

Why We Should Preserve Nature

It seems that we have duties to respect all living creatures, even the lowest-order animals and plants; to avoid causing the extinction of any species; and to preserve complex parts of the environment like a tropical rain forest or the Grand Canyon. If we ask how we can account for these duties of preservation, one possibility is to list the benefits that accrue to us from acknowledging them: tropical rain forests are central to the whole planetary ecology; currently obscure species can turn out to yield new drugs or new genetic material for agricultural exploitation. Other instrumental arguments are based on "aesthetic utility": we should preserve particular natural features or particular species because they embody qualities we value (as the lion embodies courage), or because we find them pleasing.

Instrumental arguments like these are numerous, varied, and significant, but they do not satisfy us entirely. They entail that if some species is not ecologically essential, and if it will produce no wonder drug or wonder crop, then whether we have a duty to preserve it depends on whether we like it. The content of our duties of preservation will depend heavily on accidental features of human preferences. This seems wrong. Furthermore, even in the case of the tropical rain forest, whose present utility is not in doubt, it seems wrong to claim that we should preserve it *merely* because it is essential to our carrying on our lives and pursuing our current goals and satisfactions. Our duties of preservation demand a more solid foundation than our own changeable needs and fancies.

On the other hand, suppose we try to account for duties of preservation without such instrumental arguments. It seems then we must claim that the natural world is valuable in itself. But if we imagine a universe in which there is no life form higher than the nematode, and if we ask whether it is better for that universe to exist than for there to be nothing at all, many of us would be inclined to say that it is not

better—between the existence and non-existence of such a universe, there is nothing to choose. The existence of value seems to depend somehow on the existence of fairly sophisticated consciousness. If we claim that natural entities without any minimally sophisticated conscious lives of their own—the nematode, the lousewort, the Grand Canyon—are valuable in themselves, we contradict this basic intuition that value and consciousness go together.

Standard attempts to explain duties of preservation without explicit reference to the link between value and consciousness get whatever plausibility they have by talking in a way that tends implicitly to impute consciousness where none exists. Claims that non-human entities—animals, plants, rivers, the "biotic community"—have rights either are merely disguised claims that humans have duties regarding these entities, or else presuppose developed consciousness in these entities, since any notion of rights that has enough substance to serve as a *basis* for duties drives us to think about rights as protections for the activities of rational, moral agents. Claims that every living creature has a "good of its own" that generates duties toward it invite us implicitly to think of oak trees and louseworts as engaged in conscious valuation and striving after some "good" they have chosen or acknowledged. The lesson is that hardly anyone is willing to face the claim that value depends on consciousness and deny it outright.

We are faced, then, with a dilemma. How can we explain non-instrumental duties of preservation without denying the connection between value and consciousness? Why do we have any non-instrumental duty to protect the Grand Canyon if the Grand Canyon is not somehow valuable in itself?

Knowledge and Pleasure

The solution is this. Borrowing an idea from philosopher G. E. Moore, we should regard as intrinsically valuable, not the Canyon itself, but the *complex* consisting of the Grand Canyon, plus knowledge of the Grand Canyon, plus pleasure in that knowledge. Consider a person Jones, who has some knowledge of the Grand Canyon and who takes pleasure in that knowledge. What is valuable is the "organic unity" consisting of the Grand Canyon, Jones's knowledge of the Grand Canyon, and Jones's pleasure in her knowledge of it, when these occur together. This does not entail that any individual element—the Canyon,

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or Jones's pleasure—is valuable on its own. What is intrinsically valuable is Jones's pleasure in the Canyon and in her knowledge of it, as an inseparable whole.

To say that something is intrinsically valuable is to say that it is good in itself, abstracting from its causes or consequences, and abstracting from its relationships to other things. It is good just for what it is, and a universe that contains it is the better for containing it.

If something is intrinsically valuable, then any moral agent has a moral reason to try to bring it into existence or to preserve it if it exists already. This is not to say that the agent has a conclusive moral reason: one may

cruelty, plus Jones's pleasure in her knowledge of Smith's cruelty is intrinsically valuable. The non-substitutability might seem to require as explanation that the Grand Canyon *itself* is intrinsically good, and that Smith's cruelty *itself* is intrinsically bad. But the relevant difference between the Grand Canyon and Smith's cruelty is that while Smith's cruelty *is* bad in itself, the Grand Canyon has *no* value in itself, only potential value as a possible component of a valuable complex. On the other hand, any other natural object *can* stand in for the Grand Canyon in such a complex: any individual creature, species, ecosystem, type of



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have to choose between the existence of two intrinsically valuable things, or weigh intrinsic value against instrumental value or disvalue. To say that something has intrinsic value is not to say that it must have absolute value, or that it cannot have instrumental value or disvalue as well. But it is to say that, other things equal, a moral agent has a duty to preserve or foster it.

What other complexes, constructed on the model of the Grand Canyon-Jones complex, are intrinsically valuable? Clearly, if we replace Jones by any other conscious agent capable of having the same sort of knowledge of the Canyon and taking the same sort of pleasure in it, the resulting complex will still be valuable. But there are limits on what sort of objects we can substitute for the Grand Canyon. We cannot put "Smith's cruelty" in place of the Grand Canyon and claim that the resulting complex consisting of Smith's cruelty, plus Jones's knowledge of Smith's

ecosystem, geological formation, or natural process. Every one of these things can be part of an intrinsically valuable complex if it is conjoined with some human (or sufficiently intelligent and self-conscious) being's knowledge of it and her pleasure in her knowledge.

Since any natural object can be part of a valuable complex, if we know the object and take pleasure in knowing it, we have a reason to promote its existence. If we do not know the object or take pleasure in knowing about it, then we ought to do so. We are capable of learning about any natural object, and we are capable of learning to take pleasure in knowledge of any natural object. Thus, we have a reason to preserve any natural object.

This argument gives us a non-instrumental argument for preserving natural objects, without denying the intuition that the existence of value depends somehow on consciousness. On the present argument, it is *not*

the case that we have a reason to preserve a natural object only if it is economically useful to do so or if we happen to like it. It is true that our having reason to preserve every natural object depends on our having at least the potential for knowing about and taking pleasure in every natural object. But we do have, and ought to develop, this potential. If we ignore this potential, the argument for preservation does not disappear. The central objection to traditional instrumental arguments for preservation is that they make the case for preservation depend on accidental or arbitrary facts about our needs and preferences. The present argument depends on only one deep fact about us, which seems too fundamental to be regarded as accidental or arbitrary.

Some Examples

It may clarify how the theory works if we look at some examples of how it guides us in making choices about preservation policies:

1) In cases where we are forced to choose, should we protect two individuals of some common species or the last two (mating) individuals of a rare species? Whichever pair of individuals we protect, we save two individuals (whose existence we know of and take pleasure in); but if we protect the rare individuals, we also save a species which would otherwise disappear. Because the species is a separate "natural object" to be known and appreciated, saving the species is a separate, additional good.

2) Should we *prevent* the extinction of a species which seems to be disappearing in the natural course of events and not because of human intervention? On our theory, there are considerations to be weighed on both sides, for not preventing an extinction is quite a different thing from causing an extinction. This difference is explained by the fact that natural processes are potentially valuable natural objects just as species are. If we cause an extinction, we destroy both the species and its natural "trajectory." If we prevent an extinction, we save a species, but also interfere with a natural process in a way we would not be doing if we allowed the extinction.

3) Should we preserve dangerous things, such as the smallpox virus and rats, or things which are generally thought ugly, like banana slugs? Our theory says we should—or at least, that we have *reason* to preserve the smallpox virus and that the reason is of the same type as the reason for preserving butterflies. If the consequential costs of preserving the smallpox virus are too great, then on balance we should extinguish it. Calculating the consequences and striking the balance may be very complicated. But that the smallpox virus is dangerous to people does not mean it is not worth knowing about and even taking pleasure in knowing about. No more does the "sliminess" of the slug make it unworthy. "All God's creatures" are worth our attention.

4) Is it permissible to destroy something, like a laboratory animal or the natural operation of some

natural process over a particular stretch of time, in order to increase our knowledge of the thing we destroy or of similar things? On our theory, this destruction may be justified. The value of our knowledge of and pleasure in anything is increased if the knowledge increases. In some cases, then, the destruction, which should always be cause for regret, will produce adequate compensating benefits.

5) Should we focus our efforts at preservation on rare species or on rare ecosystems? At least in principle there is a difference between protecting species and protecting ecosystems. We can easily imagine an ecosystem which contains only common species, but which is nonetheless special as an ecosystem because the species interact there in unique ways. Similarly, we can imagine a rare species which inhabits only one ecosystem, but which does not make that ecosystem as such specially interesting because an identical role is played by a similar but common species in many otherwise identical ecosystems. Given this difference in principle between protecting rare species and rare ecosystems, our theory says we should protect both.

6) If we can preserve only a limited number of endangered species, what makes one species intrinsically more worth preserving than another? We ignore here questions about the *instrumental* value and disvalue of species, realizing that it is likely in many cases that instrumental considerations will completely swamp considerations relating to the intrinsic worth of the species themselves.

Our theory implies two clear general principles. First, more complex life forms are more valuable than less complex, other things being equal. A ferret is more valuable than a centipede, which is more valuable than a rose. The more complex object is more valuable just because it provides the opportunity for more knowledge: there is more to be known about a complex object than about a simple one. This ranking generally remains the same for individuals or species, though there may be exceptions. Social insects, for example, exhibit complexities of behavior *as species* that would be unknown to us if we knew these insects only as individuals. So in this case the species is relatively more valuable than we might think after considering only the (apparent) complexity of individuals.

Second, other things being equal, a species is made more valuable by belonging to a sparsely populated genus, family, or order. Taxonomically isolated species are likely to represent unusual modes of adaptation; their existence increases the diversity of nature. That means both that there is more to know about what exists, and that a complete knowledge of what exists entails a greater knowledge of nature's possibilities.

Needless to say, the values of complexity and diversity embodied in these two general principles may conflict. We might be compelled to choose between a complex species in a richly populated genus and a simpler species which has no congeners at all. But our choices throughout will be guided by the goal of producing a greater wealth of natural objects for conscious valuers to know and take pleasure in knowing.