capacity and that it bears primary responsibility for, as it were, breaking the earth’s climate. The conclusion is clear: the world’s wealthier nations – and not just the USA – should be subject to stringent emission reductions, not simply because they are able to make such reductions, but also because justice requires that they do so.⁴

‘My emissions make no difference’

Climate change is a global problem, and it is customary to think of nations as the key players on the global playing field. Accordingly, in the previous section, I asked which *nations* are morally obliged to curb their levels of consumption. But what of individuals like you and me? Are we morally obliged to try to reduce our levels of consumption?

Chances are, we could make substantial reductions. We could drive less, better insulate our homes, use less hot water and buy goods with lower carbon costs. We could also eat less meat. For, although it is not obvious, the practice of meat-eating tends to exacerbate climate change in several ways. On the one hand, forest is often cleared in order to provide space for animals raised for meat, such as the droves of ‘hamburger cattle’ that now occupy so much land in Brazil. Since plants absorb carbon dioxide, the clearing of forests diminishes a carbon sink, and if the felled trees are burnt, the stored carbon is released into the atmosphere, further exacerbating climate change. On the other hand, the animals themselves produce large quantities of methane, a greenhouse gas. The combined effects of all those felled forests and farting livestock

⁴ Many would argue that richer nations are also morally obliged to provide aid to, and maybe even compensate, those nations whose citizens are suffering the worst effects of climate change. See, further, de-Shalit (2011).

are considerable. One study found that if every American reduced his or her meat consumption by just 20 per cent, it would be as if each of them had switched to driving a Prius (Bittman 2008).

Furthermore, evidence suggests that these lifestyle changes could make a real difference. It is true that, say, leaving one's TV on standby makes next to no difference in the great scheme of things. But performing such actions day after day, year after year – well, these things add up. For instance, over the course of a year, the average American emits over 17 metric tonnes of carbon dioxide from energy consumption.⁵ One commentator estimates that these emissions will cause the 'serious suffering and/or deaths of two future people' (Nolt 2011: 9).

But suppose, for the sake of argument, that that last claim is false and that the emissions of even high-consuming individuals are so low as to be effectively harmless. That, in itself, does not entail that global climate change places no moral demands at all upon individuals. Each of us has a civic duty to try to influence our governments to take action to address the problem of climate change. There is also a case for saying that each of us has a duty to engage in acts of civil disobedience if our governments refuse to take our opinions seriously (see Garvey 2008: 152). Be that as it may, if my emissions do not cause any significant harm, then it is difficult to see why I should be morally obliged to try to reduce them.

The point is best made by means of an example. So, imagine a man – call him Paul – who, like many of us, leads a highly consumptive lifestyle. Amongst other things, he frequently has long hot showers, he lives in a poorly insulated house, he drives to work, and he flies to faraway places on holiday. Paul is not a climate sceptic; on the contrary, he believes that climate change is a real problem and that greenhouse gas emissions really do need to be curbed. Yet he is well aware of the costs he would personally incur by reducing his own emissions. He knows how expensive it would be to get his house properly insulated, for instance. And he knows that it would take him half an hour to get to work on the bus, rather than the ten minutes it takes to drive. Now let us suppose that Paul, thinking in a utilitarian fashion, estimates that it would cost him 10 units of happiness to give up all of his excessively consumptive practices. But let us also assume that Paul knows that his own emissions result in no significant harms. In the light of these considerations, Paul arrives at the conclusion that it is simply not worth his while to reduce his overall happiness by 10 units, when doing so will have no significant effect. 'My emissions', he thinks, 'make no difference. So why should I go to the trouble of altering my lifestyle?' Hence Paul continues to have lots of long hot showers, to live in a poorly insulated house, to drive to work, and so forth.

But now imagine what the world would be like if everyone thought like Paul. Imagine a world of Pauls (and Paulines). Every individual Paul (and Pauline) knows that it would cost 10 units of happiness to give up his (or her) excessively consumptive

⁵ Based on 2011 figures from the US Department of Energy (www.eia.gov/cfapps/ipdbproject/iedindex3.cfm?tid=90&pid=45&aid=8&cid=regions&syid=2007&eyid=2011&unit=_M)

practices. Yet every individual Paul and Pauline knows that doing so would have no significant effect. So no one does anything. As a result, greenhouse gas emissions rise unabated, the climate changes, and all the world's inhabitants find themselves faced with rising floodwaters, fiercer and more frequent storms, and all the other calamities about which the IPCC and others have warned us. And let us suppose, further, that those calamities would be very bad for every single individual. Suppose that they would cost every single Paul and Pauline 50 units of happiness.

The disturbing thing about this scenario is that one can understand Paul's reasons. One can see why he chooses not to alter his lifestyle. And the same holds true of any individual Paul or Pauline. It seems rational for each and every individual Paul or Pauline to do nothing. So one can see why no one does anything. But one can also see the cumulative effect of all these individually rational decisions: total ruin.

What we have here is a particular sort of *collective action problem*: a case in which, seeking, for reasons of self-interest, to avoid certain minor costs, each member of a group acts in such a way that major costs are imposed on all. How to respond? One option is indicated by an argument we considered in chapter 1. In that chapter, we asked why any particular individual should give up eating meat, when doing so is unlikely to save any animals from being slaughtered. In response, I suggested that if a practice is morally wrong, then, all things being equal, a good person will not participate in it, even if their nonparticipation does not improve the state of the world one bit. A similar virtue ethical argument could be made in response to the scenario set out above. Someone, like Paul, who thinks that there are moral reasons to reduce greenhouse gas emissions, but who refuses to reduce his own emissions since they, as he puts it, 'make no difference', could not qualify as fully virtuous. For a person with the virtue of integrity would try to reduce her emissions, even if doing so would do nothing at all to slow the pace of climate change (Hourdequin 2010: 450; cf. Jamieson 2012: 197–8).

Not everyone finds such appeals to the virtue of individuals helpful. For instance, Steven Vogel contends that collective action problems, like the one sketched above, do not arise because the individuals involved lack integrity or any other virtue.⁶ They arise because those individuals 'are forced to act separately and thereby produce a result that none of them want' (Vogel 2012: 308). What is needed, in Vogel's view, is for the individuals concerned to be given an opportunity 'to act *as* a community and no longer as an aggregate of private individuals' (2012: 310). And creating that opportunity is, he argues, a *political* task – a matter of creating 'a world structured by different sorts of institutions, and in the context of a different sort of economy and a different sort of politics' (2012: 312).

⁶ It would be more precise to say that, although such problems could not arise if all the individuals involved had heroic levels of virtue, they can arise in situations where the individuals involved are virtuous but not heroically so.

Population

We have been considering how richer countries are to reduce their emissions of greenhouse gases. And we have seen that one option is for those of us who live in such countries to reduce the amount we consume. Another is to reduce the numbers of people who are doing the consuming (see, further, Cafaro 2012). But how? A few misanthropic environmentalists have suggested that if we care about nature we should welcome floods, droughts and other events that kill humans (see the critical discussion of such views in Bookchin 1999: 284). However, most of those who see the growth of the human population as an environmental disaster have not welcomed the deaths of any women, men or children. The overwhelming majority have tried to combine respect for human life with a commitment to curbing population growth.

In considering the issues of consumption and population growth, it helps to make a rough distinction between the world's richest and the world's poorest countries. Although, in rich countries such as Canada and Japan, population growth is relatively low, levels of consumption tend to be very high. For this reason, reducing the rate of population growth in such countries can, over time, have a significant impact on consumption. Dale Jamieson makes the point very well: 'If an American wants to minimize his environmental impact, the most effective thing he can do is to refrain from having children. He can drive around in an SUV, hang out at McDonalds, take long hot showers and still have much less environmental impact than if he fathers one, good, green, nature-loving American child' (2008: 189).

In the world's poorest countries, the opposite tends to be the case. Levels of energy consumption are typically low; however, since pension plans and social security for the elderly are either non-existent or in some other way inadequate, most people have to rely on their children to take care of them in their old age. Furthermore, given high rates of infant mortality, many of them need to have a large number of children to ensure that enough of them survive to adulthood. In many poorer parts of the world, moreover, great importance is attached to securing a male heir. Hence parents who already have one or more girls but no boys often feel the need to keep trying for children. What is more, in many such nations, those couples who do not wish to have children (or any more children) are unlikely to have access to the contraceptives and advice about contraception that are available in countries such as Germany or the Netherlands. For these and other reasons, population growth in poorer countries tends to be high.

How can population growth in the world's poorest countries be curbed? Many will be disturbed by talk of curbing it, and there certainly are good reasons for caution. The thought that it is the citizens of the world's richer nations who should be laying down the law on this issue smacks of colonial paternalism. Moreover, great injustices have been perpetrated in the past in the name of controlling population growth. Think of the sterilizations once forced upon women not just in Nazi Germany but also in the United States. Fortunately, however, some of the most effective ways to reduce rates

of population growth in poorer countries are not inherently problematic. One option is to enact social reforms to give women more control over their lives – and, in particular, more control over how many children they have. Another, related option is to alleviate poverty – through the introduction of social security, for example, or the improvement of healthcare. It is true that as poor people become richer, within either their countries of birth or those to which they have emigrated, their levels of consumption increase. But this does not, of course, provide a good reason *not* to alleviate poverty. It simply means that attempts to alleviate poverty must be combined with efforts to reduce the consumption levels of the world's rich – not just those in richer countries, such as France and Norway, but the richer inhabitants of poorer ones, such as Mexico and India.

Obligations to future generations

Tackling climate change is a costly business. To be more precise, it is likely to cost us, we 21st-century taxpayers, a great deal. But, for the most part, we will not be around to enjoy the benefits of our actions. Those benefits will accrue to people in the future: not just those a few generations down the line, but those in the far future, hundreds of years from now. (In the following, I will refer to these as 'future people'.) While we will bear the costs of mitigation (by driving less, for instance), it is future people who will reap the benefits (by avoiding flooding, spreading deserts and so forth).

Are we obliged to make these sacrifices? The answer depends to some extent on the weights that are assigned to present benefits relative to future benefits and present costs relative to future costs.

Economists, for their part, typically discount the value of benefits and costs over time, so that future benefits are reckoned to be, so to speak, less beneficial and future costs less costly. This practice of 'discounting the future' therefore provides a reason to collect benefits now and to postpone the payment of costs.

The reasons given for discounting the future are best introduced by means of an example. So, suppose that you must choose whether to receive £100 today or £100 in ten years' time. There are several reasons why it would be wise to take the money today: because £100 invested today will be worth a great deal more in a decade's time; because, due to inflation, £100 is likely to be worth less in ten years' time; and because it's safer to have the money in your pocket today (since no one can be sure what the next ten years will bring). For all these reasons, rational individuals will take the £100 today. They will judge that a benefit in ten years' time is worth less than a benefit today; they will discount the future benefits. And they will do the same with costs. Faced with the option to pay £100 today or to pay £100 in ten years' time, the rational individual will choose to defer payment. And they will choose to do this for the reasons cited above: because the money they retain can be invested; because £100 will be worth less in a decade's time; and because the future is uncertain. For all these

reasons, economists maintain, the value of benefits and costs should be discounted over time.

The practice of discounting the future plays an important role in deliberations about what we should sacrifice on behalf of future people. In discussions of climate change, in particular, there has been a great deal of debate about the rate at which future benefits and costs should be discounted. Some economists, like Nicholas Stern and his colleagues at the UK Treasury, opt for low rates, while others, such as William Nordhaus of Yale University, recommend higher ones. Hence Stern, working with a discount rate of 1.4 per cent per year, would attach a present value of \$247 billion to having a trillion dollars' worth of goods a century from now. Nordhaus, by contrast, opts for a discount rate of roughly 6 per cent, and so would come up with a present value of just \$2.5 billion. In other words, Stern attaches nearly 100 times as much value as does Nordhaus to having any particular level of costs and benefits today (Broome 2008: 71). As one would therefore expect, Stern and his colleagues advocate much stronger measures to combat climate change than does Nordhaus (see, further, Gardiner 2004: section IV).

In many cases, it makes economic sense to discount the future. But it is another question whether it is morally permissible to discount the interests of future people (see, further, Brown 2013: 84). And it is yet another question whether we are morally obliged to make any sacrifices on their behalf. In the following, we will consider three arguments that our obligations in this regard are either non-existent or severely limited. More precisely, we will consider whether our moral obligations to (or with respect to) future people are mitigated by (a) their non-existence, (b) our ignorance of their tastes and needs, or (c) the fact that we can affect their identities.

The first option, then, is to argue that we are not morally obliged to make any sacrifices on behalf of future people for the simple reason that such people do not currently exist. I will not spend much time discussing this suggestion because its flaws are, I believe, plain to see. One could just as well argue that it would be morally permissible to hide a bomb in the middle of Cape Town with a timer set to tick down to zero in 150 years' time. It is very likely that none of the people who would be affected by the explosion currently exist. But that does not mean that it would be permissible to hide such a bomb next week (and not just because of the risk that the device will go off early). On the contrary, all things being equal, it is morally wrong to choose to perform an action which one knows is likely to cause harm, even if the relevant harm will be undergone by future, rather than present, people. The fact that the victims do not yet exist is of no account.

Yet those who concede that we are morally obliged to make some sacrifices for the sake of future people might nonetheless think that those obligations are very limited. For how, they might ask, can we be morally obliged to consider the needs of future people if we have no idea what they will need?

This second objection cannot be dispatched quite as quickly as the first one. We really don't know what exactly our distant successors will need. Maybe they will spend

their days plugged into virtual reality headsets powered by some as yet undreamt-of energy source. Maybe they will have developed some ingenious new technology to stabilize the earth's surface temperatures. Perhaps, as in Disney's *WALL-E*, the people of the year 2500 will have moved off the planet entirely. Still, such appeals to ignorance do not excuse one from the moral burden of considering the needs of future people. In this connection, it is important to note that we are considering their *needs*, rather than their tastes. Predicting the tastes of future people really is a tricky business. Different generations often have very different tastes. However, their needs are often very similar. To adapt a remark Brian Barry made over thirty years ago: although we don't know what their "precise tastes" will be, we can be pretty sure that our "remote descendants" will not need skin cancer, soil erosion, or the inundation of low-lying areas as a result of the melting of the ice-caps' (1977: 274). Quite so. Appeals to ignorance carry some weight; yet they do not give us licence to ignore the needs of future people.

A third – and, I think, more interesting – argument for limiting our moral obligations to future people turns on the fact that our actions can affect not just the welfare of future people, but their very *identities*. To explain how this argument works, let me begin with a question, the relevance of which might not immediately be apparent: are you worse off as a result of President Franklin D. Roosevelt's decision to sign a declaration of war against Japan in 1941? That decision had tremendous repercussions.⁷ Shortly after war had been declared on Japan, Germany and Italy declared war on the USA, which responded in kind. By the end of the war, over 16 million US soldiers had served in posts across the globe, from North Africa to the Philippines. Millions of people were affected. Some died who otherwise would have lived and some lived who otherwise would have died. What is more, some people met who in other circumstances would not have met. Granted, in some cases, couples would have met and had children whether or not President Roosevelt had put pen to paper. But even in these cases, it is very unlikely that their children would have been conceived at exactly the same time. And given the astronomical odds against any particular sperm fertilizing any particular ovum, it is highly unlikely that conceptions at different times would result in the same offspring. The upshot of this is that if you are a young or middle-aged inhabitant of any of the world's richer nations, then it is unlikely that you would exist had it not been for President Roosevelt's decision.

Let us consider a parallel example concerning future people. Imagine that in the year 2100 President Duke decides to exercise his newly acquired political power by embarking the USA upon a programme of massive re-industrialization. Climate change agreements are torn up and (for rhetorical effect) burned; coal-fired power stations are built; people migrate *en masse* to re-industrialized areas such as West Virginia in the hope of employment; and the country's per capita energy consumption rockets. Now

⁷ I admit that there is room for scepticism here. Perhaps the USA would have been dragged into the war even if Roosevelt hadn't signed. But assume, for argument's sake, that Roosevelt's decision was crucial.

suppose that if President Duke had *not* made the decision he in fact made in 2100, then the world of 2500 would have been an environmental utopia, with great forests unfelled, wide expanses of unmelted tundra and coastal waters teeming with life (call this the Utopian World). Yet because President Duke did what he did, the world of 2500, the Dystopian World, is in a very different state: the Gulf Coast is regularly lashed by hurricanes stronger than any we have seen; Oklahoma and Kansas are deserts; New York and Washington DC are under water. Now picture, in your mind's eye, an inhabitant of the Dystopian World – call her Kim. Like her contemporaries, Kim has suffered as a result of climate change. Her husband died in the great storm of 2498. The land of her ancestors is a mosquito-infested swamp. She herself has contracted malaria. Her life isn't so bad that she'd be better off dead. But it's far from good.

Now, like President Roosevelt's decision, President Duke's decision had tremendous ramifications. It is therefore very likely that Kim would not have existed had it not been for his decision 400 years earlier. It is very likely that, in a sense, Kim owes her life to President Duke. One interesting consequence of this is that Kim *cannot be worse off* as a result of that decision. She would be worse off if her life were so awful that she would be better off dead. However, as things stand, Kim's life is awful, but not that awful. Hence the morally surprising result.

It is plausible that this result applies not just to Kim, but to many other inhabitants of the Dystopian World. It is likely, in other words, that a great many people in this storm-ravaged, mosquito-infested future world would not have existed had President Duke not acted as he did. It is true that, a few hundred years or so after President Duke's decision, there might have existed people who would have existed anyway, regardless of that decision (call this Population A). But there will also have existed a great many people who would *not* have existed had President Duke acted otherwise (call this Population B). But if any individuals from populations A and B were to meet and have children, then those children would not have existed had it not been for President Duke's decision, for if President Duke had not acted as he did, then one of their parents would not have existed. Continuing these thoughts, it is not hard to see that, over time, Population A would shrink and Population B would grow; and, indeed, that given enough time, the world's population would come to consist entirely of individuals who would not have existed had President Duke acted other than he in fact did (see Schwartz 1978: 5–6). Let us assume that the Dystopian World is one such world.

Not everyone would endorse that conclusion (for a contrary view, see Brennan and Lo 2010: 30–1). However, for argument's sake, suppose that it is true. Assume that, like Kim, none of the individuals in the Dystopian World would have existed had it not been for President Duke's decision 400 years earlier. It would seem to follow that none of those individuals were made worse off as a result of that decision. It is true that if President Duke had acted other than he did, then the world of 2500 would have been a very different place. The Utopian World, rather than the Dystopian one, would have been the actual world. Be that as it may, because those two worlds contain entirely

different populations of individuals, there is no sense in which the inhabitants of the Dystopian World are worse off than those of the Utopian World (or vice versa).⁸

The general problem to which the example of Kim is meant to draw attention was identified by the philosopher Derek Parfit. He called it the ‘identity problem’, though nowadays it is usually referred to as the ‘non-identity problem’. It arises when our actions bring about the existence of people who lead lives that are bad, though not so bad that they would be better off dead.

Some argue that the presence of non-identity problems means that our obligations to future people are very limited. Thomas Schwartz, for example, maintains that because of such problems ‘we’ve no obligation extending indefinitely or even terribly far into the future to provide any widespread, continuing benefits to our descendants’ (1978: 3). Others disagree. Thus, despite having come up with the non-identity problem in the first place, Parfit resists the conclusion that it means that ‘we can be less concerned about the more remote effects of our social policies’ (Parfit 2001 [1983]: 294). And that is surely a reasonable position to take. True, no one in the Dystopian World is worse off than they might otherwise have been. Yet things could have turned out so much better.⁹

Some would maintain that non-identity problems indicate not the limited nature of our obligations to, or with respect to, future people, but merely the limits of a certain way of thinking about those obligations. Forget about fanciful science-fiction scenarios for the moment, and imagine how the world – this world, the one we currently inhabit – will be in the year 2300. It will to some extent be the result of whatever actions we take (or fail to take) in response to global climate change. As we have seen, one response to this observation would be to say that we are not morally obliged to make any sacrifices on behalf of the inhabitants of this future world, since no action we could take in the hope of improving their lot could make them better off. But that response would, I believe, be short-sighted. Granted, we do not know what the world of 2300 will be like. Nor do we know the identities of the people who will come to inhabit it. Still, those people are unlikely to be complete strangers to us. There is, it is true, a chance that some apocalyptic event will occur in the next few centuries to blast us all back to the Stone Age. If, however, no such events ensue and the chain of tradition remains unbroken, then the people of 2300 will count as our successors, as we count as the successors of those who came before us. Even when so much time has elapsed

⁸ I am assuming that the populations of the Utopian and Dystopian worlds are equal in size. On the moral issues raised by decisions which result in populations of different sizes, see Parfit (2001 [1983]: 294–5).

⁹ Suppose, for argument’s sake, that Parfit’s intuitions are awry and that there really is no sense in which things have turned out badly as a result of President Duke’s decision. There might, nonetheless, be moral reasons to criticize that decision. So, for instance, President Duke would deserve moral criticism if he had believed that his actions would harm future people but couldn’t care less. Would he also have deserved criticism if he had been motivated, neither by callousness nor by apathy, but because his reading of Parfit’s work had led him to believe that his actions could not make future people worse off? I really have no idea.

that we can no longer think of them as part of our family, future people will carry our legacy – as, in our best moments, we continue the legacies of Lincoln, Gandhi and Martin Luther King. Viewed from this *communitarian* perspective, all of us – our predecessors, our contemporaries and even the as-yet-unborn people of 2300 – are part of one great transgenerational story (see, further, de-Shalit 1995; Scruton 2012: 207–8, 216).

Climate change and the natural world

We have been considering the various ways that climate change will affect human beings. But the earth's rapidly changing climate will affect beings other than humans. It will harm many of the planet's nonhuman inhabitants and it will degrade or destroy much that is of value in the natural world. Consider wild animals. It is true that some will not suffer greatly from the effects of climate change. Some will be able to adapt to climatic and ecological changes and thus remain in their former ranges. Others will be able to migrate to new places – towards the poles, for instance, as temperatures increase. However, in many cases, wild animals will suffer harm. The polar bear provides a striking example. In order to catch seals and other marine animals, polar bears need sea ice. Yet as annual mean temperatures at the poles have risen, the sea ice has begun to break apart earlier in the year. Consequently, polar bears have had less time each year to build up fat reserves before the ice re-forms. They have also had to swim longer distances between patches of frozen sea, further reducing their energy reserves. The result has been a significant reduction in average body weight in some populations of bears – and, accordingly, higher mortality rates (Sandler 2012: 57–8). Now, as we saw in chapters 1 and 2, there are good reasons to think that polar bears have not just moral standing, but a high moral significance. For sure, some would hold that because they are *wild* animals, we are not morally obliged to intervene on their behalf. But if Clare Palmer is right, then that conclusion would not be warranted. In *Animal Ethics in Context*, she argues that, because the bears are being harmed as a result of our actions, we have special duties to assist them – by, say, relinquishing plans to develop their habitat for mineral extraction (Palmer 2010: 145–6).

In cases like that of the polar bear, climate change results in a decrease in population size. In some of these cases, moreover, it can threaten an entire species of organism with extinction. This can occur when the members of a species are unable to move to new environments. So, for instance, if the Arctic ice cap continues to melt, then those creatures, such as polar bears, which depend on sea ice may become extinct. But even when suitable environments are present, the animals may be unable to move to them. As James Garvey (2008: 11) observes, a mountain gorilla which needs cooler weather will keep moving up the mountain, until it runs out of mountain. Indeed, the IPCC states that 'natural global climate change at rates slower than current anthropogenic

climate change caused significant ecosystem shifts and species extinctions during the past millions of years' (2014: 4).

Some have argued that these facts should prompt us to rethink what we are trying to achieve in conserving and managing the natural world. Some have maintained that in environmental contexts, as in others, we will need to *adapt* to climate change.

Their reasoning is as follows. Significant, rapid and to a large extent unpredictable changes in climate tend to produce significant, rapid and to a large extent unpredictable changes in natural systems. Natural ecosystems, for instance, do not simply migrate in response to changes in climate. They tend to break apart (Sandler 2012: 59–60). Coral reefs provide a good example. As the oceans absorb more and more carbon dioxide, they become more and more acidic, and as a result corals find it increasingly difficult to grow the calcified skeletons they need in order to survive. Hence reef ecosystems do not simply change location in response to climatic changes; they tend to disintegrate. In view of such facts, the traditional goal of *in-situ* preservation – that is, preserving a population of organisms in its native habitat – needs to be reconsidered. That goal may have been realistic when climatic and ecological conditions were fairly stable. But nowadays, in the age of the Anthropocene, it is anachronistic. For similar reasons – the argument continues – the role of historical fidelity in environmental restoration must also be reassessed. For in the midst of radically changing climatic and ecological conditions, it will rarely be practical to return natural environments to their past states. As Brian Buma (2013: 33) maintains, it will seldom be possible to reproduce an ecological community in its 'historical form in a non-historical climate'.

How exactly should conservationists adapt? Some writers have suggested that they should focus their efforts on transplanting species populations to locations where they neither currently exist nor have existed in recent history (a practice known as assisted colonization). Yet not everyone agrees. For instance, Ronald Sandler argues that there is too great a risk that species thus transplanted will become invasive, degrading the ecosystems into which they have been introduced. His own proposal is that conservationists and environmental managers would do better to retain the more traditional goal of setting aside parks, reserves and other protected areas. But he adds that their aim, in doing so, should not be to preserve the particular species and groups of species with which the areas have traditionally been associated. That goal made sense in a climatically more stable world, but it is not appropriate now. Instead, reserves and the like should, he argues, be set aside and protected for two reasons. On the one hand, reserves will continue to be useful, even in unstable climatic conditions, because they can build 'resilience and adaptive capacity among species and systems'. On the other hand, even if reserves are becoming less and less able to serve as havens for the organisms they have traditionally contained, they can help to 'accomplish other ecosystem management goals', such as the maintenance of ecosystem services (Sandler 2012: 5.2).

Not all commentators agree with Sandler. Some, such as Holmes Rolston III, continue to champion traditional goals such as *in-situ* preservation. Even so, just about all those who accept that global climate change is occurring acknowledge that it will

be bad for many of the planet's nonhuman inhabitants. But will it be bad for the planet *itself*? There are reasons to think that it will not. The earth's climate has, after all, undergone dramatic changes in the past. As the palaeontologist Stephen J. Gould observes:

All the megatonnage in our nuclear arsenals is but one tenthousandth the power of the asteroid that might have triggered the Cretaceous mass extinction. Yet the earth survived that larger shock and, in wiping out dinosaurs, paved the road for the evolution of large mammals, including humans. We fear global warming, yet even the most radical model yields an earth far cooler than many happy and prosperous times of a prehuman past ... On geological scales, our planet will take good care of itself and let time clear the impact of any human malfeasance. (2001 [1990]: 217)

Just as the planet survived those crises, so it will survive the effects of anthropogenic climate change. *Homo sapiens* might not. But the planet itself will be fine. Moreover, one might wonder how not just anthropogenic climate change but *anything* could be bad for the earth itself. As we saw in chapter 3, certain conditions can be bad for organisms. But the earth itself? With all respect to Lovelock, that would seem to be at least one step too far.

One might be tempted to conclude, on the basis of such thoughts, that from the perspective of the earth itself, climate change simply doesn't matter. And one might be tempted to draw the further conclusion that because climate change doesn't matter to the planet, it shouldn't matter to us. Those temptations should, however, be resisted. For it is an error to suppose that the earth has its own perspective on climate change (or on anything else). And to suppose that we could somehow *adopt* that imaginary perspective is to compound that error. The only perspective we can adopt in this context is our own. Male or female, rich or poor, young or old – our perspective in this context, as in any other, must be a human perspective.

But not in every respect a *distinctively* human one. For in many respects our outlook on the world is not so very different from those of our nonhuman cousins. We feel the warmth of the same sun, the support of the same earth. Like other mammals, we can feel hunger, thirst and the companionship of others. So in considering the effects of climate change, or indeed any other environmental issue, we should not think of ourselves as trapped within the confines of our all-too-human outlook on things. Recall the polar bears. Their struggles speak to us because, like them, we know what it is like to feel tired and hungry and to try to take care of our families. In thinking about their plight, we must keep in mind what we are: not disembodied intellects cast adrift from the rest of creation, but rational animals with our roots in the earth.

Summary

We cannot be 100 per cent sure; however, the world's top climate scientists working with the most comprehensive data judge that the planet's climate is undergoing various dramatic changes because of human actions – principally, the release of greenhouse gases through the combustion of fossil fuels. It would not be wise to rest all of one's hopes on geoengineering or on the promise of cleaner, alternative energy sources. Steps should also be taken to curb greenhouse gas emissions. To assess whether – and if so, by how much – a particular nation should reduce its emissions, various factors must be considered, including the nation's ability to make reductions and the part it has played in causing climate change. All such considerations point to the same conclusion: that it is the world's richest nations which are morally obliged to make the greatest reductions. It is, however, another question whether – and if so, to what extent – individuals are obliged to change their lifestyles in response to climate change. Some have argued that such changes are unlikely to have any significant effects; others, such as John Nolt, disagree. What is clear is that climate change tends to raise *collective action problems*, in which, seeking to avoid certain minor costs, each member of a group acts in such a way that major costs are imposed on all.

It is likely that the worst effects of climate change will be experienced not by us, but by *future* generations. Some have argued that since any large-scale action we take now to combat climate change will affect *who* is born in the far future, no particular person in the far future could be made either better or worse off by our large-scale actions, for if we hadn't acted as we did, then they would not have existed. Others have found it illuminating to conceive of future people not as strangers to whom we owe nothing, but as the inheritors of our cultural achievements. In the view of writers such as Avner de-Shalit, this kind of *communitarianism* provides a sound basis on which to build a robust account of our moral relations with future people.

It is not just human beings who are affected by climate change. Rapid climatic changes can disrupt ecosystems and decimate the populations of some kinds of organisms. Writers such as Ronald Sandler have argued that, in the midst of a rapidly changing climate, conservationists may well need to give up trying to preserve species in their historical ranges. Others, such as Holmes Rolston III, contend that such traditional goals should not be abandoned. On this issue, as on most others in the field of environmental philosophy, matters are far from settled. Much remains to be done.

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