

Michael Allen Fox

Thinking Ethically About the Environment

1. On What Matters

In *The Mind-Body Problem*, a novel by Rebecca Goldstein set in and around the Princeton University Philosophy Department, the author introduces what she calls "the mattering map," which is "a private image of a vast and floating map composed of untouched territories." Goldstein comments that "Philosophers may prove the nonexistence of mental images; yet I don't think a week goes by that this one doesn't flash momentarily before me, called forth by someone's saying something revelatory of his location in my private picture" (31).

I would like to adapt this interesting metaphor for the purpose of discussing how we relate philosophically—and in more precise terms, ethically—to our natural environment. Goldstein's mattering map is an imaginary device for visualizing who counts in her life and why, and how much relative to others located upon it. It is "composed of untouched territories." In contrast, the environment, or as I should prefer to say the biosphere,¹ is something palpable and capable of representation by various physical means. Yet in a more profound sense the biosphere cannot be mapped. This is the sense in which it constitutes not some individual's private mattering map but rather our shared one, composed not of separate but of touching and even interlinked territories, which we know as ecosystems. Within the biosphere the bestowing of meaning and value on acts, things and processes takes place; it is the locus of significance, the place where everything that matters occurs or is played out. Unless we protect the health of the biosphere, the conditions that sustain most

forms of life, including our own, may be undermined. If this happens, and these forms of life perish, then arguably nothing will matter any longer, the mattering map itself having been devastated.

Goldstein's mattering map is regularly "called forth" by "revelatory" events. How often is our awareness of the fragile conditions that sustain life called forth for us? How much does nature matter to most of us? I'm not talking here of becoming upset when reading the occasional article about toxic wastes or oil spills; about endangered species, drought in the Sahel, the decimation of rainforests, the greenhouse effect, or the dangers of ozone depletion; nor shall I focus on these here. Such environmental crises may point our concern in the right direction, but they are not by themselves revelatory, nor are they conducive to inspiring awe or generating reverence. (Indeed, quite the opposite.) We may all have fleeting moments of ecological awareness; but comparatively few of us, I would guess, have a deeper intuitive, imaginative, or emotional insight into the natural world—one that is abiding and motivating. Is it possible to gain such an insight? I believe it is and that the key to this process is to be found in recognizing where value in nature resides. This awareness can then be applied to the task of redefining moral obligation in a way that transcends our traditionally narrow, human-centred concerns. While it may not prove possible to move entirely beyond anthropocentrism, a new ethics for the environment is a goal worth working toward.

2. Moral Extensionism versus Holism

Several attempts have been made by philosophers over the past two decades to expand the circle of moral concern beyond the human species to nature. The best known, best developed and most widely promulgated of these views are those that fall under the heading of "animal liberation" theories, of which two have captured nearly the entire field of attention. The first is a Benthamite utilitarian position for which Peter Singer is largely responsible. This holds that many nonhuman animals are sentient, that is, capable of experiencing pain or suffering, and that pain and suffering are intrinsically evil, no matter to whom or to what they occur. Because of this the interests of sentient animals should be given equal consideration whenever we act in ways that may affect their welfare. Furthermore, there are no differences of kind but only of degree that distinguish humans from nonhumans; therefore to favor the interests of

humans as a class automatically over those of animals is to be guilty of "speciesism," or unethical bias against nonhumans merely because they happen to belong to a different species. The second major animal liberationist position is the animal rights view, associated chiefly with Tom Regan. This view maintains that it can be said truthfully of at least some nonhuman mammals that they are conscious, self-aware "subjects of a life," that they have a welfare, in the sense in which things can "fare better or worse" for them, and that they possess in an appropriate degree those other attributes and capacities to which we appeal when ascribing interests and moral rights to humans. We are logically compelled, then, to say that animals have rights, and considerations of justice therefore also apply to them. According to the rights view, however, only certain individual animals, considered as individuals, count morally. Furthermore, concern for species or for the environment as a whole cannot gain a foothold in either the utilitarian or the rights view.

These positions have been criticized on various other philosophical grounds, but what interests me here is the claim that as alternatives to the dominant, ethical tradition they do not go far enough. This objection has been advanced with particular force by John Rodman and J. Baird Callicott. Rodman accuses Singer of "sentientism" or an attitude of bias in favor of organisms capable of suffering, and labels such theories as versions of "moral extensionism"—that is, they merely extend the boundary of moral considerability, normally applied only to humans, to other animals that resemble our species closely in respect of this one capacity, leaving all other forms of life out of account ("Liberation" 83-131; "Four Forms" 82-92).² Callicott, arguing in a similar vein, observes that animal liberationist ethical theories make "no serious challenge to cherished first principles" of moral philosophy ("Animal Liberation" 319). Both authors remark on the fact that animal liberationist theories preserve the "moral pecking order" found in classical ethical theories. This implicitly if not explicitly places humans and human interests at the top of a "natural" hierarchy, the difference being that now other sentient beings or rights-bearers move up to share our lofty plane, having proved themselves capable of "qualifying" to do so by virtue of resembling us in certain crucial ways.

Another approach to environmental ethics that endeavors to avoid some of these problems is the reverence-for-life or respect-for-life theory,

variants of which have been developed by Albert Schweitzer, Kenneth Goodpaster and, most recently and at greatest length, Paul Taylor. According to this kind of theory, all living things deserve respect because they have a welfare and an immanent telos that exist independently of any instrumentality they may possess. The interests of nonhuman organisms may override those of humans in cases of conflict, particularly if the former are very basic and the latter comparatively unessential. Callicott has argued that the respect-for-life theory is also hierarchical, and provides no basis on which to ground moral concern for the inorganic ingredients of the environment that are so crucial for life ("Animal Liberation" 318-9 n.21).

Callicott, Rodman and Holmes Rolston III have moved in the direction of "environmental holism," as inspired by the "land ethic" of Aldo Leopold. According to this perspective, "In every case the effect upon ecological systems is the decisive factor in the determination of the ethical quality of actions" ("Animal Liberation" 320). Regan has colorfully dubbed this view "environmental fascism," noting that its "implications . . . include the clear prospect that the individual may be sacrificed for the greater biotic good, in the name of 'the integrity, stability, and beauty of the biotic community'" ("Animal Rights" 372).

Despite its pejorative cast, there is a point to Regan's criticism. Traditional anthropocentric ethical theories, for all their defects, do at least enable us to bring some well-rationalized principles to bear on the problems of reconciling or deciding between competing interests within the human sphere. Some attention can be given to animal welfare for reasons of compassion and the cultivation of human virtue, even if the rest of nature figures in our calculations only instrumentally. But holistic environmental ethics, for its part, offers the promise of a remedy for some defects found in traditional human-centred ethical theories. It is not atomistic, like rights-based or contractarian theories, avoids human chauvinism and is generated by a deeper ecological understanding. Yet it remains difficult to see how a holistic theory can provide usable ethical principles, particularly when it seeks "to establish value distinctions not on the basis of higher and lower orders of being, but on the basis of the importance of organisms, minerals, and so on to the biotic community" ("Animal Liberation" 319 n.21). One might reflect that such a value thesis also plays into the hands of those environmental misanthropists who

contend that since human beings' positive contribution to the biotic community is next to nil, while their negative impact is monumental, nature would be better off without our species.³ Nevertheless, in spite of these problems some kind of holistic or biocentric reorientation of valuing seems to me worth investigating seriously.

Rolston has observed that much effort has been expended in diverse areas of our culture's intellectual endeavor "trying to conceive of ourselves as the sole entities bringing value to an otherwise sterile environment" ("Values in Nature" 125-6). This reflects the value stance that is essential to the narrow and arrogant anthropocentrism characteristic of Western thought and action, which is grounded ultimately in the Judeo-Christian tradition of humans' "rightful dominion" over nature (White 1203-1207; Passmore ch. 1). Ecological knowledge and awareness, however, provide a source of insight that teaches us, if we will but heed, the futility of what I shall call the objective observer/instrumentality view of our relationship to the world around and within us. For we come to realize that we are part of the picture even as we observe, sustained and nurtured as we are by that which we study. We are capable of realizing this and of comprehending, to the degree our limited capacities allow, how the whole process works, what makes life possible. And the more we learn, the more we see how absurd it is to construct natural hierarchies, to relate to the rest of nature merely as to a collection of functional utilities, and even to draw rigid ontological lines of separation between ourselves and the total biosphere.

3. The Gaia Hypothesis and Other New Ideas about Life

Perhaps this begins to sound like nature mysticism revisited. But consider the following powerful perspective now emerging from the life sciences. In 1979 J. E. Lovelock put forward the "Gaia hypothesis," which states that from a scientific standpoint the existence and flourishing of life on Earth is not merely a happy accident. It is not just that the physical conditions for life chanced to be present, and that organisms, however they happened to come about in the first place,⁴ simply have adapted reactively over time to changing environmental circumstances. Instead, the biosphere has acted and continues to act as a gigantic control mechanism, preserving and modifying as necessary the atmospheric and surface environmental conditions that sustain life. That is, living things

transform and transmute nonliving ingredients in such a way as to enhance the prospects for life in all its many forms. But there is more. Living things act toward this end in concert, as a single organic system, or, it might be said, as a single being.

Lovelock's hypothesis certainly struck some as the bizarre speculations of a scientist out of his philosophical and poetic depth. Some ecologists had, of course, already come to the same conclusion as Lovelock. One who did was Paul Shepard, who wrote in the 1960s:

Ecological thinking . . . requires a kind of vision across boundaries. The epidermis of the skin is ecologically like a pond surface or a forest soil, not a shell so much as a delicate interpenetration. It reveals the self ennobled and extended rather than threatened as part of the landscape and the ecosystem, because the beauty and complexity of nature are continuous with ourselves. . . . Without losing our sense of a great human destiny and without intellectual surrender, we must affirm that the world is a being, a part of our own body. ("Introduction" 2, 3)

Shepard regarded ecology as "the subversive science" for exactly the reason that it undercuts our cherished beliefs about how special we are as a species, and the philosophical hubris that accompanies and rationalizes them. But over the past few years, many more scientists have come to accept the essential features of the picture Lovelock has sketched.

In 1986 an important popularized account of some very impressive data supporting the Gaia hypothesis was published by Lynn Margulis and Dorion Sagan.⁵ Tracing four billion years of microbial evolution, Margulis and Sagan

show how microbes invented all of life's essential chemical systems, all of its rules for living and change. Microbes put oxygen into the atmosphere, they built huge structures of rock that changed the face of the earth, and through symbiosis—the process by which two unlike and even hostile organisms merge to form new life forms—they created us. Far from having left these microorganisms behind on an evolutionary ladder, we—and all other forms of life—are surrounded by them and composed of them.

This refinement of the Gaia hypothesis further undermined claims on behalf of the uniqueness of humans and the independence from nature of

the human sphere of activity, claims already severely compromised by existing evolutionary theory, ethology, experimental psychology, and the life sciences generally. But in addition, and equally significant, Margulis and Sagan's argument demolished, once and for all, the idea that evolution is merely a competitive struggle for survival, and the concomitant view that aggressive instincts are most natural and universal among humans and other species. Evolution, it appears now, is not so much a ruthless competition as it is a process of co-operation and mutual life support. This conclusion has extremely interesting and suggestive implications, for at least three reasons. First, it meshes very well with the carefully framed arguments of ecofeminists, such as Val Plumwood, Ynestra King, Elizabeth Dodson Gray, and others, to the effect that: (a) there is no justification for anthropocentrism, other than the attempt to rationalize human dominion over nature (and men's power over women), by means of a hierarchical view of species; and (b) co-operation and caring must replace competition and indifference in our dealings with the natural world, just as they must replace aggression and exploitation within the human sphere. Second, the augmented Gaia hypothesis shows the falsification involved in attempts to project atomism and the image of capitalist competitiveness onto nature, or to derive evidence for such views from nature. Third, the Gaia hypothesis makes it plain as never before that humans' belief in their ability to control nature simply springs from vanity, illusion and fantasy.

One additional and related development is the emergence in biology of the concept of "network causality." The classical notion of spatiotemporally linear causality has not served modern science particularly well, but it seems especially unhelpful for understanding biological phenomena, which so often involve complex feedback systems. Hence, a more circular kind of causality, in which cause and effect are not readily separable, may be thought to be operative in living organisms and their environments. But as Rolf Sattler has argued, the situation is far more complicated than even circularity can do justice to (129). Indeed, Sattler maintains that when one begins talking about network causality, there is no longer any point to using causal language, which has been rendered obsolete by new knowledge of living processes. He proposes instead that we speak of "network interactions" (131). What Sattler and others have in mind here is the "structural and functional integration"

characteristic of living systems, where "multifactorial interactions" are prevalent (135).

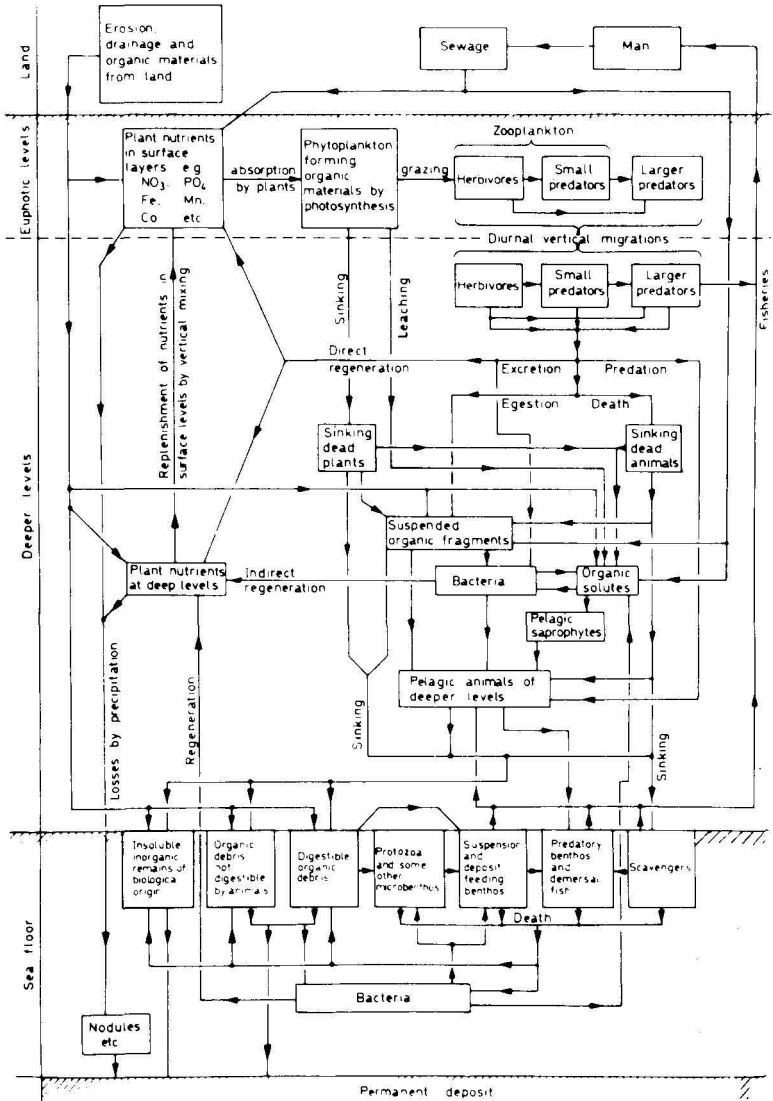


Figure 1. Some interconnections of the marine food web. From R. V. Tait, *Elements of Marine Ecology*. 3rd ed. London: Butterworths, 1981. 204. Reprinted by kind permission of Butterworth Heinemann Ltd.

Among the implications Sattler draws from the network concept is that "our actual linear and hierarchical thinking results from social conditioning." We are, he believes, "victims of this social conditioning," and need to escape from it to more holistic and ecological modes of thought.

4. Value and Nature

What are the ethical implications of these new ways of viewing nature? Can we escape from our anthropocentric, hierarchical tunnel vision? To begin with, let us look at some value implications. I believe that in light of the discoveries that are now being made about communication, conscious processes and pain sensitivity in animals, as well as about the biosphere as a whole, it is appropriate, indeed compelling, to acknowledge that there are sources of value in nonhuman nature. I don't mean merely instrumental value, which is of course all around us. It does constitute some kind of advance in our thinking to recognize that components of the biosphere, however obscure, may have, or may potentially have, instrumental value for our species, and that the biosphere as a whole does. But we may venture further to assert that nonhuman organisms have intrinsic value as individuals, and that the biosphere taken as a whole has as well. While there are philosophical objections to locating value objectively in nature, these were formulated before we became aware of just how dependent on nature we really are—just how much a function of the whole and a component of the network of life we are. Actually, it is a bit odd to speak of a time "before" we became aware of our dwelling in Gaia. Aboriginal peoples everywhere have always known about their place in nature, even if their cultural outlooks were in many ways anthropocentric. They understood the meaning of "living in harmony with nature."⁶ It is we, with our modern science, who are trying to reinvent the wheel.

To return to the question of value in nature, Rolston contends that the ecological writings of naturalists like Leopold are both descriptive *and* evaluative because it is almost impossible to disentangle the two perspectives when observing the environment closely:

Ecological description finds unity, harmony, interdependence, stability, etc., and these are valuationally endorsed, yet they are found, to some extent, because we search with a disposition to value order, harmony,

stability, unity. Still, the ecological description does not merely confirm these values, it informs them; and we find that the character, the empirical content, of order, harmony, stability is drawn from, no less than brought to, nature. ("Ecological Ethic" 100-1)

Rolston holds that valuing is a relational activity, that is, one that takes place in a "field," rather than a dyadic or oppositional one involving subjects epistemologically distanced from objects. I believe this is correct. Valuing nature is the manifestation of a consciousness that has itself emerged from the natural world and remains immersed in it. The point here is not to show that the value picked out by acts of valuing is either in the object or in the mind of the beholder, but that valuing is a cognitive process in which the two elements are connected, and in which a responsive appreciation of this connectedness occurs.⁷

Should we say, then, that if there were no conscious, valuing beings value in nature would cease to exist? Some philosophers who consider themselves committed to a holistic position would say yes. Callicott, for example, thinks so. He writes:

Let something be said to possess *intrinsic* value, on the one hand, if its value is objective and independent of all valuing consciousness. On the other, let something be said to possess *inherent* value, if (while its value is not independent of all valuing consciousness) it is valued *for itself* and not only and merely because it serves as a means to satisfy the desires, further the interests, or occasion the preferred experiences of the valuers. ("Intrinsic Value" 262; author's emphasis)

But defining intrinsic value in this way makes value in nature entirely *object*-dependent and mysteriously remote. However, what if we endorse the claim that value in nature is to be understood as inherent? The problem here is that value (as the above quotation indicates) becomes *subject*-dependent, or is placed "in the mind of the beholder." It then seems difficult to account for our being able to project beyond our consciousness in order to value something *for itself*. Are we perhaps relegated to saying that objects or their special properties are merely the "occasions for value," or the stimuli for valued experiences? No, because valuing nature, for humans, is appreciating things not solely for their aesthetic or pleasure-giving qualities but because of the harmonious,

ecological relationship in which they and we co-exist. It is, if I may so put it, the expression of a resonance between self and world.

What, then, has value in nature? I find myself tempted to answer, "Everything"—that is, all individual organisms and also the self-regulating superorganism we call the biosphere (or Gaia). Some would object that ascribing value to everything in nature undermines the notion of value itself, because the purpose of evaluating things is to enable ourselves to make comparative judgments.⁸ They would note, in addition, that if an object possesses value by virtue of having certain features, it may exhibit these features to a greater or lesser degree, and hence have greater or lesser value. The first of these supposed problems has led to the view that if we speak of intrinsic value in nature, we should be prepared to recognize *kinds* of intrinsic value. The second has been thought to suggest that talk of *degrees* of intrinsic value would be appropriate. I believe that references to kinds and degrees of intrinsic value generates more confusion than clarity, and shall not indulge in it. It seems to me that distinctions of this kind that we might draw would be objectionable, both because they are arbitrary (in the sense of drawing questionable boundaries) and hierarchical (regarding difference as in itself an indicator of superiority or inferiority). I tend to agree with Regan's assertion that the attribution of intrinsic value to things is *categorical*, that is, excludes considerations of kind or degree ("Animal Rights" 240). Something either has intrinsic value and is worthy of respect and deserving of moral consideration or it has not, and is not.

We may better understand the claim that all organisms have equal intrinsic value by invoking the notion of "goods" or "excellences" toward which individual members of a given species characteristically strive. The immanent or operative "teleology" of an organism is its tendency to attain the optimum state of well-being or most beneficial level of functioning for members of its species, and this is the good of its kind. John Clark, an anarchist writer, has urged that:

If we are to attribute moral value to the attainment of our good, that is, if we are to recognize it not merely as a natural process, but also as an end perceived as having the value or quality of goodness, then we are required by the demands of consistency to give moral recognition to the similar goods existing at all levels of nature. There is then no reason to limit moral consideration (or even a concept like "interest," to the extent

that it is analytically helpful) to human beings, or even to living beings. Good must be recognized wherever it exists. (195)

I am inclined to accept this position, although many will deem it problematic, insisting either that we must recognize greater and lesser goods or that the view in question collapses into absurdity if pressed too far, as when we find ourselves forced to compare the good of an AIDS virus or an *Anopheles* mosquito with that of a human being. However, I think these difficulties stem, once again, from our human chauvinism, from our implicit belief that something can have value in its own right only if it affects our species in a way that we regard as beneficent, or resembles us in some cherished ways. This attitude serves no other purpose than setting ourselves up once again as the sole reference point for value judgments concerning everything in the universe. But, as we have already seen, from an ecological or biocentric point of view such a stance is quite unsound. It also confuses the instrumental value something may have for us with the value in itself of that thing.

I have maintained above that a narrowly anthropocentric value position is not only philosophically indefensible, but also bankrupt from a prudential standpoint. For seeing nature as merely or principally a vast "storehouse" or "reservoir" of raw materials or of things whose sole purpose is to serve human ends places us on a very obvious collision course that will most likely end in the extinction of our own species. Having said this, however, it must be conceded that anthropocentric thinking and valuing is in a minimal but important sense inescapable, as we shall see.

5. Value and Environmental Ethics: Biocentrism

Does a coherent, defensible and applicable ethic emerge from the foregoing reflections on the Gaia hypothesis and on value in nature? This is far from clear, and much work is being done at the present time to try to translate broader visions into meaningful ethical theory. The most fully developed position to date is Paul Taylor's "ethics of respect for nature," which is one of several "biocentric" ethical theories that have appeared in the recent philosophical literature. I would like to set out the essentials of this view briefly and then offer some concluding reflections on the problem of thinking ethically about the environment.

Taylor, a longtime proponent of "biocentric egalitarianism" holds that all living things possess equal worth (*Respect for Nature* 71-80),⁹ and this premise he treats as a "presupposition of the attitude of respect" (*Respect for Nature* 178) that is central to his theory. Any being that has a realizable good is "deserving of moral concern and consideration," and "all moral agents have a prima facie duty to promote or preserve the entity's good as an end in itself and for the sake of the entity whose good it is" (*Respect for Nature* 75). To show moral concern for such an entity is to be willing to "make judgments from its standpoint about how it ought to be treated" (*Respect for Nature* 17; author's emphasis), that is, to adhere to a principle of "species impartiality." According to Taylor, an environmental ethics, conceived as an ethics of respect for nature, is structured similarly to an ethics of respect for persons. (He claims that environmental ethics does not supplant but rather supplements human ethics when the impact of our behavior on members of other species and their habitats is at issue.) There are three elements in Taylor's ethics of respect for nature: (1) "an ultimate moral attitude" of respect for nature; (2) a belief system (the biocentric outlook); and (3) a set of rules of conduct and standards of character (the ethical system proper). The rules of conduct prescribe prima facie duties to nature, which are four in number: non-maleficence, non-interference, fidelity, and restitutive justice. The first two of these are reasonably self-explanatory; the third enjoins against betraying wild animals' trust, as in deceptive practices used in hunting, fishing and trapping; the last concerns reparations for previous wrongs. The ethical system is rounded out by a set of "priority principles" which may be appealed to in order to resolve conflicts among our four duties to nature, and a second set "governing the fair resolution of conflicts between humans and nonhumans" (*Respect for Nature* 21). As an example of the former, the duty of non-maleficence takes precedence over that of restitutive justice: attempting to correct a past wrong by restoring a damaged habitat for the benefit of one species should avoid severely harming other species that share the same ecosystem (*Respect for Nature* 194-5). As an example of the latter, the "principle of proportionality" states that basic interests should take precedence over non-basic interests, with species membership remaining an irrelevant consideration: humans ought to forego killing wild animals in order to

obtain furs, exotic leathers and other vanity products (*Respect for Nature* 269-80).

There is much that is thought-provoking and even workable in Taylor's prescriptions. He admits that when basic interests are pitted against basic interests, humans will justifiably choose to look after their own, and that when human lives are threatened by hostile and harmful organisms, nothing short of killing these organisms will suffice (*Respect for Nature* 264-9). But perhaps there is a conflict here? How can we assert the equal worth of all living things, yet make exceptions in our own favor after all? Taylor maintains that there is a "structural symmetry" between an ethics of respect for persons and an ethics of respect for nature (*Respect for Nature* 41-47). While we often find it difficult to decide between competing claims of *humans* when their interests come into conflict, we are not prevented from so doing merely because they are beings whose lives are deemed to have equal worth. So similarly it should not turn out to be impossible to decide between competing claims of *human and nonhumans* when their interests clash simply because we affirm that they are beings whose lives are said to have equal worth. However, as one commentator has observed, in relation to Taylor's two principles of respect (respect for persons and respect for life):

. . . if we have more than one ultimate principle, and these cannot be ranked or reduced one to another, then is it possible to avoid ultimate incoherence? Should we not attempt to abandon one of these incompatible ultimate attitudes? It is not hard to guess which one would go. (Johnson 349)

This raises a very hard question I would like to address in closing.

6. Sceptical Conclusions

Is it possible, in practical terms, for humans to escape from their anthropocentrism, even if spiritually, philosophically and emotionally they can project themselves into a biocentric outlook? I am not at all sure it is possible. Humans—at least those who look at things in a predominantly secular and rational way—are at best able to see themselves dualistically: at one and the same time as part of nature and as standing outside it. Humans are blessed with, or perhaps cursed by, the ability to take a

"point of view on the world" (Frey 154). This means, among other things, being capable of adopting an axiological perspective. But whatever perspective we take, our outlook remains species-specific, and hence only one of very many possible world-views. And while we may, for certain purposes, assume a more encompassing standpoint, such as that of biocentrism, it is questionable whether we can decide what sorts of actions are better or worse, permissible, obligatory, or forbidden remaining wholly within such a framework.

If spiders could take a point of view on the world, there is no doubt that it would be rooted in arachnocentrism, just as that of wolves would be lupocentric and that of dolphins and whales cetaceocentric. Should it surprise us that the human point of view is anthropocentric? Members of every species would most probably defend species-specific interests when it comes to the crunch. Indeed we see them doing so all around us, as we engage in endless debates about whether it is appropriate to ascribe wishes and interests to nonhuman animals. But even if humans can't—at this stage of their evolution—completely transcend their habitual modes of thinking, or the split between anthropocentric and biocentric viewpoints, the Gaia hypothesis and holistic theorizing generally can certainly play a major role in shaping individual choice and collective decision-making. For they compel us to acknowledge the need for creative responses to Taylor's key question: "*What is the ethical significance of our being members of the Earth's Community of Life?*" (*Respect for Nature* 49; author's emphasis). At the very least this would entail abandoning the strict anthropocentrism of short-term planning and ruthless exploitation of the planet's riches in favour of a "weak anthropocentrism" (Norton 131-48)¹⁰ of long-term planning, concern for future persons and wise management of the environment. It is not difficult to imagine that such a response would also include showing moral consideration for at least some nonhuman animals, for their own sakes, and in this way extend beyond even weak anthropocentrism. I predict that the latter represents the direction in which human ethical thinking will develop.

Perhaps our ethical thinking will yet fulfil Leopold's vision of a steadily expanding circle of ethical community that eventually embraces the rest of nature, just as it has previously embraced all of humankind (238-46). The Pre-Socratics, we believe, lacked the conceptual tools to

address philosophical problems their successors learned how to analyze. We think of the sayings attributed to these shadowy figures as the ravings of naive and strangely inarticulate sages. Could it be that future humans will remember the fragmentary utterances of today's environmental philosophers in the same way?

NOTES

1. "The largest and most nearly self-sufficient biological system is often designated the *biosphere* or *ecosphere*, which includes all the earth's living organisms interacting with the physical environment as a whole to maintain a steady-state system intermediate in the flow of energy between the input of the sun and the thermal sink of space" (Odum 4; author's emphasis).
2. See Roderick Frazier Nash for a discussion of early attempts to define "the concept of expanded community."
3. See, for example, Aspinall; McHarg; Ardrey; and Taylor, "The Ethics of Respect for Nature."
4. For an interesting survey of current thinking on this problem, see J. Madeleine Nash.
5. See also Margulis and Olendzenski.
6. See Knudtson and Suzuki.
7. For another perspective on this relationship, consider the following comment: "Gaia shifts the locus of creativity from the human intellect to the enveloping world itself. The creation of meaning, value, and purpose no longer hovers inside human physiology, for creativity abounds in the surrounding landscape" (Cohen 56).
8. See, for example, Thompson. See also Plumwood, "Ethics and Instrumentalism" and Nelson.
9. Taylor prefers to speak of the equal "inherent worth" of living things because he thinks the terms "intrinsic value" and "inherent value" designate qualities that are "relative to and dependent on" valuers. For Taylor intrinsic value is attributed to experiences, activities, goals, and interests that we value for their own sakes; something has inherent value if it is esteemed by us for noninstrumental (e.g. aesthetic, cultural, symbolic, historical, or sentimental) reasons. Inherent worth "is to be attributed only to entities that have a good of their own." These are clearly stipulative rather than commonly agreed-upon philosophical usages.
10. This label was coined by Bryan Norton 131-48.

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