The Moral Standing of Natural Objects

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Human beings are, as far as we know, the only animals to have moral concerns and to adopt moralities, but it would be a mistake to be misled by this fact into thinking that humans are also the only proper objects of moral consideration. I argue that we ought to allow even nonliving things a significant moral status, thus denying the conclusion of much contemporary moral thinking. First, I consider the possibility of giving moral consideration to nonliving things. Second, I put forward grounds which justify this extension of morality beyond its conventional boundaries. Third, I argue that natural objects have a status different from a special class of artifacts —works of art. Fourth, I discuss the notion of interest, and fifth I look briefly at the status of natural systems and at ways we might link the proposed extension of moral considerability with the rest of our moral thinking.

I. THE SCOPE OF MORALITY

There is considerable agreement among writers that if anything deserves moral consideration, then normal adult humans do, but given, in Waismann's phrase, the "open texture" of our language, we can easily imagine extending the language of rights, duty, respect, and obligation to children, the senile, the deranged, foetuses, the comatose, higher animals, human and animal corpses, and—perhaps less easily—also to other animals, trees, shrubs, vegetables, bacteria, cells, forests, valleys and even minerals. The length, and the ordering, of such a list is obviously a matter of considerable disagreement. Following Warnock and Goodpaster,[1] I take *moral considerability* as the core notion and consider extending it beyond our fellow humans to four progressively larger groups of things: (1) sentient beings whose psychological states are *models* of our own; (2) sentient beings of any kind; (3) living things; and (4) natural objects of any sort.

The notion of *model* in (1) is borrowed from Matthews who argues that there is a certain psychological unity within the animal kingdom.[2] Human

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[1] G. J. Warnock, *The Object of Morality* (London: Methuen, 1971) and Kenneth Goodpaster, "On Being Morally Considerable," *Journal of Philosophy* 75 (1978): 308–25. W. Murray Hunt, in objecting to Goodpaster's extension of moral considerability to all living things, asks the question: "Are *Mere Things* Morally Considerable?" *Environmental Ethics* 2 (1980): 59–63.

[2] In G. B. Matthews, "Animals and the Unity of Psychology," *Philosophy* 53 (1978): 437–54.

beings are not unique in forming plans and carrying them out, cooperatively if necessary. Lionesses on a hunt do the same. Cows weep when parted from their calves: do they not then feel the pain of separation? The point is so obviously true that it would be irritating for someone to defend it, as Hume noted long ago:

> Next to the ridicule of denying an evident truth is that of taking much pains to defend it; and no truth appears to me more evident, than that beasts are endow'd with thought and reason as well as man. The arguments are in this case so obvious that they never escape the most stupid and ignorant.[3]

Of course, an appeal to our unity with other animals has its limits, for at some stage our psychological relatedness to other species becomes so attenuated as no longer to count for very much. Problems begin to arise when one tries to determine what the moral significance of this psychological unity is supposed to be.

An answer to this question may have something to do with the related question of *rights.* Passmore argues that legal obligations and rights can only be generated among beings who belong to one community of "mutual obligations" and "common interests," while others, like Feinberg, maintain that for something to be a potential rights holder it must have interests, for the holder of rights must be able to be represented (and what has no interests cannot be represented), and must be able to benefit in its own right (which again requires it to possess interests).[4] It looks as if higher animals will certainly be candidates for moral consideration if Feinberg is right. And it can also be urged that humans and other animals do at least sometimes form communities of common interests. A striking example of this is the relationship between Bush people and the honey guide so lovingly described in Laurens van der Post's novel *A Far-Off Place.* The honey guide is in no way a domesticated creature, but benefits from leading humans to beehives by obtaining a generous helping of honeycomb. Post writes:

> . . . this partnership of the honey-guide and man differs from all others because it is voluntary, free and equal, formed out of a sense of mutual obligation to a common purpose of life and love of the honey that is the product of the purpose. . . . It is proof miraculous of what life could become when a sense of common purpose and interdependence of all living and existing things is recognized and wholeheartedly served.[5]

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[3] David Hume, *A Treatise of Human Nature,* ed. L. A. Selby-Bigge (Oxford: Clarendon Press, 1968), bk. 1, pt. 3, sec. 3.

[4] Joel Feinberg, "The Rights of Animals and Unborn Generations," in W. T. Blackstone, ed., *Philosophy and Environmental Crisis* (Athens: University of Georgia Press, 1974), pp. 43–68.

[5] Laurens van der Post, *A Far-Off Place* (Harmondsworth: Penguin Books, 1976), p. 217.

Closer to home, we can think of the relationship between dolphins and those who study them—or if we include cases in which the participation of those involved is less than equal, the bond between people and pets. Even so, we can again ask: just what does the possession of interests, or the shared interests of a community, amount to?

Perhaps we can make sense of the appeal to interests, psychological models, and communities if we think of moral values as bound up with a framework of primarily human interests, needs, and purposes. The notion that a *moral* code provides a means of maximizing welfare within a society, for example, would be one way of accommodating this perspective, since considerations regarding welfare only seem to arise for beings who have interests. Alternatively, we can consider what set of principles it would be rational to choose for a society given both information and ignorance about one's place in that society.[6] Or again, like Gewirth, we can seek to establish some fundamental moral principle on the ground that since we claim rights for ourselves in virtue of our having certain qualities, then others who possess these same qualities will also be able to claim similar rights.[7]

What lies behind all these notions is a human- (or at least animal-) centered conception of ethics, a kind of ethical egoism once removed. Whereas the egoist is interested in the welfare of one particular individual above all others, these more sophisticated views recognize that what it is *moral* to do may not always result in maximizing welfare or benefit to the agent, although a code based on these insights supposedly maximizes the welfare of a group, society, or community of appropriately characterized individuals. If my own access to certain benefits is through my membership in such groups, then I will be able to "identify" in some sense with the group and may come to associate my good with that of the group.

It is not my intention to undermine this strategy or to deny that something of moral interest can result from the strategy. Indeed, rather like Gewirth, I appeal to qualities common to humans and to some inanimate objects in order to make out a case for the moral considerability of the latter. Unlike Gewirth and most other theorists, however, the shared quality which I suggest is not anything like rationality, purposive agency, linguistic ability, or even sentience. This is not to deny that such qualities may be morally important. Perhaps a creature which is rational and talks has more of a moral claim on me than one which is rational but lacks language (assuming, for the moment, that rationality and linguistic ability can be separated). But if I am right, my argument at least challenges the notion that by the time we have reached sentience we are sure to have exhausted the fund of morally relevant features.

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[6] For such starting points, see R. B. Brandt, *A Theory of the Good and the Right* (Oxford: Oxford University Press, 1979).

[7] Alan Gewirth, *Reason and Morality* (Chicago: University of Chicago Press, 1978).

Significantly, then, I suggest that what it is moral to do may, on occasion, be something that does not benefit individual humans, communities of humans, or communities of humans and other beings with qualities like those of agency, rationality, or sentience. Does this mean that we, along with a wide variety of natural objects—perhaps all of them—form a community the welfare of which is the proper object of morality? Perhaps, though as I show later this question may be more terminological than real. For the time being, it should be noted that I am not denying that for social life to be possible at all there have to be rules that take account of the often competing interests of those who live together in communities and that some of these will be moral rules. Nor am I dismissing the possibility of putting forward human-regarding arguments for the preservation of wildlife and wild places. On the contrary, such arguments seem to me to be very important and may themselves be—morally or otherwise—already decisive.

To pursue the hypothesis, should we not then think straightway about the extension of considerability to all sentient and living things? Pleasure and pain is something that is a central feature of human (and probably animal) experience, and interests, we might think, can still exist in the absence of sentience anyway.[8] We need food, and it is a good thing for us, even if we lack the warm glow of contentment a full stomach sometimes brings. The defender of sentience may wonder why we should care for the goals of a being, albeit a *living* one, who is incapable of feeling frustration, fear, disappointment, hurt, or satisfaction. Now there is undoubtedly an *explanatory* route linking sentience with moral respect. If an item has feelings, this explains its possession of interests. And, as we have seen, its possession of interests can in turn explain why it is worthy of moral consideration. But what I suggest is another route to just this same destination—moral considerability. My route may not appear to be so obviously explanatory—this may be because it is not so well worn as the first one—but so long as the route I suggest is a possible one, then the dogma that moral respect is conceptually tied to sentience will be wide-open to challenge.

In this connection Callicott has argued that it cannot simply be the pain we inflict on animals in the course of factory farming or experimentation that makes these procedures wrong, for in their natural state animals are exposed to cruel pain, lingering death, and the ravages of disease and predators.[9] What if the total pain endured in the farm or the laboratory is less for a given species than its total in the wild? For Callicott this seems to show that what is immoral

[8] For the centrality of pleasure and pain to human experience, see John Rodman, "The Liberation of Nature?" *Inquiry* 20 (1977): 83–145, and for remarks on pleasure and pain as adaptational signals, not goals in themselves, see Goodpaster, "On Being Morally Considerable."

[9] J. Baird Callicott, "Animal Liberation: A Triangular Affair," *Environmental Ethics* 2 (1980): 311–38. Although here, and elsewhere, I am critical of Callicott, I found his paper extremely stimulating, and useful in preparing the final draft of the present paper.

in our treatment of animals is not the infliction of pain, but "the transmogrification of organic to mechanical processes."[10] Callicott is wrong, however, if he thinks that this weighing of natural against unnatural pains in itself reveals that we wrong animals in some way that is independent of the infliction of pain, for, morally, there is all the difference in the world between those pains that occur in the natural course of events and those that are deliberately and knowingly inflicted by intelligent moral agents. Of course, I agree with Callicott that the evils of factory farming involve more than the evil of deliberately inflicting pain, and it is precisely to let us argue to such a conclusion that we need some ground for moral consideration that is itself independent of sentience.

Suppose, then, that at least for the sake of the argument the possibility of moral consideration to our third group is allowed. Is there any good reason why we should pause there instead of sliding all the way down the slippery slope? Both works of art and natural objects like great deserts and mountains seem to command a certain respect for their own sakes. Is this a kind of moral respect? Or is it simply absurd to suggest so? My strategy here is slightly devious. I start by arguing that it is at least not absurd to consider inanimate natural objects as worthy of moral consideration in their own right. Having thus established the possibility of a morality that gives nature its due, I then turn to the problem of what might motivate or justify such a moral stance.[11] In the West, we are not used to taking seriously the idea that natural objects can have a moral claim on us. What seem to be clear moral intuitions, though, are quite often local to a time and a culture. Thus, in a culture strongly influenced by Buddhism, Jainism, or Shinto it would hardly have been necessary to argue as I have been doing for the considerability of living things. By now taking an example from another culture I intend to establish the possibility of extending moral consideration to at least some things in our fourth class.

In a speech delivered in 1854, Chief Seattle, a North American Indian, laments the coming of the whites and the demise of both the Indian and the Indian's environment:

> Our dead never forget this beautiful earth, for it is the mother of the red man. We are part of the earth, and it is part of us. The perfumed flowers are our sisters; the deer, the horse, the great eagle; these are our brothers. The rocky crests, the juices of the meadow, the body heat of the pony, and man—all belong to the same family. . . .

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[10] Ibid., p. 336.

[11] Some may balk at the notion that any individualist approach could give nature its due, for nature itself is a kind of society of structures in each of which millions of individuals participate. I deal with this issue in the final section of the paper, and until then—and at the acknowledged risk of oversimplifying—I continue the argument at the level of the individual.

> The rivers are our brothers, they quench our thirst. The rivers carry our canoes, and feed our children. If we sell you our land, you must remember, and teach your children, that the rivers are our brothers, and yours, and you must henceforth give the rivers the kindness you would give any brother. . . .
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> A few more hours, a few more winters, and none of the children of the great tribes that once roamed on this earth or that roam now in small bands in the woods will be left to mourn the graves of a people once as powerful and hopeful as yours. But why should I mourn the passing of my people? Tribes are made of men, nothing more. Men come and go like the waves of the sea.[12]

In these extracts we can see how Chief Seattle runs together references to the living (flower, horses, eagles) with reference to the nonliving (rocky crests, rivers). The third paragraph suggests far less concern with survival than we might expect from a chief who foresees the extinction of his own tribe.

Yet, struck as we may be by Chief Seattle's words, is there any way we can attach the perspective they reveal to those of us who bask in the material wealth of the twentieth century? Toward the end of his speech, he says:

> . . . we do not understand why the buffalo are all slaughtered, the wild horses are tamed, the secret corners of the forest heavy with the scent of many men, and the view of the ripe hills blotted by talking wires. Where is the thicket? Gone. Where is the eagle? Gone. And what is it to say goodbye to the swift pony and the hunt? The end of living and the beginning of survival.[13]

The questions are good ones for a people who live by hunting. For us, when we face the next energy crisis, the worry is more likely to be that we must say goodby to the fast car, the dishwasher, the air conditioner, and the television. Yet, we should be wary of dismissing the alien perspective out of hand; parochial matters of our society's values are not the point. And there are many reasons for thinking that acting morally may well involve the abandonment of many of our materialist goals, along with an end to the exploitation of poorer and weaker societies required to support a way of life both comfortable and corrupting.

So from Chief Seattle I take it that it is possible to extend moral considerability to at least some nonliving natural objects. Of course, this is not to claim that the morality of his tribe was a consistent one; indeed, I am not sure that this would matter, since it would be foolish to pretend that all moralities are

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[12] I found the text of the speech in the journal *New Internationalist* 3, no. 31 (September 1975): 16–17.

[13] A book by Helen Muir, *Many Men and Talking Wives,* published by Duckworth in September 1981, purports to take its title from this section of Seattle's (or Seatlh's) address. This reading of the text is perpetuated by Jill Tweedie (*Guardian,* 26 October 1981), who draws attention to "the odd title" of Muir's book. I have not undertaken the research necessary to discover which text has the misprint.

consistent. But there is no better evidence that a moral posture is possible than the fact that a group managed to live by it, and Chief Seattle's words reveal just such a stance giving a degree of consideration even to inanimate things. In the next section, I show that this stance is possible *for us* by proposing a criterion for such considerability.

II. THINGS AND THEIR FUNCTIONS

Supposing, at least for the sake of the argument, that there are possible principles which can be said to be moral principles and which allow consideration not only to living things but also to some nonliving natural objects, we might wonder if there are any other objects which might have a claim to moral status. Natural objects contrast with artifacts. Both sorts of object have structure of varying complexity, and both can have functions. The function of scissors is to cut, and good scissors cut well; the function of a heart is to pump blood, and good hearts pump well. But the function of an artifact is the result of design, and this design is intended to satisfy some end. By saying this, I mean to count beaver lodges as artifacts, but not coral reefs.

Now, a badly designed object may not fulfill its function well (or function instead as a different artifact), but the structure of complete natural objects is not the result of design, for they have no functions to fulfill. Parts of natural objects—like hearts, kidneys, leaves, and roots—do have functions, and these are determined by the contribution they make to the growth, maintenance, and survival of the complete, living thing of which they are parts. And, by extension, we may even count whole conglomerates of natural things—ecosystems—as containing whole objects within them which function to preserve the system as a whole. But we must be cautious with this extended use, for whole natural individuals, whether microbes or tigers, have no intrinsic functions at all.

It is important to be clear about this matter of intrinsic function. A cotoneaster shrub, let us suppose, functions to screen the compost heap in a garden. This is typical of the countless ways we—and other living things—use natural objects in the fulfilment of our schemes. Yet, it would be silly to try to define cotoneasters in terms of their contributions to gardens, or in terms of any other functions that we, or any other creature, might assign them. By contrast, to describe an item as a root, or a leaf, is to describe it in terms of its functions; an object that looked like a leaf, yet failed to promote growth by photosynthesis, and took no part in transpiration, would hardly be a genuine leaf. Thus, there seems to be an important distinction between whole natural objects and their functional parts.

It is not my intention here to contribute to the already large literature on function and teleology. Any reasonable account of function, nevertheless, will allow for the existence of defective or diseased things of a kind which fail to

carry out the functions characteristic of that kind. Thus, we should no doubt want to distinguish false leaves (which do not function as leaves at all) from defective leaves (which would have functioned as normal leaves had not certain disturbing factors intervened). My notion of intrinsic function is rather like Enç's notion of function *simpliciter.* As he puts it:

> What I am asserting here is that when we discover what the function of the heart is, we also discover part of the identity conditions of a heart. Part of what it is to be a heart is to be capable of pumping blood under normal conditions. . . .[14]

It is no part of the identity conditions of cotoneasters that they screen eyesores. It follows that I can know that a certain bush screens my compost heap without knowing what kind of bush it is; and a grasp of what a cotoneaster is involves no reference to such overlaid (non-intrinsic) functions as that of screening other things.

Now for a problem case. Suppose we find an ecosystem in which stability is preserved in part by the appetite of a large predator. To the predator we assign the function within the system of keeping, say, the population of voles at a reasonable level. Moreover, the system which the predator helps to control may itself have determined a place in it for such a predator. In this case, it looks as if the predator is functionally adapted to the system. Now there are two ways in which we can try to take the sting out of this example and argue that the predator in fact has no function. Despite the initial attractiveness of the first route out, I suggest that the second is in fact more plausible.

The first argument might be called an appeal to the "come off it" strategy. To view an ecosystem as a living machine involves a number of assumptions. We view the system as if designed for stability, as if a certain niche had been made with a predator in mind, as if the predator were custom built to carry out the role of vole control. But none of this is, literally, how selection and adaptation work. To use Dennett's terminology, we can distinguish *design-stance* descriptions from *physical-stance* ones.[15] Although the former stance can be rich in metaphor and useful explanation, the "come off it" strategy simply reminds us that the physical facts of the matter involve blind natural forces and chance selection.

Despite its initial appeal, there are drawbacks to this strategy. What about the heart, and its generally accepted function of pumping blood? We could use

[14] Berent Enç, "Functional Attributions and Functional Explanations," *Philosophy of Science* 46 (1979): 349. Enç's view arises from a criticism of Wright's influential views: see L. Wright, "Functions," *Philosophical Review* 82 (1973): 139–68, and his book *Teleological Explanations* (Berkeley: University of California, 1976). Wright's view is also criticized by C. Boorse, "Wright on Functions," *Philosophical Review* 84 (1976): 70–86 and by A C Purton, "Biological Function," *Philosophical Quarterly* 29 (1979): 10–24.

[15] See the introduction to D. Dennett, *Brainstorms* (Sussex: Harvester Press, 1978).

the same strategy here, pointing out that hearts just evolved, that the forces at work were no different from those involved in other cases of evolution. Yet, following Wright's account of functions, we may want to say that the heart is there because it pumps the blood, and its pumping the blood is a consequence of its being there.[16] The joint truth of these conditions suffices for the recognition that the function of the heart is to pump the blood. But the "come off it" line threatens our conception of functional parts within organisms. Additionally, it may well make sense to regard a predator in an ecosystem as having a function. At least, it would be better not to rule this possibility out *a priori.* And, luckily, there is a way in which we can allow this without being committed to the claim that this hawk, or that tiger, has any intrinsic functions at all.

Our second way out of the difficulty involves no more than pointing out that the assignment of functions to individual predators, or to any other individual, risks a division fallacy. Suppose our large predator is an eagle, and suppose further that eagles die out in the system under consideration. As they become extinct, their place is taken by some other species—by hawks of some kind. So long as the hawks control the voles to the same extent as the eagles did, our model of the system will not be substantially altered. The claim that the eagle had this function prior to its extinction is not a claim about any individual bird. Rather it was a claim about a kind of animal, about the need for a group fulfilling the role in question to be represented in the ecosystem. But what is true of a group need not be true of any representative of that group. And the truth, if any there be, in talking about the function of a predator in a natural system is, at best, a truth about a group, not about any individuals.[17] One eagle dies, while another is hatched to replace it. Just as the heart cells do not function to pump blood (although hearts do) individual eagles do not function to control voles (although we may regard groups of them as doing so).[18]

My point, however, is more than the claim that nothing has a function *qua* individual. On the contrary, individual things may acquire this or that function in particular circumstances. And—if we broaden the notion of non-intrinsic

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[16] I agree with Enç that Wright's account gives a sufficient, but not necessary, set of conditions for the possession of an (intrinsic) function.

[17] Obviously, truths about groups and truths about species should also be kept distinct. We may find nonaggressive groups of individuals, for example, belonging to a species generally characterized as aggressive.

[18] For readers who find the analogy with a physical thing of this sort inappropriate, a more convincing example may come from the "Ant Fugue" in D. R. Hofstadter's *Gödel, Escher, Bach* (Sussex: Harvester, 1979). Teams of ants form "signals," characterized by their function of conveying specialized ants to a part of a colony. But only the team, not the individual ants, have this function. The individual ants have the functions of nursing, cleaning, hunting, and so forth. Incidentally, I regard ant colonies as individuals, with ants as functional components: there is no more to the individual ant than its roles in the colony, whereas there is more to an eagle than its roles, say, as one of a nesting pair.

function to include roles—how well an individual discharges a given function (as mother, chairperson, or whatever) may itself be a matter of moral concern. The claim that nothing has a function *qua* individual would, at best, be true only of intrinsic functions.[19] And it is just such functions which individuals that are not physically parts of other objects are lacking. As we have seen, this intrinsic functionlessness is coupled with a capacity to take on multifarious functions in different contexts. But what makes a factory worker more than a machine operator also makes an elm tree more than a windbreak: in each case we have an assigned function coupled with the potential for taking on many other functions—voluntarily or not—overlaid on an individual that is designed specifically neither for this nor for that, since the individual was not designed at all. And if we are to look for a quality by virtue of which all natural things may claim moral considerability, I tentatively suggest that we have come up with a candidate: their lack of intrinsic function.

III. ART AND AUTONOMY

We celebrate the intrinsic lack of function of persons in various ways: they are not merely the means to others' ends, but have the potential for all sorts of different roles; within institutions they can acquire all sorts of functions, but none of this can undermine their fundamental autonomy. The thrust of my argument is that we do have some grounds, albeit slender ones, for recognizing a similar autonomy in other natural things.[20]

Few would deny that scissors, cars, and other products of human and animal invention lack this autonomy shared by natural objects. But there are some products of human labor which have seemed to many to have a value beyond mere functional utility, and have instead appeared to have an intrinsic value for their own sakes. Works of art are perhaps the best examples of such products, and many modern writers have followed Hegel in ascribing a higher value to art than to nature. Thus, Savile writes:

> Of course it is true that natural beauty has value for us too, but we may observe that at least in the highest examples of art we find functions exemplified and

[19] See Enç, "Functional Attributes," p. 361.

[20] Murray MacBeath has impressed on me that it can seem odd to hold mountains as autonomous if by this we mean that they do things in a self-regulating way, getting on—as it were—with the business of being mountains. Intuitions may vary here, but much the same oddness can be found, if we work at it, in ascribing a form of agency, however diminished, to some living things and living systems. Interestingly, Wiggins writes of "geographical or geological terms like *river, lake, spring, sea, glacier* or *volcano*" that "it will not be wildly inappropriate to speak of principles of activity" (see David Wiggins, *Sameness and Substance* [Oxford: Basil Blackwell, 1980], p. 86). Consider also my remarks about the slowness of change in mountains in the final section of the paper.

> values conveyed which nature and experience are scarcely able to yield. For instance, through art, though rarely through nature, we find ourselves made sharply aware of the splendours and defects of the society in which we live. . . .[21]

Ignoring the human-regarding stance taken by this writer, we can still see an attempt made to compare natural objects with artifacts. And if we are going to compare the claims of these two kinds of objects, it is interesting to know if the objects compete on the same basis. It may be that works of art are examples of the sort of objects whose existence we wondered about at the start of the preceding section: artifacts that have a claim to moral standing.

Some support for the idea that works of art are more than mere instruments of communication between artist, or composer, and audience is rendered by noting the affront people display when an important art work is vandalized, or one of a country's art treasures is threatened with export. To give a complete account of why art is viewed as something transcendent, and of value for its own sake, would take me too far from the central themes of this paper. Yet, I want to maintain that art works and natural objects do not compete for moral consideration on any similar basis. Unlike natural objects, art works do not seem to me to fall within the scope of morality.

Part of the "magic" of art is that masterpieces of music, literature, painting, and the rest are packed with symbolic richness. Not only is there no simple message conveyed by a great painting or sculpture, but rather a number of messages, allusions, and suggestions conveyed on many different levels. The symbolic content of such objects represents a great deal to a great many people. They are messages of great richness. This sheer expressive power that they represent enables us, I think, to account for their potency while staying within an account of art which treats it as a mode of communication between the creative agent and the audience.

If we do stay within such an account, then artworks are functional objects, and hence not on the same footing as complete natural objects. This is not to say that there is no room for talk of respect, duty, and obligation when we are dealing with art; rather, we need to be clear on the Kantian distinction between duties owed directly to objects, and duties we may have regarding an object. We owe no respect, no duties, to any of Leonardo's work, but we do have duties regarding it, duties which are owed to the many people for whom his work is of immense symbolic power. Likewise, a government contemplating a road building program owes no duty to a valley on the grounds that it is sacred to a particular local tribe, but the government does, of course, owe a duty to the tribe regarding the valley. If a road is built through the valley despite the protests of the tribe, it is the tribe, not the valley, that has been wronged.

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[21] A. Savile, "The Place of Intention in the Concept of Art," in H. Osborne, ed., *Aesthetics* (Oxford; Oxford University Press, 1972).

Yet, the valley is a natural object, and if what I have argued so far has any plausibility, it may be that we owe any valley, consecrated to ancestors or not, a certain moral respect which we do not owe any artifact. Subtract the expressive power and the fitness for its purposes from a painting and you are left with an artifact of no particular value: the canvas, the wood for the frame, even the frame itself and the pigments in the oils, might all have been put to better use. But subtract the functions assigned by people and animals to a valley and its river, take away the ski lifts, the beaver dams, and the scenic views and you are left with an object containing within it hundreds of self-regulating systems living in a kind of natural anarchy, an object that partly determines its own climate, serving no one's purpose, but still worthy of respect purely in its own right.

To argue in this way raises an interesting problem: could there be items of human or animal creation which, nonetheless, have a value purely for and in themselves, not merely one derived from their function? Gardens, parks, canals, and the like might seem to be of this type. And many animals may be thought, at first sight, to be artifacts themselves. As Callicott says, "Domestic animals are creations of man. They are living artifacts, but artifacts nevertheless. . . . It is literally meaningless to suggest that they be liberated".[22] Certainly, intervention by unnatural selection, or by gardening, has allowed the production of living things and systems particularly suited to human ends and needs. But we need to be wary about classifying such items. Suppose an alien biologist is puzzled to find a breed of (domestic) sheep particularly ill adapted to surviving in the wild. The biologist is enlightened by the discovery that the breed is the result of human intervention aimed at maximizing wool production and yielding a high proportion of edible flesh. Does the discovery tell the biologist more about the *nature* of the breed in question? Of course not: the puzzle was about the etiology of the breed, not about what kind of thing it was. It might be objected that one thing the biologist has found out is that the animals are of a certain kind, namely, the domestic kind. Little hangs on this point. The label "domestic" identifies no natural kind, and is dispensible from the taxonomist's point of view. It alerts us to the likelihood that the animal or plant in question is the result of selective breeding. As Darwin so cautiously made the point:

> The key is man's power of accumulative selection: nature gives successive variations; man adds them up in certain directions useful to him. In this sense he may be said to have made himself useful breeds.[23]

[22] Callicott, "Animal Liberation," p. 330.

[23] Charles Darwin, *The Origin of Species,* 6th ed., 1872, chap. 1; reproduced in P. Appleman, ed., *Darwin* (New York: Norton, 1979), p. 45.

Selective breeding, then, yields "artifacts" in only an attenuated sense of that term.

Plants and rocks in a garden, however, represent a different case. They are incorporated as parts into a whole which is the result of human design and that design is aimed at satisfying our own ends. Gardens, parks, and game reserves are thus artifacts in a perfectly literal sense. But their components are natural objects and our use of them within the artifact will more or less restrict their autonomy. A garden, then, has a double value. It has the sum of the values of the individual things within it; and additionally it has its value as an artifact —that is, value for those who use it and benefit from it.

With these cases distinguished, and put to one side, there is a more difficult case we must now consider. In a story by Stanislaw Lem a creator-benefactor named Trurl builds a microscopic kingdom for the "entertainment" of a dispossessed tyrant. The kingdom is housed in a portable glass case and is meant to contain simulations of people, armies, villages, and so on. But Trurl does his job too well: the simulations are perfect; the case contains tiny persons living their life under the decrees of the tyrant who rules over them like a god.[24] Here is a situation in which we would say that something rather strange has happened. What Trurl has invented was meant to be no more than a game, so that the wicked ruler could use up his energies and be happy in his tyranny while no one suffered. And the world in the glass case could no doubt be functionally described in just such a way. Lem's story, though, enables us to see how misleading such a functional description is. Trurl is induced in the course of the tale to feel more and more uncomfortable as he comes to realize that what he has created are real persons with real feelings, undergoing real suffering, and fighting real wars at the tyrant's command. So here at least we have a case where something has been produced with a certain function in mind, but where a merely functional description of the thing produced is quite inadequate.

Of course, human beings are autonomous, and we should surely want to maintain this whether or not we hold particular religious (or other) beliefs about how we came into being. The Lem story has allowed us to conclude that not all purposeful creation results in items that can be adequately defined in terms of intrinsic function. It matters little whether we decide to call such items "artifacts" or not. If Trurl's creations are artifacts, then so—according to some—are we. This shows that there can be artifacts that lack intrinsic functions, that in some way go beyond what their creator has programmed into them. My own inclination is to use a different term for such entities—but it is clear, I hope, that nothing of any substance hinges upon this decision.

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[24] "The Seventh Sally," from *The Cyberiad,* trans. M. Kandel (Seabury Press, 1974). The piece occurs also as chap. 18 of Daniel Dennett and D. R. Hofstadter, eds., *The Mind's I* (Sussex: Harvester, 1981).

Doesn't such a move, however, just open the door to the following objection? Some human works of art, my critic suggests, are precisely artifacts that have a value in and for themselves over and above what can be captured by any functional account of the sort sketched earlier. It is interesting to note the result of taking such an objection seriously. If the critic is right, and at least some works of art are lacking in intrinsic function, then we need some explanation of why such items are often valued far more highly than natural objects. It would be fascinating to pursue this issue, and I do not mean to give the impression that I am entirely unsympathetic to such an enterprise, but, for the moment, I am content to rest happily with the functional model of art as a form of multilevel communication by means of a suitable notational system.[25] Perhaps I err, but if I do, then more will need to be said by the critic about identity conditions for works of art and about why we do not pay nature the same respect we so dutifully give to art.

IV. INTEREST

The position I have now reached has both benefits and drawbacks. From such a stance, we can see why the retention of certain areas in national parks, carefully stocked with selected species, seems to some people a poor attempt at giving nature her due, for such parks and game reserves become large artifacts, no different in kind from zoos and gardens. Of course, not all protected wilderness areas are managed in this way, and even if some are, the objects within them are, as I have argued, often pretty well autonomous. On the other side, much work remains to be done to show whether I am right in lumping together many different kinds of natural objects as all sharing the same autonomy. And the details of how to distinguish parts of objects from whole objects have been conveniently skipped. Are clouds whole objects, or just parts of one object, the atmosphere? Are human bodies whole objects, or just temporary swarms of atoms? Ignoring these difficulties, nothing has been said to support the view that wilderness areas should be left alone, rare species protected and industrial pollution reduced—for the acknowledgement that natural objects are worthy of respect for themselves does not require in itself any prohibition on our use of them, although we might expect that taking their autonomy seriously would mean putting limits on our present somewhat selfish exploitation of them.

But before we take seriously talk about limits in this context, we have to consider how we might give weight to claims on behalf of natural objects at all. Do their interests compete with ours in any way? Does it even make sense to think of an inanimate thing having interests at all? Much of the recent work

[25] For requirements on notational systems, see Nelson Goodman's *Languages of Art* (Oxford: Oxford University Press, 1969), especially chaps. 4 and 5.

on the question of respect—or rights—for natural objects has been stimulated by the case of the Mineral King Valley described in Stone's book *Should Trees Have Standing?* Stone's article of the same title was in part responsible for the Douglas dissent, in which an American Supreme Court judge argued for the extension of rights to natural objects (the text of the Douglas dissent is printed in Stone's book).[26] The trouble, though, with Stone's original position is that it seems to require us to recognize that such items as forests, rivers, and valleys have interests. Stone's arguments involve an appeal to the fact that we already accord recognition to the interests of such merely legal "persons" as countries, corporations, and so on, even though in the nineteenth-century jurists found such notions almost unintelligible. Thus, he writes:

> Perhaps injury to the Sierra Club was tenuous, . . . but the injury to Mineral King —the park itself—wasn't. If I could get the courts thinking about the park itself as a jural person—the way corporations are 'persons'—the notion of nature having rights would here make a significant operational difference. . . .[27]

As we have already seen, Feinberg argues that "the sorts of beings who *can* have rights are precisely those who have (or can have) interests,"[28] and so it is hardly surprising to find Stone taking the position he does.

Such a view, indeed, seems plausible when we focus on living things, or simple aggregates of living things, like forests. And let us suppose, perhaps implausibly, that the interests of a corporation can be identified by a reductionist strategy: we can appeal to the interests of employees, shareholders, customers, and so on. In a similar way, perhaps the interests of a forest can be identified in terms of the interests of its individual trees, the birds who nest in them, the fungi around their roots, and so forth. Yet, even in this case there is an overwhelming difference. In the case of a natural forest, there was no design, no purpose, no contracts, no statutes—in brief, none of the hallmarks of the artifacts which are corporations. Corporations have ends to serve, at least economically, but forests have none. But I have already argued that living things in general do have an interest in survival, growth, and freedom from disease. So perhaps we should include forests as special cases of living things. Alas, none of this comes close to establishing any sort of interest for mountains, the air, deserts, and rocky crests.

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[26] Christopher D. Stone, *Should Trees Have Standing?* (Los Angeles: Kaufmann, 1974). The article appears in *Southern California Law Review* 45 (1972): 450. Also on the same topic, it is worth looking at L. H. Tribe's "Ways not to Think about Plastic Trees," *Yale Law Journal* 83 (1974): 1315–48, and the same author's "From Environmental Foundations to Constitutional Structures," *Yale Law Journal* 84 (1975): 545–56.

[27] In his introduction to the book cited in the preceding note.

[28] Feinberg, "The Rights of Animals," p. 51.

Another point about interests is that while we are expert as far as human interests are concerned (so we think), we can never be in a position to say just what the interests of other living or nonliving things might be. Perhaps rivers enjoy being dammed—how could we ever tell? As Sagoff wryly remarks:

> Make no mistake: the policy which turns our remaining wilderness areas into amusement parks, highlights the scenery with *son et lumiere,* and fetes the animals with garbage increases the general satisfaction of man, beast and mountain.[29]

Yet, if, in Tribe's words, we are to give "institutional expression to the perception that nature exists for itself," how could we do so while abandoning talk of interests? Aping Feinberg, we might suggest that a mountain has no interest unless we assign it a function within a scheme of human interests, and so a mountain *per se* could not be represented in any institutional legal process, especially in an adversarial system of law like our own.[30] Seen in this way, Stone's appeal to corporations, municipalities, and the rest is not a very helpful precedent.

An opponent of species-centered morality might point out at this stage that our predicament merely confirms our alienation from nature. Since we are unable to determine the wants, needs, harms, injuries, and benefits of rivers and mountains, we are unable to let them figure in our institutional processes which are designed for handling just such matters. Rodman, for example, suggests that we should abandon the property paradigm and adopt instead a

> principle of propriety, i.e., the principle that action should be appropriate to the nature of all the parties involved in the transaction accompanied by the corollary recognition that non-human species exist "in their own rights" . . . and not simply "for us."[31]

For us there will be the additional problem of determining the "nature" of a river, desert, or mountain. Yet, Rodman couples this principle with the suggestion that "we may need to become less moralistic and less legalistic," and maybe this is a solution to our difficulty. If moral theory tells us that any morality will concentrate paradigmatically on social goals, the harmonizing of essentially divergent human interests, the protection of minorities and so on, then perhaps we should follow Rodman and think of our relationship to nature in less moral terms.

The considerations I have advanced in this paper suggest that all natural objects share a certain functionlessness, unlike their parts, and that this may

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[29] Mark Sagoff, "On Preserving the Natural Environment," *Yale Law Journal* 84 (1974): 244.
[30] See Feinberg, "The Rights of Animals," p. 54.
[31] Rodman, "The Liberation of Nature," p. 109.

provide a basis for a fellow feeling, a respect, and a care for natural objects which is no less important for being outside the scope of social morality. My own view here is that to accept this way out, however attractive, is to restrict the scope of morality unduly. Although in my account we can talk of the harm caused to the fish and flora of a river by excessive fertilizer runoff, we can only talk of the harm to the river itself metaphorically. I admit that the river itself can have no interest, literally,[32] but to take this fact as showing that the river itself commands no moral respect is to fall back on a conception of morality that ties it to the social goals already mentioned. We already have notions that are at odds with such a conception. The pointless destruction of inanimate things is as much vandalism as the destruction in a similar spirit of living things. Passmore, in speaking of our reverence for life, says that we can link this reverence with

> another more explicitly western tradition, that it is wrong unnecessarily to destroy—a principle embodied in the concept embodied in the concept of "vandalism" . . . One could at least go this far: the moral onus is on anyone who destroys.[33]

The arguments in this paper might be thought to give some plausibility to an attempt to divorce an account of vandalism from simple reverence for life and to tie it instead to a recognition of the common predicament of all natural uncreated things. But I doubt whether, in the end, vandalism is the notion we should give our attention to. Artifacts are obvious victims of vandalism, and it seems clear that destruction for its own sake is not a necessary condition of a vandalistic act.

V. INDIVIDUALS AND SYSTEMS

So far I have been dealing with easy cases—with individuals, or simple aggregates (like forests) whose parts are individuals. Before inquiring further into the connections, if any, between the viewpoint I am urging and the accepted notions of what is of moral concern, it is necessary to take a look at one very distinctive view of environmental morality—Leopold's land ethic. This view can be neatly captured by the motto: "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."[34] It could be argued that the autonomous,

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[32] However, granted the open texture of our language and the associated possibilities of conceptual development and revision, we could—as I admit in the final section—probably work up a concept of interest that would apply to rivers.

[33] John Passmore, *Man's Responsibility for Nature* (London: Duckworth, 1974), p. 124.

[34] Aldo Leopold, *A Sand County Almanac* (New York: Oxford University Press, 1949), pp. 224–25. Leopold's views are concisely summarized in Callicott, "Animal Liberation."

intrinsically functionless individuals with which I have so far been concerned are themselves *parts* of certain larger wholes—ecosystems. Moreover, the good of such systems and the good of the individuals living within them are not wholly disconnected. As Stephen Clark puts it:

> Plants too, and every clod of earth, are animate: not mystically so, but in straightforward biological terms. The earth itself, the biosphere itself is made up of living things and their products in a single interconnected whole. We are all members one of another, and the lowliest organism may be as vital to the whole as any Nobel prize-winner. More so, indeed. For the very fact which can be immediately adduced to mark the difference between man and plants, or men and micro-organisms, reveals that the latter are strictly very much more important than any one of us.[35]

How can I, calling as I do for respect for rocky crests or great oceans, ignore the claims of individual ecosystems let alone those of that "multi-millionfold life-support system that is the terrestrial biosphere"?[36]

One problem here is knowing just what the good of the biosphere is if it is something different from the sum of the goods of all the individuals living within it. Another, more technical, issue is whether we, or anything else are, literally, *parts* of ecosystems. It is certainly not right to think of our relationship to larger systems in the way that our components stand to us. At least, such an analogy is no more helpful than that which sees the relation of parts of a body to a whole body as similar to that of members of a family to the whole family, or citizens to the state.[37] To discuss this technical issue in detail here would not, I think, be rewarding. So let us stay neutral on the matter of parts and wholes, but bearing in mind that when I speak of the relation of members to a group I am in no way intending to suggest that this is at all the same as that of a component to a whole.

Anyone who is wary of facile reductionism would want to question the suggestion implicitly made at the start of the preceding paragraph that the good of the biosphere may be no more than the sum of the goods of its members. Think of an analogy with families. The good of a family is not merely the sum of the goods of its members, at least not if saying this involves ignoring the fact that I may make a sacrifice for the good of the family (to which I belong). As I suggested in section one, I can come to identify with a group to which I belong, and cease to see a conflict between my good and its good. So

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[35] Stephen R. L. Clark, *The Moral Status of Animals* (Oxford: Clarendon Press, 1977), p. 170.

[36] Ibid., p. 160.

[37] A *part* is not the same thing as a *member.* Part/whole questions raise complex problems about identity. For a glimpse of such problems see my critical study of Eli Hirsch's book *The Concept of Identity* (New York: Oxford University Press, 1982), forthcoming in *Nous.* A critique of the view that citizens are parts of society can be found in David-Hillel Ruben, "Social Wholes and Parts," *Mind* 93 (1983): 219–38.

my good (being identified with the good of the family) can involve sacrifices on my part. On the other hand, the good of the family is not something quite distinct from the good of its members. My sacrifices will benefit the family only because they benefit other members of it, and it is, no doubt, the fact that I care about their good that involves me in making the sacrifices I do. Now is a family an intrinsically functionless thing? It is hardly an *individual* in the philosopher's sense, but it is a unitary entity of a sort. And even if we are troubled about agreeing that it is intrinsically functionless, there will be some intrinsically functionless groups in which I have some degree of membership. To be consistent, perhaps I ought to argue for the moral standing of such items, although such a claim would not be nearly so clear as one made on behalf of individuals, since the former depends on further clarifications of the status of such entities.

It should now be clear why I focused on individual natural things to begin with. This was no mere post-Renaissance individualism on my part, but rather a concern to work from the simpler cases. It is arguable that ecosystems fulfill the conditions for functionless objects and are therefore candidates for moral consideration every bit as worthy as trees, valleys, rivers and stones. If you take such a view, I have no objection to your taking my references to natural objects in this broad way. But I hope I have said enough to show that it is not a necessary corollary of this view that the good of such a large object will be distinct from, or even at odds with, the good of its members. Just as in the case of the family, the adoption of an appropriate environmental ethic may make it (morally) impossible for any opposition to arise between our good as humans and the good of the biosphere or of the planet.

But what is the focus of an appropriate environmental ethic? A question mark now hangs over notions of *welfare* or *interest,* for I am prepared to concede that rivers and deserts have, quite literally, no welfare or interests, and I would concede the point with regard to ecosystems as well. Of course, since the good of a system or group is, as I have admitted, not distinct from the good of its members, and since at least some members of every ecosystem have interests, we might be tempted by some reductionist account of the interests of such systems. Indeed, we could no doubt try to make sense of acting charitably toward a river, or of being benevolent to a desert. The open texture of our language is perfectly hospitable to just such conceptual development, but it is not part of my aim to argue for it here. Nor am I urging any kind of reductionist ploy. So it may be that a utilitarian, for example, will need either to reinterpret what I say so that notions of welfare, benevolence, and interest can have some kind of application in such cases or else to dismiss my arguments as morally irrelevant.

One small hope I entertain is that reflection on the points I have tried to make may undermine the sympathetic reader's allegiance to a morality based exclusively on notions like those of welfare or interest. We are terribly tempted

to simplify and systematize, to think that simple rules and formulas will work for much of our moral life. Suggestions like the ones made in this paper threaten the neat systematizations others have made, and raise problems that few have ever taken seriously. It is bad enough trying to count the interests of sentient things in our calculations: but how are we to proceed when we count in things that are not sentient and have no interests? We are inclined, at least if we take views like utilitarianism seriously, to dismiss this latter group of things simply because they cannot be *counted* or given weight in our *calculations* in any obvious way. My response is to reject this kind of systematic approach to the problem. Let us give considerability to all intrinsically functionless natural things. The next step—not one I can take here—is to look at lots of cases, taking extended moral considerability seriously, and see how we can start to give due weight to the moral claims of the diverse items in the cases. I am pleased to see that others likewise distrust the appeal of systems in morality. Clark, for one, inveighs against moral systems which "present a sort of ghastly *reductio ad absurdum* of their own pretensions".[38]

There are a couple of concepts that figure in our everyday moral thinking which do, I think, have application to the kinds of items for which I have been suggesting we take moral considerability seriously. The first is the idea of *freedom* which seems to make little sense when applied to a functional component or to a merely functional artifact. For something to have an intrinsic function, its very existence as an item of the kind that it is depends upon its fulfilling whatever causal roles its function requires. An intrinsically functionless item, by contrast, can change, develop, and organize itself subject to quite different constraints. Of course, to be a flower of a certain sort is to have certain components organized in a certain structure—a structure determined in the end by the flower's microscopic genetic structure. But the same kind of flower will grow differently in different environments, play host to different sorts of insects, and fulfill all sorts of different imposed roles. We too have the freedom to adapt to various circumstances and environments, a freedom of which we ourselves are aware and a freedom that is far greater than that of a primula or a dandelion. But the difference between dandelions, primulas, and us is one of degree, not of kind.

What may come as a shock is not my notion that ecosystems may differ in degree rather than in kind from us, for after all, such systems are governed by internal principles which enable them to survive changes and crises almost as if they too were living things. Rather, the shock may come in the claim that deserts, rocks, and rivers are similar to us, too. The vagaries of human existence, our limited point of view, are no doubt important in explaining the difficulty we have in seeing such objects as self-organizing systems. If millenia were but seconds to us, we would be immediately aware of the logic of the rock

[38] Clark, *Moral Status of Animals,* p. 187.

cycle, the growth of mountains, and the ebb and flow of deserts. In such a way we can perhaps start to make sense of Wiggins' remarks about a principle of activity.[39] As it is, our knowledge of these things is only remote and indirect, but the claim that rivers, mountains, and wildernesses can be "tamed" is an implicit acknowledgement that they have, so to speak, their own wild, free way of existing.

If freedom is one notion that has a recognizable role in our moral thinking, another, I would suggest, is that of the *natural.* We can perhaps recognize that we ourselves are natural objects sharing the accident of existence with other autonomous natural objects. This separateness and independence of all natural things gives rise to a kind of dignity noted even by the Romantic poets on the occasions when they were able to transcend their often self-indulgent enjoyment of nature. Iris Murdoch writes:

> A self-directed enjoyment of nature seems to me to be something forced. More naturally, as well as more properly, we take a self-forgetful pleasure in the sheer alien pointless independent existence of animals, birds, stones and trees.[40]

In my account, the propriety of this self-forgetful pleasure is based on a certain common predicament that we and our fellow natural objects find ourselves in. That we, and other animals, can act purposively, set ourselves projects and strive intelligently to fulfill them should not lead us to forget the intrinsic functionlessness of uncreated things. We already have a concept of naturalness which leads us to protect and cherish the natural and mistrust the artificial. At its fashionable worst, respect for the natural is invoked in order to promote the sales of herbal shampoos and ginseng root, but such respect is also linked with our growing concern about factory farming, monoculture, aforestation, global pollution, genetic engineering, and loss of wilderness.

It may seem to some that what we are dealing with here might more properly be regarded as *aesthetic* rather than purely moral matters. But if this paper has set out mainly to challenge the notion that sentience, rationality, or even life itself exhaust the bases for moral concern, then a corollary would be a challenge to the view that respect for the natural can be dismissed as merely aesthetic. How, indeed, are we to separate the aesthetic and the moral? If we claim that morality, unlike aesthetics, deals with interest or welfare, then this would be merely question-begging. Perhaps our care for what is natural is both aesthetic and moral: the burden, I would argue, is on the objector to establish that such care is in some distinctive way nonmoral.

My conclusion, then, is that it is quite unclear that appeals to rationality and the rest give rise to claims that are morally more urgent, or more central, than

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[39] See note 20.

[40] Iris Murdoch, *The Sovereignty of Good* (London: Routledge and Kegan Paul, 1970), p. 85.

the appeal to intrinsic lack of function. I recognize, of course, that much of my argument here has been sketchy in the extreme, but such an approach suits the hypothetical and exploratory nature of the undertaking. If my suggestions have worth, then a great deal will need to be done by way of filling out the details, and justifying claims which at the moment stand on insecure foundations. But if by writing this I have persuaded at least some readers to look at the scope of morality from a new viewpoint, and to consider the subtleties that would be involved in trying to reconcile our moral respect for different kinds of thing and adjudicating the different claims they make on us, then I will have succeeded in overcoming some of the bias to which our moral reflections are so regularly prone.