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NON-ANTHROPOCENTRIC VALUE THEORY AND ENVIRONMENTAL ETHICS

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OVER the last decade, environmental ethics has emerged as a new subdiscipline of moral philosophy. As with anything new in philosophy or the sciences, there has been some controversy, not only about its legitimacy, but about its very identity or definition. The question of legitimacy has been settled more or less by default: professional philosophical interest in environmental philosophy seems to be growing as, certainly, work in the field proliferates. The question of identity—just what is environmental ethics?—has not been so ingenuous.

Environmental ethics may be understood to be but one among several new sorts of applied philosophies, the others of which also arose during the seventies. That is, it may be understood to be an *application* of well-established conventional philosophical categories to emergent practical environmental problems. On the other hand, it may be understood to be an *exploration* of alternative moral and even metaphysical principles, forced upon philosophy by the magnitude and recalcitrance of these problems.[1] If defined in the former way, then the work of environmental ethics is that of a philosophical yeoman or underlaborer (to employ Locke's self appraisal); if defined in the latter way, it is that of a theoretician or philosophical architect (as in Descartes' self-image). If interpreted as an essentially theoretical, not applied discipline, the most important philosophical task for environmental ethics is the development of a non-anthropocentric value theory.[2] Indeed, as the discussion which follows will make clear, without a non-anthropocentric axiology the revolutionary aspirations of theoretical environmental ethics would be betrayed and the whole enterprise would collapse into its more workaday, applied counterpart.

The subject of this paper, accordingly, is a synoptic and critical review of various proferred candidates for a non-anthropocentric value theory for environmental ethics. Ethical hedonism and conativism are treated as theoretically inadequate non-anthropocentric extensions of the prevailing anthropocentric paradigm. Theism, holism, and sentimentalism are then discussed, in turn, as possible models. A modified and modernized form of the last of these is recommended as the best alternative.

An anthropocentric value theory (or axiology), by common consensus, confers intrinsic value on human beings and regards all other things, including other forms of life, as being only instrumentally valuable, i.e., valuable only to the extent that they are means or instruments which may serve human beings. A non-anthropocentric value theory (or axiology), on the other hand, would confer intrinsic value on some non-human beings.

In general, the recently developed kinds of applied ethics apply normal ethics ("normal" as in "normal science") to novel moral problems (for example, how to treat "neomorts" or dispose of "radwastes") generated by novel technologies. In environmental ethics, if so construed, one would need only carefully consider the effects of our environmental actions, the pollution people create, the resources they consume, etc., on other people.[3] It may then be decided what the right thing to do is by, say, a standard utilitarian calculus, limited by considerations of human justice, human rights, human duties, and human liberties. Since normal ethical theory is conventionally anthropocentric, no critical *theoretical* thinking needs to be done. Environmental ethics is thus reduced more or less to cost-benefit analyses and public policy considerations.[4] Such cost-benefit/public policy exercises

are environmental because the arena or theatre of action and decision-making is the natural environment and they are ethical because all interested (human) parties are considered equally and the limitations on acceptable courses of action, however economically efficient, current in the political culture are respected.

When pursued from a more speculative or theoretical orientation, the focus of attention of environmental ethics shifts from the *application* of normal ethical theory to the *criticism* of normal ethical theory. Environmental ethics so construed is environmental because it concerns non-human natural entities, natural communities, or nature as a whole, and ethical because it attempts to provide theoretical grounds for the *moral standing* or *moral considerability* of non-human natural entities, natural communities, or nature as a whole.[5] So construed, environmental ethics is not an applied ethics similar to bio-medical or business ethics; it constitutes, rather, nothing less than an incipient paradigm shift in moral philosophy.[6]

Like revolutionary moments in the sciences, the present demand for a paradigm shift in ethics is stimulated in part by certain experiential moral problems which evade satisfactory resolution by means of an uncritical application of normal ethical theory.[7] Examples of such intractable environmental moral problems are the progressive deterioration and destruction of biocoenoces, massive anthropogenic local extirpation and total global extinction of species, and global biological simplification, homogenization and impoverishment.[8] There is something clearly morally wrong about this human assault on non-human forms of life and natural systems. Normal (anthropocentric) moral theory, however, can only explicate this intuitively felt wrongness in terms of actual and potential losses of natural resources (either material or spiritual) and disruption of natural services.[9] But there seems to be something wrong about the radical destruction of non-human life on Earth and/or the ubiquitous replacement by human beings and human symbionts of non-human forms of life that goes beyond the diminishment of natural aesthetic amenities, or the loss of medical or other resources, or even the destabilization of the human life support system, "Spaceship Earth," (as sometimes it is called from a subconscious anthropocentric point of view).

The most conservative and, probably because it is the most conservative, by far the most fully developed and discussed attempt to provide a non-anthropocentric axiology for environmental ethics is popularly known as "animal liberation."[10] It is the most conservative because it requires the least change in the reigning anthropocentric, utilitarian normal ethical paradigm. In fact, it insists less on a change in the axiology of utilitarian moral theory than its rigorous and consistent implementation.

The axiology of classical utilitarianism is hedonic. Good and evil are defined in terms of pleasure and pain, respectively. And since utilitarianism is an *ethical* hedonism, moral agents, when morally evaluating courses of action, are required to be strictly impartial between the experiential loci of pleasure and pain. Conventionally such impartial or equal consideration has been limited to the pleasure and pain of human beings. But such a limitation is, theoretically speaking, *ad hoc*; it is not derivable from the first principles of the theory itself, as Bentham, its architect, clearly recognized.[11] Hence, classical utilitarianism, consistently implemented, is non-anthropocentric.

Since it provides for the direct moral standing of at least some non-human natural entities classical hedonic utilitarianism strictly interpreted, with no *ad hoc* limitations, might *prima facie*, serve as the axiological basis for a non-anthropocentric environmental ethic. If so, it should be preferred to all theoretical alternatives since it least departs from normal ethics.

Ethical hedonism, however, is, upon a moment's reflection, an obviously inadequate axiological basis for a comprehensive environmental ethic since it limits moral considerability to only those beings capable of experiencing pleasure and pain, "sentient" beings, in the jargon of animal liberation. While it may include most complex animal organisms within its purview, it clearly excludes all plants. Thus, other things being equal, it would permit the destruction of a Sequoia grove to provide pasture for a liberated and exponentially increasing population of feral cattle. And it has other, less obvious, drawbacks. For example, it makes no distinction between wild and domestic organisms. A

Pekinese lap dog and a "bobby calf" have the same moral status as a wild timber wolf and a wild otter. Further, it fails to articulate our considered moral intuitions respecting collective or holistic entities—species, biocoenoses, biomes, and the biosphere itself—since none of these collective entities is any more sentient than a plant.[12]

A more inclusive non-anthropocentric axiology, structurally similar in basic logical form to ethical hedonism, has no generally recognized rubric, but may be descriptively named "ethical conativism." It is the axiological foundation of the popular Schweitzerian reverence-for-life ethic and its more analytic, academic equivalent, the Feinberg-Goodpaster life-principle ethic. Conativism defines interests in terms of conations (hypostatized as the will-to-live in Schweitzer) and intrinsic value in terms of interests.[13] Something is intrinsically valuable and owed moral consideration if interests, construed in the broadest possible sense, may be intelligibly assigned it. Plants have interests, so construed, though they may not be conscious of them. Hence, conativism opens the community of morally considerable beings to plants as well as animals; it provides, thus, moral status for all living things.

Ethical conativism is not a normal moral theory because it is non-anthropocentric. Indeed, it is biocentric in the literal sense of the term—life-centered.[14] Nevertheless, it is clearly an extension, a stretching, of normal moral theory so as to embrace with the least theoretical restructuring living, nonhuman natural entities. Like both the utilitarian and deontological variations of normal ethics, it assigns intrinsic value to *discrete individuals*, indeed, first and foremost to oneself. It then moves from egoism to biocentric egalitarianism by a process of generalization, elegantly described by Goodpaster, typical of prevailing ethical theory.[15]

Hence, as a theoretical basis for a non-anthropocentric environmental ethic, ethical conativism shares many of the inadequacies of ethical hedonism . Indeed, the only *practical* difference is that plants, as well as animals, are members of the moral club and thus must be extended moral consideration or moral standing. Like ethical hedonism, no theoretical justification is provided for differential treatment of wild and domestic organisms, nor for the moral considerability of superorganismic entities. Further, even its proponents frankly admit that it is, if taken seriously, impossible to live by as it would imply a quietism so absolute as to be suicidal.[16]

This last observation hints at the deeper cognitive dissonance between normal ethical theory and the theoretical requirements of non-anthropocentric environmental ethics. Stretching normal ethical theory to its limits, first to provide moral standing for sentient, then conative entities ironically results in a life-denying, rather than life-affirming, moral philosophy. Not only would conativism's rigorous adherents be required to starve *themselves* to death, nature itself mocks and defies the intractable moral atomism which hedonism and conativism uncritically appropriate from the normal ethical paradigms. Nature notoriously appears indifferent to individual life and/or individual suffering. Struggle and death lie at the very heart of natural biotic processes, both ecological and evolutionary. An adequate biocentric axiology for environmental ethics could hardly morally condemn the very processes which it is intended to foster and protect. [17] More particularly—and for the same reason, its atomistic presuppositions— neither can ethical conativism, any better than ethical hedonism, adequately address what is emerging as the most pressing of all contemporary environmental problems, "the silent crisis of our time," threatened massive species extinction and the consequent biotic impoverishment of the Earth.[18]

However, a new, revolutionary moral paradigm is no more created *ex nihilo* than a new, revolutionary scientific paradigm. Without some historical continuity, a new theory, natural or moral, could not be recognized as such. Copernicus, for example, having pressed the Ptolemaic model to its limits, did not abandon altogether mathematical astronomy as hopeless and take up, say, a mystical approach. Rather, he turned to the history of his science and searched among his predecessors for helpful ideas, cast aside or neglected along the way. And what he found in the astronomy of the Pythagoreans and Aristarchus was a bold insight which he successfully developed and applied to the experiential problems at hand.[19]

Neither should we turn away from moral phil-

osophy as such and retreat to some sort of moral mysticism. In the historical backwaters of moral philosophy, similarly, there may repose some helpful insights which may be developed and tried against contemporary experiental environmental problems which elude solution by normal ethical theory even when stretched to its logical limits. In the tradition there appear three *prima facie* attractive alternatives one of which seems the best.

Historically the first and theoretically the most obvious possibility is theistic axiology. If God is posited as the arbiter of value, anthropocentrism is immediately and directly overcome. If God, moreover, is conceived as in the Judeo-Christian tradition to be the creator of the natural world, and to have declared His creation to be *good*, then the creation as a whole, including, as its centerpiece, the biosphere, and the components of the creation, species prominently among them, have, by immediate inference, intrinsic value.

The same tradition of thought, however, provides for a unique place for man among creatures.[20] Man is said to be created in the "image of God" and given "dominion" over the creation. But this could be interpreted as conferring a special responsibility, not a special privilege, on humanity. Indeed, it could be employed to obviate the problem for non-anthropocentric environmental ethics posed by the absence of moral reciprocity alleged by some critics to be the Achilles heel of the entire enterprise.[21] The human role in nature may, thus, not be to conquer and master it, but to be God's steward and benign viceroy. The stewardship interpretation is hard to reconcile with God's charge to man to "subdue" the creation, but the conqueror interpretation is no less hard to reconcile with God's later charge to man to "dress the garden and keep it."[22]

The stewardship interpretation, all things considered, seems to have the most textual support and to be the most plausible. Most appealingly, from the point of view of the theoretical requirements of non-anthropocentric environmental ethics, the theistic axiology of the Judeo-Christian tradition provides intrinsic value less for individuals than for the more permanent and persistent *forms* of nature and for the natural world *as a whole* . It is clear, for example, when God is creating plants and animals, that He is establishing species, and it is understood that individuals naturally come and go. Thus in fulfilling our role as stewards, i.e., in dressing the garden and keeping it, our task is not primarily one of preventing individual animal suffering or looking out for the interests of individual plants and animals, but of preserving species, maintaining the integrity of natural communities, and insuring the healthy functioning of the biosphere, the garden, as the whole.[23]

In Genesis there is even the tantalizing suggestion that man's original sin was environmental, not sexual as usually supposed. Upon eating the fruit of the tree of the knowledge of good and evil, the first noetic revelation was self-consciousness: Adam and Eve became aware that they were naked. This unique human self-awareness is logically necessary for deliberate human self-centeredness, i.e., for anthropocentrism. Thus, anthropocentrism, far from being a natural and divinely sanctioned value orientation is, upon this interpretation of Biblical theism, the original source of all evil in the world. Other elements of the myth, the curses, banishment, and so on, are not only consistent with this interpretation, they seem actually to reinforce it.

This theistic axiology has one main drawback as a non-anthropocentric value theory for environmental ethics. It is primitive, essentially mythic, ambiguous, and inconsistent with modern science, and more especially with modern ecological, evolutionary biology. It is therefore metaphysically discordant with the world view in which environmental problems are preceived as fundamentally important and morally charged in the first place.

A second alternative may be called, for reasons which should be evident in a moment, holistic rationalism. Some ancient philosophers, Plato most notably, and some early modern philosohers, especially Leibniz, posited the existence of an objective, impersonal Good from which value flowed. Things, or more generally and abstractly, phenomena, accordingly, are intrinsically good or valuable to the degree that they exemplify the characteristics of the Good. Clearly, this is not an anthropocentric axiology since value is not determined in terms either of human nature or of human interests. A development and application of this originally Platonic axiological approach might pro-

vide a suitable non-anthropocentric axiology for environmental ethics.

The nature of the Good in Plato's dialogues is very elusive. Recent scholarship inclines to the view that by "the Good" Plato understood a formal *principle of order* of the highest degree of generality, and by "order" he more definitely meant formal logico-mathematical design.[24] A good house or ship is one that is well-ordered, i.e., its parts are measured, proportioned, and fitted together according to a rational design; the goodness of body (health), of soul (virtue), or society (justice) and of the cosmos as a whole is similarly defined.[25] Likewise, Leibniz believed that this was the best of all possible worlds because it exhibits, "the greatest possible variety, together with the greatest *order* that may be; that is to say the greatest possible perfection."[26] The most perfect possible world is "the one which is at the same time the simplest in hypotheses and the richest in phenomena."[27]

In contemporary conservation literature one sometimes finds *biological* systemic diversity and/or complexity apparently posited as a good in itself.[28] This usually undefended intuition seems best theoretically articulated by the axiological strand of thought about value notably represented by Plato and Leibniz. The most well-known and oft-quoted adaptation to ecological conservation of the general theory that the formal properties of natural systems—order, parsimony, harmony, complexity, and variety—are objective, intrinsic values is the summary maxim of Aldo Leopold's "land ethic": "A thing [i.e., an action] is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise."[29]

Though Leopold's land ethic is (with all its charm and simplicity) conceptually and logically more well-grounded than it may at first appear, Leopold makes no deliberate effort specifically to explain or defend the necessity of this, his cardinal moral precept. A more recent, philosophically self-conscious, development of Leopold's conception of the intrinsic value of diverse, complex, and integrated ecosystems has been attempted by Peter Miller.[30] Miller posits "richness" as an irreducible, objective, intrinsic value. While Miller very fully characterizes or *describes* "richness" ("the richness of natural systems [consists of] their inner and outer profusion, unity," etc.) he does not adequately *explain why* richness should be valued *for the sake of itself*, or, more concretely, why a rich (viz., diverse, complex, and stable) biota is *intrinsically* better than a simple, impoverished, or catastrophic one. The value of "richness," so described, is certainly explicable instrumentally: a biologically rich world is aesthetically and epistemically more satisfying and it is materially more secure than an impoverished or "poor" world, but these are clearly anthropocentric concerns.

From the classical rationalistic axiological perspective, the *system itself*, classically the cosmos and its various microcosmic sub-systems, often including human society, was considered valuable *per se* or at least to exemplify or instantiate "the Good." In its present adaptation to non-anthropocentric environmental ethics, rational holism would consider the *biosphere* as a whole and its several sub-systems—biomes, biocoenoses, and micro-ecosystems, species, and their populations—to be valuable. It thus clearly avoids the fundamental theoretical inadequacy for a non-anthropocentric environmental ethic of the hedonic and conative extensions of normal ethics, namely, an intractable atomistic or individualistic bias. Indeed, it has the opposite drawback, a detached indifference to individual welfare.

The axiological orientation of classical rationalism has, in fact, been, in theory at least, so detached, general, and abstract that its conscription in service of non-anthropocentric environmental ethics could easily boomerang in another way. One may morally decry the very real and imminent prospect of an abrupt, massive reduction of biotic diversity to be succeeded by a "mono-culture" consisting of tens of billions of human beings, their habitations, their economic cultivars (and the pests thereof), human transportation, distribution, and communication networks, and little else. However, if one forthrightly and articulately defends one's considered intuition that this process of anthropogenic biological impoverishment is objectively morally wrong by positing organic "richness" (biotic diversity, complexity, and harmony) as objectively and impersonally good, one might well be accused of temporal parochialism. Considering

our time as but an infinitesimal moment in the three and one-half billion year tenure of life on planet Earth, the present tendency of man to extirpate and eventually extinguish other species and take over their habitats for himself and his domesticated symbionts might be viewed quite disinterestedly as but a brief transitional stage in the Earth's evolutionary odyssey. Non-human life will go on even under the worst possible anthropogenic destructive scenario presently conceivable, nuclear holocaust, and in time speciation will occur, novel species will radiate anew, and novel ecosystems will mature. The new Age (of Insects, perhaps) will eventually be just as diverse, orderly, harmonious, and stable, and thus no less good than our current ecosystem with its present complement of species.

The deeply felt and widely shared moral intuition that *extant* non-human species and the biosphere in its *current* state have intrinsic value, therefore, does not seem adequately articulated by holistic rationalism. There is something valuable, it seems intuitively certain, about *our* world (with us in it!) which nevertheless resists reduction to our *interests* or to our *tastes*. For its articulation and explanation this intuition, if it is to withstand critical examination, will require a moral theory that is at once humanistic, but not anthropocentric.

From this brief review and critique of candidates for an axiology for non-anthropocentric environmental ethics, a number of criteria which an adequate axiology must meet have emerged. An adequate value theory for non-anthropocentric environmental ethics must provide for the intrinsic value of both individual organisms and a hierarchy of superorganismic entities— populations, species, biocoenoses, biomes, and the biosphere. It should provide differential intrinsic value for wild and domestic organisms and species. It must be conceptually concordant with modern evolutionary and ecological biology. And it must provide for the intrinsic value of *our present* ecosystem, its component parts and complement of species, not equal value for any ecosystem.

The historical philosophical theory of value most concordant with modern biology is David Hume's, to take up the penultimate criterion first. In fact, so concordant is it that Hume's analysis of value allowing for divergencies of detail has been long absorbed into the *biological* explanation of moral and moral-like animal behavior.[31]

According to Hume all behavior is motivated by passion, emotion, feeling, or sentiment.[32] For purposes of moral theory, the passions may be divided into two classes, the self-oriented (e.g., fear, jealousy, animal appetites, etc.) and the other-oriented (e.g., love, sympathy, charity, etc.). The other-oriented passions are not derivative of the self-oriented ones. They are equally primitive and autochthonous. Thus, the moral standing of beings other than oneself is *not* reached by the process of generalization described by Goodpaster, characteristic of normal ethical theory.[33]

For Hume, the existence of these "moral sentiments" was a fundamental psychological fact, the origins of which he could not and did not attempt to explain. Darwin in the next century undertook to explain them "exclusively from the side of natural history."[34] The very existence of morals presents an evolutionary paradox. Given the mechanics of natural selection, we should expect human (and all other animal behavior, for that matter) to become ever more competitive, hostile, rapacious, and violent instead of ever more cooperative, deferential, genteel, and caring. Darwin assumed Hume's moral psychology, rather than Kant's or any other philosophical account, since emotion or passion is a more primitive and universal animal capacity than reason or any other supposed wellspring of moral behavior.

Darwin supposed that the most rudimentary other-oriented sentiments were the parental-filial affections. They facilitated, especially among mammals, reproductive success and, hence, would be conserved by natural selection. For those species which survived better in social aggregates than as solitaries slight variations of the parental-filial affections, for example, affection and sympathy for other kin, would be conserved as such affections would facilitate social integration and expansion and, in turn, survival and successful reproduction. As the relationship between social evolution and the evolution of the other-oriented, or moral sentiments is one of positive feedback, ethics evolved correlatively to social evolution. As proto-human and eventually human societies grew larger and more complex the moral sentiments grew correla-

tively more widely cast and delicate and moral behavior became more generally directed and refined. Finally, Darwin imagined "as man advanced in civilization, and small tribes are united into larger communities, the simplest reason would tell each individual that he ought to extend his social instincts and sympathies to all the members of the same nation though personally unknown to him."[35]

Darwin's hypothetical and sometimes speculative account of the origins of morals has recently been supplanted by more scientifically rigorous work.[36] Nevertheless, Darwin's fundamental approach, rudimentary insights, and Humean foundations have been retained in contemporary biosocial thought.

Aldo Leopold incorporated Darwin's theory of the origins of ethics (and therefore its Humean foundations) in his celebrated "land ethic," the seminal and by now classical attempt to provide a non-anthropocentric environmental ethic.[37] Leopold, indeed, represented the "land ethic" as the next "step" in the on-going process of social-ethical evolution. "All ethics," he wrote, "rest upon a single premise: that the individual is a member of a community of interdependent parts." This is Darwin's explanation of moral evolution in a nutshell. "The land ethic simply enlarges the boundaries of the community to include soils, waters, plants, and animals, or collectively: the land."[38] Leopold, in effect, simply pointed out that ecology represents plants, animals (including human beings), soils, and waters as members of one humming "biotic community." When this essentially ecological idea becomes a general and settled habit of thought and perception, then, to paraphrase Darwin, the simplest reason would tell each individual that he ought to extend his social instincts and sympathies to all the members of the same (biotic) community though differing from him in species.

Hume, Darwin, and Leopold all recognize in addition to social sympathies and affections for fellow *members* of society, whether tribal, national, or biotic, special social sentiments the object of which is society itself.[39] Patriotism is the name of the social sentiment directed to the nation as a superorganismic entity. Presently there is no name for the emergent feeling, the object of which is the biosphere *per se* and its several superorganismic sub-systems. We could, perhaps, call it biophilia.

Value, according to Hume, is subjective and affective. Therefore, it may seem that though Hume's theory of value is concordant with evolutionary and ecological biology, it fails one basic requirement of an adequate axiology for non-anthropocentric environmental ethics: it is not non-anthropocentric. Value depends upon human sentiments; according to Hume, "you never can find it, till you turn your reflection into your own breast..."[40] Granted. But a crucial distinction remains to be drawn. Value may be grounded in human feelings, but neither the feelings themselves nor, necessarily, the breast or self in which they reside are their natural objects.[41] The *moral* sentiments are, by definition, other-oriented. And they are intentional, that is, they are not valued themselves, or even experienced apart from some object which excites them and onto which they are, as it were, projected. [42] Their natural objects are not limited, except by convention, to other human beings. They are, rather, naturally excited by fellow social members (and by society itself) which may include, as in both contemporary ecological thought and tribal representation, non-human beings and a larger than human social order.[43]

Therefore, the Darwin-Leopold environmental ethic, grounded in the axiology of Hume, is genuinely and straightforwardly non-anthropocentric, since it provides for the *intrinsic* value of non-human natural entities. It is also, nonetheless, humanistic since intrinsic value ultimately depends upon human valuers. It provides both for the intrinsic value of non-human individual organisms and for superorganismic entities—populations, species, biocoenoses, biomes, and the biosphere. Other individual organisms are, as it were, fellow-members of the biotic community and the biosphere is, as it were, our tribe or nation, with smaller collective entities, like species, actuating the moral sentiments once actuated by so many totemic clans.

Contemporary human beings are genetically endowed with the affective capacity to value unselfishly evolved by our tribal ancestors. Who or what is valued for the sake of itself, however, is determined as much by culture as by genes. We now perceive the Earth to be a small, precious oasis in

a hostile desert of largely cold, empty space. The Earth is our cozy home. We now perceive other living things as literally kindred beings, coevolved ultimately from one ancestral cell. We value the Earth and "our fellow-voyagers...in the odyssey of evolution," not only for what they can do for us, but for themselves, just as, when our cultural horizons were less expansive, we valued quite selflessly our children, other relatives, local neighbors, and the tribal whole to which we belonged.[44,45]

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NOTES

1. Among the first academic philosophical discussions to suggest the need for newly constructed moral and metaphysical principles to deal with emergent environmental problems is Richard Routley's, "Is There a Need for a New, an Environmental Ethic?," *Proceedings of the Fifteenth World Congress of Philosophy*, vol. 1 (1973), pp.205-10, simultaneously Arne Naess, "The Shallow and deep, Long Range Ecology Movement," *Inquiry* vol. 16 (1973); pp. 95-100, distinguished between essentially applied and critical-theoretical approaches to environmental philosophy. Subsequently, a critical-theoretical approach to environmental philosophy has been sometimes referred to as "deep ecology."

2. A clear and original statement of the centrality of the conceptual problem of a non-anthropocentric axiology for environmental ethics may be found in Holmes Rolston, III, "Is There an Ecological Ethic?," *Ethics* vol. 85 (1975), pp. 93-109.

3. Tom Regan, "The Nature and Possibility of an Environmental Ethic," *Environmental Ethics*, vol. 3 (1981) denies that an anthropocentric environmental ethic is an environmental ethic at all. He prefers to call an anthropocentric environmental ethic "a management ethic," "an ethic *for the use* of the environment" as opposed to a genuine environmental ethic which is "an ethic *of* the environment" (p. 20).

4. Kristin Shrader-Frechette's approach to environmental ethics in *Environmental Ethics* (Pacific Grove: Boxwood Press, 1981) is a recent example. She writes, "What I have shown is that there is a strong rational foundation for using existing utilitarian and egalitarian ethical theories to safeguard the environment. Utilitarian doctrines clearly protect the interests of future generations and egalitarian schemes prohibit any environmental hazards against which persons cannot be assured equal protections" (p. 23). William Frankena, "Ethics and the Environment," in K. Goodpaster and K. Sayre, eds., *Ethics and Problems of the 21st Century* (Notre Dame: University of Notre Dame Press, 1979) appears to support such an approach. He writes, "We have had a number of calls for a 'new ethics' in recent times, and today we are again told that we need a new one for dealing with the environment. Actually, however,...our old ethics, or at least its best parts, are entirely satisfactory as a basis for our lives in the world. The trouble being only that not enough of us live by it enough of the time..." (p. 3). See also W. H. Murdy, "Anthropocentrism: A Modern Version," *Science*, vol. 187 (1975), pp. 1168-72.

5. The phrase, "moral considerability," was introduced into the literature of environmental ethics by Kenneth Goodpaster, "On Being Morally Considerable," *Journal of Philosophy*, vol. 75 (1978), pp. 306-25.

6. Bill Devall, "The Deep Ecology Movement," *Natural Resources Journal*, vol. 20 (1980), pp. 299-322, to some extent anticipates this judgement. Devall, however, is talking about *social* "paradigms" and *movements* while this discussion is more narrowly confined to moral *theories* and draws attention to an analogy between normal and revolutionary *scientific theory* and normal and revoluntionary *moral theory*. John Rodman, "Paradigm Change in Political Science," *American Behavioral Scientist*, vol. 24 (1980), pp. 49-78, employs the Kuhnian concept of "paradigm change" more as it is employed herein since Rodman is concerned with theory construction in a discipline of social science and less with a movement and its various proponents and programs. An application of this concept to metaphysics has been provided by Alan R. Drengson, "Shifting Paradigms: From the Technocratic to the Person-Planetary," *Environmental Ethics*, vol. 2 (1980), pp. 221-240.

7. See Richard Routley, "Is There a Need for a New, an Environmental Ethic?." More recently, Tom Regan, "On the Nature and Possibility of an Environmental Ethic," has insisted upon the need for a new non-anthropocentric moral paradigm, set out certain requirements it must satisfy, but finally is skeptical that any theory may succeed. Very recently, Evelyn B. Pluhar, "Justification of an Environmental Ethic," *Environmental Ethics*, vol. 5 (1983), pp. 47-61, reitereated the need for a non-anthropocentric environmental ethic and has taken up with more hope of success Regan's axiological criteria. Pluhar recommends a theory of intrinsic value similar, though expressed in different terms, to the one recommended below.

8. For a convenient summary see Norman Myers, *The Sinking Ark, A New Look at the Problem of Disappearing Species* (New

York: Pergamon Press, 1979). Myers predicts that "if present average patterns of exploitation persist" one million species, one-third to one-tenth the Earth's present complement of species, may become extinct by the end of the twentieth century (p. 4).

9. The concept of considered or reflective intuition and its role in critical moral thought has been very recently and clearly discussed by Tom Regan, *The Case for Animal Rights*, unpublished manuscript, pp. 4, 17-19. He there distinguished considered or reflective intuition from a "gut-reaction" first impression and from the more technical mataethical concept of intuition tied to Moorean non-natural properties.

10. Both the term and the classic work on the subject are Peter Singer's. See Peter Singer, *Animal Liberation* (New York: New York Review, 1975). For a guide to the literature, see Charles R. Magel, *A Bibliography of Animal Rights and Related Matters* (Washington: University Press of America, 1981).

11. The famous passage, routinely quoted by animal liberationists, is Jeremy Bentham, *Principles of Morals and Legislation*, New Edition (Oxford: Oxford University Press, 1823), Ch. XVII, Sec. 1.

12. For a full discussion of these and other inadequacies (so far as a non-anthropocentric axiology for environmental ethics is concerned) of classical utilitarianism with an animal liberation twist see J. Baird Callicott, "Animal Liberation: A Triangular Affair," *Environmental Ethics*, vol. 2 (1980), pp. 311-338.

13. See Albert Schweitzer, *Civilization and Ethics*, ed. by John Naish, partially reprinted in Regan and Singer, eds., *Animal Rights and Human Obligations* (Englewood Cliffs: Prentice Hall, 1976), pp. 133-138; and Kenneth Goodpaster, "On Being Morally Considerable." Joel Feinberg, "The Rights of Animals and Unborn Generations," in Wm. T. Blackstone, ed., *Philosophy and Environmental Crisis* (Athens: University of Georgia Press, 1974), provides the clearest possible statement:

> A mere thing, however valuable to others, has no good of its own. The explanation of that fact, I suspect, is that mere things have no conative life: no conscious wishes, desires, and hopes; or urges and impulses; or unconscious drives, aims, goals; or latent tendencies, directions or growth, and natural fulfillments. Interests must be compounded somehow out of conations;...(pp. 49-50).

Though Feinberg himself did not draw the inference, Goodpaster points out that this statement, by implication, would commit Feinberg to moral standing for plants as well as animals. Hence, one may refer to the Feinberg-Goodpaster life-principle ethic, though Feinberg is something of a silent partner.

14. The phrases coined by Naess in "The Shallow and Deep, Long Range Ecology Movement," (and picked up as slogans of the deep ecology movement), "biocentric egalitarianism in principle" and "the right to live and blossom" appear to have a conative basis.

15. See Kenneth Goodpaster, "From Egoism to Environmentalism" in *Ethics and Problems of the 21st Century*: pp. 21-35.

16. Goodpaster, "On Being Morally Considerable" writes, "the clearest and most decisive refutation of the principle of respect for life is that one cannot *live* according to it,...we must eat, experiment to gain knowledge, protect ourselves from predation,...to take seriously the criterion of considerability being defended, all these things must be seen as somehow morally wrong" (p. 324). Schweitzer, *Civilization and Ethics* writes, "it remains a painful enigma how I am to live by the rule of reverence for life in a world ruled by creative will which is at the same time destructive will" (p. 136).

17. For an elaboration of these points see J. Baird Callicott, "Animal Liberation: A Triangular Affair"; John Rodman, "The Liberation of Nature," *Inquiry* vol. 20 (1977), pp. 83-131; and Paul Shepard, "Animal Rights and Human Rites," *North American Review*, winter 1974, pp. 35-41.

18. The quoted phrase is from Thomas Eisner, *et al.*, "Conservation of Tropical Forests," *Science* vol 213 (1981), p. 1314.

19. See Thomas Kuhn, *The Copernican Revolution* (Cambridge: Harvard University Press, 1957).

20. The term "man" is used here not without sensitivity to the issue of gender bias in language. It is, however, a term so grafted to the conceptual complex under consideration that the distinctive flavor of that complex would be lost without it. Hence, it is used, but used apologetically. Let a similar caveat be registered here also in respect to the capitalized masculine pronoun used to refer to God.

21. See, for example, Michael Fox, "Animal Liberation: A Critique ," *Ethics* vol. 88 (1978), p. 112; and John Passmore, *Man's Responsibility for Nature: Ecological Problems and Western Traditions* (New York: Charles Schribner's Son's, 1974), p. 116.

22. Later in the order of the text, but not later in temporal order of composition: see Arthur Weiser, *The Old Testament: Its Formation and Development*, trans. by D. Barton (New York: Association Press, 1961).

23. A recent application to environmental conservation of this interpretation of the Judeo-Christian theistic axiology may be found in David Ehrenfeld, "The Conservation of Non-resources," *American Scientist* vol. 64 (1976), pp. 648-655.

24. Cf. "The Tübingen School," most notably, H. J. Kramer, *Arete bei Platon and Aristotles: zum Wesen und zur Geschichte der platonischen Ontologie* (Heidelberg: Heidelberger Akademie, 1959). English readers may consult J. N. Findlay, *Plato: The Written and Unwritten Doctrines* (London: Routledge and Kegan Paul, 1974).

25. Plato's most explicit and clear statement of the nature of goodness is *Gorgias*, 503c-508c.

26. G.W.v. Leibniz, "Monadology," no. 58 in G. R. Mongomery, tr. *Leibniz* (LaSalle, IL: Open Court, 1962), p. 263.

27. G.W.v. Leibniz, "Discourse on Metaphysics," sec. 6 in *Leibniz*, p. 11.

28. See. for example, Noel J. Brown, "Biological Diversity: The Global Challenge" in *Proceedings of the U.S. Strategy Conference on Biological Diversity, Nov. 16-18, 1981* (Washington: Department of State Publication 9263, 1982), pp. 22-27.

29. Aldo Leopold, *A Sand County Almanac* (New York: Oxford University Press, 1949), p. 224.

30. Peter Miller, "Value as Richness: Toward a Value Theory for an Expanded Naturalism in Environmental Ethics," *Environmental Ethics* vol. 4 (1982), pp. 101-114. Miller's theory as any naturalistic theory of value falls to Moore's open question as it is directly pointed out.

31. This is not surprising. According to a new study of Hume by J. L. Mackie, *Hume's Moral Theory* (London: Routledge and Kegan Paul, 1980), Hume's interest in ethics, "is a demand for an explanation of the sort typically given by the empirical sciences: 'Here is a curious phenomenon, human morality,...why is it there and how did it develop?'" (p. 6).

32. See David Hume, *Treatise of Human Nature*, Book III, Part I.

33. Goodpaster, "From Egoism to Environmentalism" identifies Hume along with Kant as one of the progenitors of contemporary normal ethical theory, a fundamental feature of which is the identification of a psychological property upon which one's own value (for oneself) rests and then the generalization of this property so as to include as equally valuable a limited set of psychologically similar "others." Thus one moves from egoism to limited altruism. This is a mistake. Goodpaster quite correctly describes the moral logic of contemporary normal ethical theory, but he wrongly attributes it originally to Hume as well as to Kant. The actual historical forebear of the paradigm Goodpaster calls the H-family of moral theory (after Hume) is Bentham (and thus it should have been called the B-family).

34. Charles Darwin, *The Descent of Man and Selection in Relation to Sex*, second edition (New York: J. A. Hill, 1904), p. 97.

35. *Ibid.*, p. 124. For Darwin's full account, summarized in this paragraph, see *Descent*, ch. 4.

36. Most notably by W. D. Hamilton, "The Genetical Theory of Social Behavior," *Journal of Theoretical Biology* vol. 7 (1964), pp. 1-32; R. L. Trivers, "The Evolution of Reciprocal Altruism," *Quarterly Review of Biology* vol. 46 (1971), pp. 35-57; Edward O. Wilson, *Sociobiology: The New Synthesis* (Cambridge: Belknap Press, 1975).

37. For a more detailed study of the relationship of the moral analyses of Hume and Darwin to Aldo Leopold's land ethic, see J. Baird Callicott, "Elements of an Environmental Ethic: Moral Considerability and the Biotic Community," *Environmental Ethics* vol. 1 (1979), pp. 71-81 and "Hume's Is/Ought Dichotomy and the Relation of Ecology to Leopold's Land Ethic," *Environmental Ethics* vol. 4 (1982), pp. 163-174.

38. Leopold, *Sand County*, pp. 203-4.

39. See Hume, *Treatise*, pp. 484-5; Darwin, *Descent*, p. 122; and Leopold, *Sand County*, p. 204.

40. Hume, *Treatise*, pp. 468-9.

41. A formal distinction related to this one is fully developed by Richard and Val Routley, "Against the Inevitability of Human Chauvinism" in *Ethics and Problems of the 21st Century*, pp. 36-59, and "Human Chauvinism and Environmental Ethics" in Mannison, McRobbie, and Routley, eds., *Environmental Philosophy* (Canberra: Australian National University, 1980), pp. 96-189.

42. The idea that the moral sentiments are "projected" or "objectified" is regarded by Mackie in *Hume's Moral Theory*, ch. v. as the best interpretation of Hume's sentimentalism. With an approach like this one, according to Pluhar, "The Justification of an Environmental Ethic," though we fail to establish purely objective intrinsic value, we avoid the following dilemma for a non-anthropocentric environmental ethic: "either leave the ethic unjustified and beg the question by affirming it...or leave it

unjustified and be skeptical about it" (p. 60).

43. For the social representation of nature by tribal peoples and its relationship to tribal environmental ethics see Thomas W. Overholt and J. Baird Callicott, *Clothed-in-Fur and Other Tales: An Introduction to an Ojibwa World View* (Washington: University Press of America, 1982) and J. Baird Callicott, "Traditional American Indian and Western European Attitudes Toward Nature: An Overview," *Environmental Ethics* vol. 4 (1982), pp. 293-318.

44. The quoted phrase is from Leopold, *Sand County*, p. 109.

45. This is a revised version of a paper read to the invited symposium on anthropocentrism and environmental ethics at the fifty-seventh annual meeting of the American Philosophical Association-Pacific Divison, March 24-26, 1983, Berkeley, California. Research for this paper was assisted by the University of Maryland Center for Philosophy and Public Policy's Working Group on Species Preservation, directed by Bryan Norton and Henry Shue.