

Environment and Society

3a

Dr. Bradley H. Brewster

The Land Ethic

Aldo Leopold

(from *A Sand County Almanac and Sketches Here and There*, 1949)

[Edited and abridged for readability and for the purposes of this class. ~ Dr. Bradley H. Brewster]

When god-like Odysseus returned from the wars in Troy, he hanged all on one rope a dozen slave-girls of his household whom he suspected of misbehavior during his absence.

This hanging involved no question of propriety. The girls were property. The disposal of property was then, as now, a matter of expediency, not of right and wrong.

Concepts of right and wrong were not lacking from Odysseus' Greece: witness the fidelity of his wife through the long years before at last his black-prowed galleys close the wine-dark seas for home. The ethical structure of that day covered wives, but had not yet been extended to human chattels. During the three thousand years which have since elapsed, ethical criteria have been extended to many fields of conduct, with corresponding shrinkages in those judged by expediency only.

The Ethical Sequence

This extension of ethics, so far studied only by philosophers, is actually a process in ecological evolution. Its sequences may be described in ecological as well as in philosophical terms. An ethics, ecologically, is a limitation on freedom of action in the struggle for existence. An ethic, philosophically, is a differentiation of social from anti-social conduct. These are two definitions of one thing. The thing has its origin in the tendency of interdependent individuals or groups to evolve modes of cooperation. The ecologist calls these symbioses. Politics and economics are advanced symbioses in which the original free-for-all competition had been replaced, in part, by cooperative mechanisms with an ethical content.

The complexity of cooperative mechanisms has increased with population density, and with the efficiency of tools. It was simpler, for example,

to define the anti-social uses of sticks and stones in the days of the mastodons than of bullets and billboards in the age of motors.

The first ethics dealt with the relation between individuals; the Mosaic Decalogue is an example. Later accretions dealt with the relation between individual and society. The Golden Rule tries to integrate the individual to society; democracy to integrate social organization to the individual.

There is as yet no ethic dealing with man's relation to land and to the animals and plants which grow upon it. Land, like Odysseus' slave-girls, is still property. The land-relation is still strictly economic, entailing privileges but not obligations.

The extension of ethics to this third element in human environment is, if I read the evidence correctly, an evolutionary possibility and an ecological necessity. It is the third step in a sequence. The first two have already been taken. Individual thinkers since the days of Ezekiel and Isaiah have asserted that the despoliation of land is not only inexpedient but wrong. Society, however, has not yet affirmed their belief. I regard the present conservation movement as the embryo of such an affirmation.

An ethic may be regarded as a mode of guidance for meeting ecological situations so new or intricate, or involving such deferred reactions, that the path of social expediency is not discernible to the average individual. Animal instincts are modes of guidance for the individual in meeting such situations. Ethics are possibly a kind of community instinct in-the-making.

The Community Concept

All ethics so far evolved rest upon a single premise: that the individual is a member of a community of interdependent parts. His instincts prompt him to compete for his place in that community, but his ethics prompt him also to cooperate (perhaps in order that there may be a place to compete for).

The land ethic simply enlarges the boundaries of the community to include soils, waters, plants, and animals, or collectively: the land.

This sounds simple: do we not already sing out love for and obligation to the land of the free and the home of the brave? Yes, but just what and whom do we love? Certainly not the soil, which we are sending helter-skelter

downriver. Certainly not the waters, which we assume have no function except to turn turbines, float barges, and carry off sewage. Certainly not the plants, of which we exterminate whole communities without batting an eye. Certainly not the animals, of which we have already extirpated many of the largest and most beautiful species. A land ethic of course cannot prevent the alteration, management, and use of these 'resources,' but it does affirm their right to continued existence, and, at least in spots, their continued existence in a natural state.

In short, a land ethic changes the role of *Homo sapiens* from conqueror of the land-community to plain member and citizen of it. It implies respect for his fellow-members, and also respect for the community as such.

In human history, we have learned (I hope) that the conqueror role is eventually self-defeating. Why? Because it is implicit in such a role that the conqueror knows, *ex cathedra*, just what makes the community clock tick, and just what and who is valuable, and what and who is worthless, in community life. It always turns out that he knows neither, and this is why his conquests eventually defeat themselves.

In the biotic community, a parallel situation exists. Abraham knew exactly what the land was for: it was to drip milk and honey into Abraham's mouth. At the present moment, the assurance with which we regard this assumption is inverse to the degree of our education.

The ordinary citizen of today assumes that science knows what makes the community clock tick; the scientist is equally sure that he does not. He knows that the biotic mechanism is so complex that its workings may never be fully understood.

That man is, in fact, only a member of a biotic team is shown by an ecological interpretation of history. Many historical events, hitherto explained solely in terms of human enterprise, were actually biotic interactions between people and land. The characteristics of the land determined the facts quite as potently as the characteristics of the men who lived on it.

Consider, for example, the settlement of the Mississippi valley. In the years following the Revolution, three groups were contending for its control: the native Indian, the French and English traders, and the American settlers.

Historians wonder what would have happened if the English at Detroit had thrown a little more weight into the Indian side of those tipsy scales which decided the outcome of the colonial migration into the cane-lands of Kentucky. It is time now to ponder the fact that the cane-lands, when subjected to the particular mixture of forces represented by the cow, plow, fire, and axe of the pioneer, became bluegrass. What if the plant succession inherent in this dark and bloody ground had, under the impact of these forces, given us some worthless sedge, shrub, or weed? Would Boone and Kenton have held out? Would there have been any overflow into Ohio, Indiana, Illinois, and Missouri? Any Louisiana Purchase? Any transcontinental union of new states? Any Civil War?

Kentucky was one sentence in the drama of history. We are commonly told what the human actors in this drama tried to do, but we are seldom told that their success, or the lack of it, hung in large degree on the reaction of particular soils to the impact of the particular forces exerted by their occupancy. In the case of Kentucky, we do not even know where the bluegrass came from—whether it is a native species, or a stowaway from Europe.

Contrast the cane-lands with what highlight tells us about the Southwest, where the pioneers were equally brace, resourceful, and preserving. The impact of occupancy here brought no bluegrass, or other plant fitted to withstand the bumps and buffetings of hard use. This region, when grazed by livestock, reverted through a series of more and more worthless grasses, shrubs, and weeds to a condition of unstable equilibrium. Each recession of plant types bred erosion; each increment to erosion bred a further recession of plants. The result today is a progressive and mutual deterioration, not only of plants and soils, but of the animal community subsisting thereon. The early settlers did not expect this: on the *ciénegas* of New Mexico some even cut ditches to hasten it. So subtle has been its progress that few residents of the region are aware of it. It is quite invisible to the tourist who finds this wrecked landscape colorful and charming (as indeed it is, but it bears scant resemblance to what it was in 1848).

This same landscape was “developed” once before, but with quite different results. The Pueblo Indians settled the Southwest in pre-Columbian

times, but they happened *not* to be equipped with range livestock. Their civilization expired, but not because their land expired.

In India, regions devoid of any sod-farming grass have been settled, apparently without wrecking the land, by the simple expedient of carrying the grass to the cow, rather than vice versa. (Was this the result of some deep wisdom, or was it just good luck? I do not know.)

In short, the plant succession steered the course of history; the pioneer simply demonstrated, for good or ill, what successions inhered in the land. Is history taught in this spirit? It will be, once the concept of land as a community really penetrates our intellectual life.

The Ecological Conscience

Conservation is a state of harmony between men and land. Despite nearly a century of propaganda, conservation still proceeds at a snail's pace; progress still consists largely of letterhead pieties and convention oratory. On the back forty we still slip two steps backward for each forward stride.

The usual answer to this dilemma is "more conservation education." No one will debate this, but is it certain that only the *volume* of education needs stepping up? Is something lacking in the *content* as well?

It is difficult to give a fair summary of its content in brief form, but, as I understand it, the content is substantially this: obey the law, vote right, join some organizations, and practice what conservation is profitable on your own land; the government will do the rest.

Is not this formula too easy to accomplish anything worthwhile? It defines no right or wrong, assigns no obligation, calls for no sacrifice, implies no change in the current philosophy of value. In respect of land-use, it urges only enlightened self-interest. Just how far will such education take us? An example will perhaps yield a partial answer.

By 1930 it had become clear to all except the ecologically blind that southwestern Wisconsin's topsoil was slipping seaward. In 1933 the farmers were told that if they would adopt certain remedial practices for five years, the public would donate CCC labor to install them, plus the necessary machinery and materials. The offer was widely accepted, but the practices were widely

forgotten when the five-year contract period was up. The farmers continued only those practices that yielded an immediate and visible economic gain for themselves.

This led to the idea that maybe farmers would learn more quickly if they themselves wrote the rules. Accordingly the Wisconsin Legislature in 1937 passed the Soil Conservation District Law. This said to farmers, in effect: *We, the public, will furnish you free technical service and loan you specialized machinery, if you will write your own rules for land-use. Each county may write its own rules, and these will have the force of law.* Nearly all the counties promptly organized to accept the proffered help, but after a decade of operation, *no county has yet written a single rule.* There has been visible progress in such practices as strip-cropping, pasture renovation, and soil liming, but none in fencing woodlots against grazing, and none in excluding plow and cow from steep slopes. The farmers, in short, have selected those remedial practices which were profitable anyhow, and ignored those which were profitable to the community, but not clearly profitable to themselves.

When one asks why no rules have been written, one is told that the community is not yet ready to support them; education must precede rules. But the education actually in progress makes no mention of obligations to land over and above those dictated by self-interest. The net result is that we have more education but less soil, fewer healthy woods, and as many floods as in 1937.

The puzzling aspect of such situations is that the existence of obligations over and above self-interest is taken for granted in such rural community enterprises as the betterment of roads, schools, churches, and baseball teams. Their existence is not taken for granted, nor as yet seriously discussed, in bettering the behavior of the water that falls on the land, or in the preserving of the beauty or diversity of the farm landscape. Land-use ethics are still governed wholly by economic self-interest, just as social ethics were a century ago.

To sum up: we asked farmer to do what he conveniently could to save his soil, and he has done just that, and only that. The farmer who clears the woods off a 75 percent slope, turns his cows into the clearing, and dumps its rainfall, rocks, and soil into the community creek, is still (if otherwise decent) a

respected member of society. If he puts lime on his fields and plants his crops on a contour, he is still entitled to all the privileges and emoluments of his Soil Conservation District. The District is a beautiful piece of social machinery, but it is coughing along on two cylinders because we have been too timid, and too anxious for quick success, to tell the farmer the true magnitude of his obligations. Obligations have no meaning without conscience, and the problem we face is the extension of the social conscience from people to land.

No important change in ethics was ever accomplished without an internal change in our intellectual emphasis, loyalties, affections, and convictions. The proof that conservation has not yet touched these foundations of conduct lies in the fact that philosophy and religion have not yet heard of it. In our attempt to make conservation easy, we have made it trivial.

Substitutes for a Land Ethic

When the logic of history hungers for bread and we hand out a stone, we are at pains to explain how much the stone resembles bread. I now describe some of the stones which serve in lieu of a land ethic.

One basic weakness in a conservation system based wholly on economic motives is that most members of the land community have no economic value. Wildflowers and songbirds are examples. Of the 22,000 higher plants and animals native to Wisconsin, it is doubtful whether more than five percent can be sold, fed, eaten, or otherwise put to economic use. Yet these creatures are members of the biotic community, and if (as I believe) its stability depends on its integrity, they are entitled to continuance.

When one of these non-economic categories is threatened, and if we happen to love it, we invent subterfuges to give it economic importance. At the beginning of the century songbirds were supposed to be disappearing. Ornithologists jumped to the rescue with some distinctly shaky evidence to the effect that insects would eat us up if birds failed to control them. The evidence had to be economic in order to be valid.

It is painful to read these circumlocutions today. We have no land ethic yet, but we have at least drawn nearer the point of admitting that birds should continue as a matter of biotic right, regardless of the presence or absence of economic advantage to us.

A parallel situation exists in respect of predatory mammals, raptorial birds, and fish-eating birds. Time was when biologists somewhat overworked the evidence that these creatures preserve the health of game by killing weaklings, or that they control rodents for the farmer, or that they prey only on "worthless" species. Here again, the evidence had to be economic in order to be valid. It is only in recent years that we hear the more honest argument that predators are members of the community, and that no special interest has the right to exterminate them for the sake of a benefit, real or fancied, to itself. Unfortunately this enlightened view is still in the talk stage. In the field the extermination of predators goes merrily on: witness the impending erasure of the timber wolf by fiat of Congress, the Conservation Bureaus, and many state legislatures.

Some species of trees have been "read out of the party" by economics-minded foresters because they grow too slowly, or have too low a sale value to pay as timber crops: white cedar, tamarack, cypress, beech, and hemlock are examples. In Europe, where forestry is ecologically more advanced, the non-commercial tree species are recognized as members of the native forest community, to be preserved as such, within reason. Moreover some (like beech) have been found to have a valuable function in building up soil fertility. The interdependence of the forest and its constituent tree species, ground flora and fauna is taken for granted.

Lack of economic value is sometimes a character not only of species or groups, but of entire biotic communities: marshes, bogs, dunes, and "deserts" are examples. Our formula in such cases is to relegate their conservation to government as refuges, monuments, or parks. The difficulty is that these communities are usually interspersed with more valuable private lands; the government cannot possibly own or control such scattered parcels. The net effect is that we have relegated some of them to ultimate extinction over large areas. If the private owner were ecologically minded, he would be proud to be the custodian of a reasonable proportion of such areas, which add diversity and beauty to his farm and to his community.

In some instances, the assumed lack of profit in these "waste" areas has proved to be wrong, but only after most of them had been done away with. The present scramble to reflood muskrat marshes is a case in point.

There is a clear tendency in American conservation to relegate to government all necessary jobs that private landowners fail to perform. Government ownership, operation, subsidy, or regulation is now widely prevalent in forestry, range management, soil and watershed management, park and wilderness conservation, fisheries management, and migratory bird management, with more to come. Most of this growth in government conservation is proper and logical, some of it is inevitable. That I imply no disapproval of it is implicit in the fact that I have spent most of my life working for it. Nevertheless the question arises: What is the ultimate magnitude of the enterprise? Will the tax base carry its eventual ramifications? At what point will governmental conservation, like the mastodon, become handicapped by its own dimensions? The answer, if there is any, seems to be in a land ethic, or some other force which assigns more obligation to the private landowner.

Industrial landowners and users, especially lumbermen and stockmen, are inclined to wail long and loudly about the extension of government ownership and regulation to land, but (with notable exceptions) they show little disposition to develop the only visible alternative: the voluntary practice of conservation on their own lands.

When the private landowner is asked to perform some unprofitable act of the good of the community, he today assents only with outstretched palm. If the act costs him cash this is fair and proper, but when it costs only forethought, open-mindedness, or time, the issue is at least debatable. The overwhelming growth of land-use subsidies in recent years must be ascribed, in large part, to the government's own agencies for conservation education: the land bureaus, the agricultural colleges, and the extension services. As far as I can detect, no ethical obligation toward the land is taught in these institutions.

To sum up: a system of conservation based solely on economic self-interest is hopelessly lopsided. It tends to ignore, and thus eventually to eliminate, many elements in the land community that lack commercial value, but that are (as far we know) essential to its healthy functioning. It assumes, falsely, I think, that the economic parts of the biotic clock will function without the uneconomic parts. It tends to relegate to government many functions eventually too large, too complex, or too widely dispersed to be performed by government.

An ethical obligation on the part of the private owner is the only visible remedy for these situations.

The Land Pyramid

An ethic to supplement and guide the economic relation to land presupposes the existence of some mental image of land as a biotic mechanism. We can be ethical only in relation to something we can see, feel, understand, love, or otherwise have faith in.

The image commonly employed in conservation education is "the balance of nature." For reasons too lengthy to detail here, this figure of speech fails to describe accurately what little we know about the land mechanism. A much truer image is the one employed in ecology: the biotic pyramid. I shall first sketch the pyramid as a symbol of land, and later develop some of its implications in terms of land-use.

Plants absorb energy from the sun. This energy flows through a circuit called the biota, which may be represented by a pyramid consisting of layers. The bottom layer is the soil. A plant layer rests on the soil, an insect layer on the plants, a bird and rodent layer on the insects, and so on up through various animal groups to the apex layer, which consists of the larger carnivores.

The species of a layer are alike not in where they came from, or in what they look like, but rather in what they eat. Each successive layer depends on those below it for food and often for other services, and each in turn furnishes food and services to those above it. Proceeding upward, each successive layer decreases in numerical abundance. Thus, for every creature there are hundreds of his prey, thousands of their prey, millions of insects, uncountable plants. The pyramidal form of the system reflects this numerical progression from apex to base. Man shares an intermediate layer with the bears, raccoons, and squirrels which eat both meat and vegetables.

The lines of dependency for food and other services are called food chains. Thus soil-oak-deer-Indian is a chain that has now been largely converted to soil-corn-cow-farmer. Each species, including ourselves, is a link in many chains. The deer eats a hundred plants other than oak, and the cow a hundred plants other than corn. Both, then, are links in a hundred chains. The pyramid is a tangle of chains so complex as to seem disorderly, yet the stability of the

system proves it to be a highly organized structure. Its functioning depends on the cooperation and competition of its diverse parts.

In the beginning, the pyramid of life was low and squat; the food chains short and simple. Evolution has added layer after layer, link after link. Man is one of thousands of accretions to the height and complexity of the pyramid. Science has given us many doubts, but it has give us at least one certainty: the trend of evolution is to elaborate and diversity the biota.

Land, then, is not merely soil; it is a fountain of energy flowing through a circuit of soils, plants, and animals. Food chains are the living channels which conduct energy upward; death and decay return it to the soil. The circuit is not closed; some energy is dissipated in decay, some is added by absorption from the air, some is stored in soils, peats, and long-lived forests; but it is a sustained circuit, like a slowly augmented revolving fund of life. There is always a net loss by downhill wash, but this is normally small and offset by the decay of rocks. It is deposited in the ocean and, in the course of geological time, raised to form new lands and new pyramids.

The velocity and character of the upward flow of energy depend on the complex structure of plant and animal community, much as the upward flow of sap in a tree depends on its complex cellular organization. Without this complexity, normal circulation would presumably not occur. Structure means the characteristic numbers, as well as the characteristic kinds and functions, of the component species. This interdependence between the complex structure of the land and its smooth functioning as an energy unit is one of its basic attributes.

When a change occurs in one part of the circuit, many other parts must adjust themselves to it. Change does not necessarily obstruct or divert the flow of energy; evolution is a long series of self-induced changed, the net result of which has been to elaborate the flow mechanism and to lengthen the circuit. Evolutionary changes, however, are usually slow and local. Man's invention of tools has enabled him to make changes of unprecedented violence, rapidity, and scope.

One change is in the composition of floras and faunas. The larger predators are lopped off the apex of the pyramid; food chains, for the first

time in history, become shorter rather than longer. Domesticated species from other lands are substituted for wild ones, and wild ones are moved to new habitats. In this worldwide pooling of faunas and floras, some species get out of bounds as pests and diseases, others are extinguished. Such effects are seldom intended or foreseen; they represent unpredicted and often untraceable readjustments in the structure. Agricultural science is largely a race between the emergence of new pests and the emergence of new techniques for their control.

Another change touches the flow of energy throughout plants and animals and its return to the soil. Fertility is the ability of soil to receive, store, and release energy. Agriculture, by overdrafts on the soil, or by too radical a substitution of domestic for native species in the superstructure, may derange the channels of flow or deplete storage. Soils depleted of their storage, or of the organic matter which anchors it, wash away faster than they form. This is erosion.

Waters, like soil, are part of the energy circuit. Industry, by polluting waters or obstructing them with dams, may exclude the plants and animals necessary to keep energy in circulation.

Transportation brings about another basic change: the plants or animals grown in one region are now consumed and returned to the soil in another. Transportation tapes the energy stored in rocks, and in the air, and uses it elsewhere; thus we fertilize the garden with nitrogens gleaned by the guano birds from the fishes of seas on the other side of the Equator. Thus the formerly localized and self-contained circuits are pooled on a worldwide scale.

The process of altering the pyramid for human occupation releases stored energy, and this often gives rise, during the pioneering period, to a deceptive exuberance of plant and animal life, both wild and tame. These releases of biotic capital tend to becloud or postpone the penalties of violence.

The thumbnail sketch of land as an energy circuit conveys these basic ideas:

1. That land is not merely soil.

2. That the native plants and animals kept the energy circuit open; other may or may not.
3. That man-made changes are of a different order than evolutionary changes, and have effects more comprehensive than is intended or foreseen.

These ideas, collectively, raise two basic issues: Can the land adjust itself to the new order? Can the desired alterations be accomplished with less violence?

Land Health and the A-B Cleavage

A land ethic, then, reflects the existence of an ecological conscience, and this in turn reflects a conviction of individual responsibility for the health of the land. Health is the capacity of the land for self-renewal. Conservation is our effort to understand and preserve this capacity.

Conservationists are notorious for their dissensions. Superficially these seem to add up to mere confusion, but a more careful scrutiny reveals a single plane of cleavage common to many specialized fields. In each field one group (Group A) regards the land as soil, and its function as commodity-production; another group (Group B) regards the land as a biota, and its function as something broader. How much broader is admittedly in a state of doubt and confusion.

In my own field, Group A is quite content to grow trees like cabbages, with cellulose as the basic forest commodity. It feels no inhibition against violence; its ideology is agronomic. Group B, on the other hand, sees forestry as fundamentally different from agronomy because it employs natural species, and manages a natural environment rather than creating an artificial one. Group B prefers natural reproduction on principle. It worries on biotic as well as economic grounds about the loss of species like chestnuts, and the threatened loss of the white pines. It worries about a whole series of secondary forest functions: wildlife, recreation, watersheds, wilderness areas. To my mind, Group B feels the stirrings of an ecological conscience.

In the wildlife field, a parallel cleavage exists. For Group A the basic commodities are sport and meat; the yardsticks of production are ciphers of

take in pheasants and trout. Artificial propagation is acceptable as a permanent as well as a temporary recourse—if its unit costs permit. Group B, on the other hand, worries about a whole series of biotic side-issues. What is the cost in predators of producing a game crop? Should we have further recourse to exotics? How can management restore the shrinking species, like prairie grouse, already hopeless as shootable game? How can management restore the threatened rarities, like trumpeter swan and whooping crane? Can management principles be extended to wildflowers? Here again it is clear to me that we have the same A-B cleavage as in forestry.

In the larger field of agriculture I am less competent to speak, but there seem to be somewhat parallel cleavages. Scientific agriculture was actively developing before ecology was born, hence a slower penetration of ecological concepts might be expected. Moreover, the farmer, by the very nature of his techniques, must modify the biota more radically than the forester or the wildlife manager. Nevertheless, there are many discontents in agriculture which seem to add up to a new vision of “biotic farming.”

Perhaps the most important of these is the new evidence that poundage or tonnage is no measure of the food-value of farm crops; the products of fertile soil may be qualitatively as well as quantitatively superior. We can bolster poundage from depleted soils by pouring on imported fertility, but we are not necessarily bolstering food-value. The possible ultimate ramifications of this ideas are so immense that I must leave their exposition to abler pens.

The discontent that labels itself “organic farming,” while bearing some of the earmarks of a cult, is nevertheless biotic in its direction, particularly in its insistence on the importance of flora and fauna.

In all these cleavages, we see repeated the same basic paradoxes: man the conquer *versus* man the biotic citizen; science the sharpener of his sword *versus* science the searchlight on his universe; land the slave and servant *versus* land the collective organism.

The Outlook

It is inconceivable to me that an ethical relation to land can exist without love, respect, and admiration for land, and a high regard for its value. By value, I of

course mean something far broader than mere economic value; I mean value in the philosophical sense.

Perhaps the most serious obstacle impeding the evolution of a land ethic is the fact that our educational and economic system is headed away from, rather than toward, an intense consciousness of land. Your true modern is separated from the land by many middlemen, and by innumerable physical gadgets. He has no vital relation to it; to him it is the space between cities on which crops grow. Turn him loose for a day on the land, and if the spot does not happen to be a golf links or a "scenic" area, he is bored stiff. If crops could be raised by hydroponics instead of farming, it would suit him very well. Synthetic substitutes for wood, leather, wool, and other natural land products suit him better than the originals. In short, land is something he has "outgrown."

Almost equally serious as an obstacle to a land ethic is the attitude of the farmer for whom the land is still an adversary, or a taskmaster that keeps him in slavery. Theoretically, the mechanization of farming ought to cut the farmer's chains, but whether it really does is debatable.

One of the requisites for an ecological comprehension of land is an understanding of ecology, and this is by no means co-extensive with "education"; in fact, much higher education seems deliberately to avoid ecological concepts. An understanding of ecology does not necessarily originate in courses bearing ecological labels; it is quite as likely to be labeled geography, botany, agronomy, history, or economics. This is as it should be, but whatever the label, ecological training is scarce.

The case for a land ethic would appear hopeless but for the minority which is in obvious revolt against these "modern" trends.

The "key-log" which must be moved to release the evolutionary process for an ethic is simply this: quit thinking about decent land-use as solely an economic problem. Examine each question in terms of what is ethically and aesthetically right, as well as what is economically expedient. A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise.

I have purposely present the land ethic as a product of social evolution because nothing so important as an ethic is ever "written." Only the most superficial student of history supposes that Moses "wrote" the Decalogue; it evolved in the minds of a thinking community, and Moses wrote a tentative summary of it for a "seminar." I say tentative because evolution never stops.

The evolution of a land ethic is an intellectual as well as emotional process. Conservation is paved with good intentions which prove to be futile, or even dangerous, because they are devoid of critical understanding either of the land, or of economic land-use.

The mechanism of operation is the same for any ethic: social approbation for right actions: social disapproval for wrong actions.

Environmental Ethics

Alasdair Cochrane

(from *Internet Encyclopedia of Philosophy*, 2007)

[Edited and abridged for readability and for the purposes of this class. ~ Dr. Bradley H. Brewster]

The field of environmental ethics concerns human beings' ethical relationship with the natural environment. While numerous philosophers have written on this topic throughout history, environmental ethics only developed into a specific philosophical discipline in the 1970s. This emergence was no doubt due to the increasing awareness in the 1960s of the effects that technology, industry, economic expansion and population growth were having on the environment. The development of such awareness was aided by the publication of two important books at this time. Rachel Carson's *Silent Spring*, first published in 1962, alerted readers to how the widespread use of chemical pesticides was posing a serious threat to public health and leading to the destruction of wildlife. Of similar significance was Paul Ehrlich's 1968 book, *The Population Bomb*, which warned of the devastating effects the spiraling human population has on the planet's resources. Of course, pollution and the depletion of natural resources have not been the only environmental concerns since that time: dwindling plant and animal biodiversity, the loss of wilderness, the degradation of ecosystems, and climate change are all part of a raft of "green" issues that have implanted themselves into both public consciousness and public policy over subsequent years. The job of environmental ethics is to outline our moral obligations in the face of such concerns. In a nutshell, the two fundamental questions that environmental ethics must address are: what duties do humans have with respect to the environment, and why? The latter question usually needs to be considered prior to the former. In order to tackle just what our obligations are, it is usually thought necessary to consider first *why* we have them. For example, do we have environmental obligations for the sake of human beings living in the world today, for humans living in the future, or for the sake of entities within the environment itself, irrespective of any human benefits? Different philosophers have given quite different answers to this fundamental question which, as we shall see, has led to the emergence of quite different environmental ethics.

EXTENDING MORAL STANDING

As noted above, perhaps the most fundamental question that must be asked when regarding a particular environmental ethic is simply, *what obligations do we have concerning the natural environment?* If the answer is simply that we, as human beings, will perish if we do not constrain our actions towards nature, then that ethic is considered to be “anthropocentric.” Anthropocentrism literally means “human-centeredness,” and in one sense all ethics must be considered anthropocentric. After all, as far as we know, only human beings can reason about and reflect upon ethical matters, thus giving all moral debate a definite “human-centeredness.” However, within environmental ethics anthropocentrism usually means something more than this. It usually refers to an ethical framework that grants “moral standing” solely to human beings. Thus, an anthropocentric ethic claims that only human beings are morally considerable in their own right, meaning that all the direct moral obligations we possess, including those we have with regard to the environment, are owed to our fellow human beings.

While the history of western philosophy is dominated by this kind anthropocentrism, it has come under considerable attack from many environmental ethicists. Such thinkers have claimed that ethics must be extended beyond humanity, and that moral standing should be accorded to the nonhuman natural world. Some have claimed that this extension should run to sentient animals, others to individual living organisms, and still others to holistic entities, such as rivers, species and ecosystems. Under these ethics, we have obligations in respect of the environment because we actually owe things to the creatures or entities within the environment themselves. Determining whether our environmental obligations are founded on anthropocentric or non-anthropocentric reasoning will lead to different accounts of what those obligations are. This section examines the prominent accounts of moral standing within environmental ethics, together with the implications of each.

Human Beings

Although many environmental philosophers want to distance themselves from the label of anthropocentrism, it nevertheless remains the case that a number of coherent anthropocentric environmental ethics have been elaborated (Blackstone 1972; Passmore 1974; O'Neill 1997; Gewirth 2001). This should be

of little surprise, since many of the concerns we have regarding the environment appear to be concerns precisely because of the way they affect human beings. For example, pollution diminishes our health, resource depletion threatens our standards of living, climate change puts our homes at risk, the reduction of biodiversity results in the loss of potential medicines, and the eradication of wilderness means we lose a source of awe and beauty. Quite simply then, an anthropocentric ethic claims that we possess obligations to respect the environment for the sake of human well-being and prosperity.

Despite their human-centeredness, anthropocentric environmental ethics have nevertheless played a part in the extension of moral standing. This extension has not been to the nonhuman natural world though, but instead to human beings who do not yet exist. The granting of moral standing to future generations has been considered necessary because of the fact that many environmental problems, such as climate change and resource depletion, will affect future humans much more than they affect present ones. Moreover, it is evident that the actions and policies that we as contemporary humans undertake will have a great impact on the well-being of future individuals. In light of these facts, some philosophers have founded their environmental ethics on obligations to these future generations (Gewirth 2001).

Of course, it is one thing to say that human beings in the future have moral standing; it is quite another to justify the position. Indeed, some philosophers have denied such standing to future people, claiming that they lie outside of our moral community because they cannot act reciprocally (Golding 1972). So, while we can act so as to benefit them, they can give us nothing in return. This lack of reciprocity, so the argument goes, denies future people moral status. However, other philosophers have pointed to the fact that it is usually considered uncontroversial that we have obligations to the dead, such as executing their wills and so on, even though they cannot reciprocate (Kavka 1978). While still others have conceded that although any future generation cannot do anything for us, it can nevertheless act for the benefit of its own subsequent generations, thus pointing to the existence of a broader transgenerational reciprocity (Gewirth 2001).

However, perhaps we do not have obligations to future people because there is no definitive group of individuals to whom such obligations are owed.

This argument is not based on the simple fact that future people do not exist yet, but on the fact that we do not know who they will be. Derek Parfit (1984) has called this the “non-identity problem” (ch. 16). The heart of this problem lies in the fact that the policies adopted by states directly affect the movement, education, employment, and so on of their citizens. Thus, such policies affect who meets whom, and who has children with whom. So, one set of policies will lead to one group of future people, while another set will lead to a different group. Our actions impact who will exist in the future, making our knowledge of who they will be incomprehensible. Since there is no definitive set of future people to receive the benefits or costs of our actions, to whom do we grant moral standing? Secondly, and of particular importance for environmental ethics, how could any future people legitimately complain that they have been wronged by our environmentally destructive policies? For if we had not conducted such policies, they would not even exist.

In response to the non-identity problem, it has been argued that while we do not know exactly who will exist in the future, we do know that some group of people will exist and that they will have interests. In light of this, perhaps our obligations lie with these interests, rather than the future individuals themselves (DesJardins 2001:74). As for the second aspect of the problem, we might claim that although future generations will benefit from our environmentally destructive policies by their very existence, they will nevertheless have been harmed. After all, cannot one be harmed by a particular action even if one benefits overall? To illustrate this point, James Woodward (1986) gives the example of a racist airline refusing to allow a black man on a flight that subsequently crashes. Isn't this man harmed by the airline, even though he benefits overall?

Even if we do decide to grant moral standing to future human beings, however, that still leaves the problem of deciding just *what* obligations we have to them. One set of difficulties relates to our ignorance of who they are. For not only do we lack information about the identity of future people, but we have neither knowledge of their conceptions of a good life, nor what technological advances they may have made. For example, why bother preserving rare species of animal or oil reserves if humans in the future receive no satisfaction from the diversity of life and have developed some alternative

fuel source? Our ignorance of such matters makes it very difficult to flesh out the content of our obligations.

By way of reply to such problems, some philosophers have argued that while we do not know everything about future people, we can make some reasonable assumptions. For example, Brian Barry (1999) has argued that in order to pursue their idea of the good life—whatever that happens to be—future people will have need of some basic resources, such as food, water, minimum health, and so on. Barry thus argues that our obligations lie with ensuring that we do not prevent future generations from meeting their basic needs. This, in turn, forces us to consider and appropriately revise our levels of pollution, resource depletion, climate change, and population growth. While this might seem a rather conservative ethic to some, it is worth pointing out that at no time in humanity's history have the needs of contemporaries been met, let alone those of future people. This unfortunate fact points to a further problem that all future-oriented anthropocentric environmental ethics must face: Just how are the needs and interests of the current generation to be weighed against the needs and interests of those human beings in the future? Can we justifiably let present people go without for the sake of future humans?

Clearly then, the problems posed by just a minimal extension of moral standing are real and difficult. Despite this, however, most environmental philosophers feel that such anthropocentric ethics do not go far enough, and want to extend moral standing beyond humanity. Only by doing this, such thinkers argue, can we get the beyond narrow and selfish interests of humans, and treat the environment and its inhabitants with the respect they deserve.

Animals

If only human beings have moral standing, then it follows that if I come across a bear while out camping and shoot it dead on a whim, I do no wrong to that bear. Of course, an anthropocentric ethic might claim that I do some wrong by shooting the bear dead—perhaps shooting bears is not the action of a virtuous individual, or perhaps I am depleting a source of beauty for most other humans—but because anthropocentrism states that only humans have moral standing, then I can do no wrong to the bear itself. However, many of us have the intuition that this claim is wrong. Many of us feel that it is possible to do wrong to animals, whether that be by shooting innocent bears or by torturing cats. Of

course, a feeling or intuition does not get us very far in proving that animals have moral standing. For one thing, some people (hunters and cat-torturers, for example) no doubt have quite different intuitions, leading to quite different conclusions. However, several philosophers have offered sophisticated arguments to support the view that moral standing should be extended to include animals.

Peter Singer and Tom Regan are the most famous proponents of the view that we should extend moral standing to other species of animal. While both develop quite different animal ethics, their reasons for according moral status to animals are fairly similar. According to Singer (1974), the criterion for moral standing is sentience: the capacity to feel pleasure and pain. For Regan (2004[1983]), on the other hand, moral standing should be acknowledged in all "subjects-of-a-life": that is, those beings with beliefs, desires, perception, memory, emotions, a sense of future, and the ability to initiate action (ch. 7). So, while Regan and Singer give slightly different criteria for moral standing, both place a premium on a form of consciousness.

For Singer, if an entity possesses the relevant type of consciousness, then that entity should be given equal consideration when we formulate our moral obligations. Note that the point is not that every sentient being should be treated equally, but that it should be considered equally. In other words, the differences between individuals, and thus their different interests, should be taken into account. Thus, for Singer it would not be wrong to deny pigs the vote, for obviously pigs have no interest in participating in a democratic society, but it would be wrong to subordinate pigs' interest in not suffering, for clearly pigs have a strong interest in avoiding pain, just like us. Singer then feeds his principle of equal consideration into a utilitarian ethical framework, whereby the ultimate moral goal is to bring about the greatest possible satisfaction of interests. So there are two strands to Singer's theory: first of all, we must consider the interests of sentient beings equally; and secondly, our obligations are founded on the aim of bringing about the greatest amount of interest-satisfaction that we can.

Tom Regan takes issue with Singer's utilitarian ethical framework, and uses the criterion of consciousness to build a "rights-based" theory. For Regan, all entities who are "subjects-of-a-life" possess "inherent value." This means

that such entities have a value of their own, irrespective of their good for other beings or their contribution to some ultimate ethical norm. In effect then, Regan proposes that there are moral limits to what one can do to a subject-of-a-life. This position stands in contrast to Singer who feeds all interests into the utilitarian calculus and bases our moral obligations on what satisfies the greatest number. Thus, in Singer's view it might be legitimate to sacrifice the interests of certain individuals for the sake of the interest-satisfaction of others. For example, imagine that it is proven that a particular set of painful experiments on half a dozen pigs will lead to the discovery of some new medicine that will itself alleviate the pain of a few dozen human beings (or other sentient animals). If one's ultimate norm is to satisfy the maximum number of interests, then such experiments should take place. However, for Regan there are moral limits to what one can do to an entity with inherent value, irrespective of these overall consequences. These moral limits are "rights," and are possessed by all creatures who are subjects-of-a-life.

But what does all this have to do with environmental ethics? Well, in one obvious sense animal welfare is relevant to environmental ethics because animals exist within the natural environment and thus form part of environmentalists' concerns. However, extending moral standing to animals also leads to the formulation of particular types of environmental obligations. Essentially, these ethics claim that when we consider how our actions impact on the environment, we should not just evaluate how these affect humans (present and/or future), but also how they affect the interests and rights of animals (Singer 1993, ch. 10, and Regan 2004[1983], ch. 9). For example, even if clearing an area of forest were proven to be of benefit to humans both in the short and long-term, that would not be the end of the matter as far as animal ethics are concerned. The welfare of the animals residing within and around the forest must also be considered.

However, many environmental philosophers have been dissatisfied with these kinds of animal-centered environmental ethics. Indeed, some have claimed that animal liberation cannot even be considered a legitimate environmental ethic (Callicott 1980; Sagoff 1984). For these thinkers, all animal-centered ethics suffer from two fundamental and devastating problems: first of all, they are too narrowly individualistic; and secondly, the logic of animal ethics implies unjustifiable interference with natural processes. As for the first point, it

is pointed out that our concerns for the environment extend beyond merely worrying about individual creatures. Rather, for environmentalists, "holistic" entities matter, such as species and ecosystems. Moreover, sometimes the needs of a "whole" clash with the interests of the individuals that comprise it. Indeed, the over-abundance of individuals of a particular species of animal can pose a serious threat to the normal functioning of an ecosystem. For example, many of us will be familiar with the problems rabbits have caused to ecosystems in Australia. Thus, for many environmentalists, we have an obligation to kill these damaging animals. Clearly, this stands opposed to the conclusions of an ethic that gives such weight to the interests and rights of individual animals. The individualistic nature of an animal-centered ethic also means that it faces difficulty in explaining our concern for the plight of endangered species. After all, if individual conscious entities are all that matter morally, then the last surviving panda must be owed just the same as my pet cat. For many environmental philosophers this is simply wrong, and priority must be given to the endangered species (Rolston 1985).

Animal-centered ethics also face attack for some of the implications of their arguments. For example, if we have obligations to alleviate the suffering of animals, as these authors suggest, does that mean we must stop predator animals from killing their prey, or partition off prey animals so that they are protected from such attacks (Sagoff 1984)? Such conclusions not only seem absurd, but also inimical to the environmentalist goal of preserving natural habitats and processes.

Having said all of this, I should not over-emphasize the opposition between animal ethics and environmental ethics. Just because animal ethicists grant moral standing only to conscious individuals, that does not mean that they hold everything else in contempt (Jamieson 1998). Holistic entities may not have independent moral standing, according to these thinkers, but that does not equate to ignoring them. After all, the welfare and interests of individual entities are often bound up with the healthy functioning of the "wholes" that they make up. Moreover, the idea that animal ethics imply large-scale interferences in the environment can be questioned when one considers how much harm this would inflict upon predator and scavenger animals. Nevertheless, clashes of interest between individual animals and other natural entities are inevitable, and when push comes to shove animal ethicists will

invariably grant priority to individual conscious animals. Many environmental ethicists disagree, and are convinced that the boundaries of our ethical concern need to be pushed back further.

Individual Living Organisms

As noted above, numerous philosophers have questioned the notion that only conscious beings have moral standing. Some have done this by proposing a thought experiment based on a "last-human scenario" (Attfield 1983:155). The thought experiment asks us to consider a situation, such as the aftermath of a nuclear holocaust, where the only surviving human being is faced with the only surviving tree of its species. If the individual chops down the tree, no human would be harmed by its destruction. For our purposes we should alter the example and say that all animals have also perished in the holocaust. If this amendment is made, we can go further and say that no conscious being would be harmed by the tree's destruction. Would this individual be wrong to destroy the tree? According to a human or animal-centered ethic, it is hard to see why such destruction would be wrong. And yet, many of us have the strong intuition that the individual would act wrongly by chopping down the tree. For some environmental philosophers, this intuition suggests that moral standing should be extended beyond conscious life to include individual living organisms, such as trees.

Of course, and as I have mentioned before, we cannot rely only on intuitions to decide who or what has moral standing. For this reason, a number of philosophers have come up with arguments to justify assigning moral standing to individual living organisms. One of the earliest philosophers to put forward such an argument was Albert Schweitzer. Schweitzer's (1923) influential "Reverence for Life" ethic claims that all living things have a "will to live", and that humans should not interfere with or extinguish this will. But while it is clear that living organisms struggle for survival, it is simply not true that they "will" to live. This, after all, would require some kind of conscious experience, which many living things lack. However, perhaps what Schweitzer was getting at was something like Paul W. Taylor's (1986) more recent claim that all living things are "teleological centers of life." For Taylor, this means that living things have a good of their own that they strive towards, even if they lack awareness of this fact. This good, according to Taylor, is the full development of an organism's

biological powers. In similar arguments to Regan's, Taylor claims that because living organisms have a good of their own, they have inherent value; that is, value for their own sake, irrespective of their value to other beings. It is this value that grants individual living organisms moral status, and means that we must take the interests and needs of such entities into account when formulating our moral obligations.

But if we recognize moral standing in every living thing, how are we then to formulate any meaningful moral obligations? After all, don't we as humans require the destruction of many living organisms simply in order to live? For example we need to walk, eat, shelter, and clothe ourselves, all of which will usually involve harming living things. Schweitzer's answer is that we can only harm or end the life of a living entity when absolutely necessary. Of course, this simply begs the question: when is it absolutely necessary? Taylor attempts to answer this question by advocating a position of general equality between the interests of living things, together with a series of principles in the event of clashes of interest. First, the principles state that humans are allowed to act in self-defense to prevent harm being inflicted by other living organisms. Second, the basic interests of nonhuman living entities should take priority over the nonbasic or trivial interests of humans. Third, when basic interests clash, humans are not required to sacrifice themselves for the sake of others (Taylor 1986:264-304).

As several philosophers have pointed out, however, this ethic is still incredibly demanding. For example, because my interest in having a pretty garden is nonbasic, and a weed's interest in survival is basic, I am forbidden from pulling it out according to Taylor's ethical framework. For some, this makes the ethic unreasonably burdensome. No doubt because of these worries, other philosophers who accord moral standing to all living organisms have taken a rather different stance. Instead of adopting an egalitarian position on the interests of living things, they propose a hierarchical framework (Attfield 1983; Varner 1998). Such thinkers point out that moral standing is not the same as moral significance. So while we could acknowledge that plants have moral standing, we might nevertheless accord them a much lower significance than human beings, thus making it easier to justify our use and destruction of them. Nevertheless, several philosophers remain uneasy about the construction of such hierarchies and wonder whether it negates the acknowledgement of

moral standing in the first place. After all, if we accept such a hierarchy, just how low is the moral significance of plants? If it is low enough so that I can eat them, weed them, and walk on them, what is the point of granting them any moral standing at all?

There remain two crucial challenges facing philosophers who attribute moral standing to individual living organisms that have not yet been addressed. One challenge comes from the anthropocentric thinkers and animal liberationists. They deny that "being alive" is a sufficient condition for the possession of moral standing. For example, while plants may have a biological good, is it really a good of their own? Indeed, there seems to be no sense in which something can be said to be good or bad from the point of view of the plant itself. And if the plant doesn't care about its fate, why should we (Warren 2000:48)? In response to this challenge, environmental ethicists have pointed out that conscious volition of an object or state is not necessary for that object or state to be a good. For example, consider a cat that needs worming. It is very unlikely that the cat has any understanding of what worming is, or that he needs worming in order to remain healthy and fit. However, it makes perfect sense to say that worming is good for the cat, because it contributes to the cat's functioning and flourishing. Similarly, plants and trees may not consciously desire sunlight, water, or nutrition, but each, according to some ethicists, can be said to be good for them in that they contribute to their biological flourishing.

The second challenge comes from philosophers who question the individualistic nature of these particular ethics. As mentioned above, these critics do not believe that an environmental ethic should place such a high premium on individuals. For many, this individualistic stance negates important ecological commitments to the interdependence of living things, and the harmony to be found in natural processes. Moreover, it is alleged that these individualistic ethics suffer from the same faults as anthropocentric and animal-centered ethics: they simply cannot account for our real and demanding obligations to holistic entities, such as species and ecosystems. Once again, however, a word of caution is warranted here. It is not the case that philosophers who ascribe moral standing to individual living things simply ignore the importance of such "wholes." Often the equilibrium of these entities is taken extremely seriously (see Taylor 1986:77). However, it must be

remembered that such concern is extended only insofar as such equilibrium is necessary in order for individual living organisms to flourish; the wholes themselves have no independent moral standing. In the next section, those philosophers who claim that this standing should be extended to such "wholes" will be examined.

Holistic Entities

While Albert Schweitzer can be regarded as the most prominent philosophical influence for thinkers who grant moral standing to all individual living things, Aldo Leopold is undoubtedly the main influence on those who propose "holistic" ethics. Aldo Leopold's "land ethic" demands that we stop treating the land as a mere object or resource. For Leopold, land is not merely soil. Instead, land is a fountain of energy, flowing through a circuit of soils, plants, and animals. While food chains conduct the energy upwards from the soil, death and decay returns the energy back to the soil. Thus, the flow of energy relies on a complex structure of relations between living things. While evolution gradually changes these relations, Leopold argues that man's interventions have been much more violent and destructive. In order to preserve the relations within the land, Leopold claims that we must move towards a "land ethic," thereby granting moral standing to the land community itself, not just its individual members. This culminates in Leopold's (1989[1949]) famous ethical injunction: "A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise" (pp. 218-225).

Several philosophers, however, have questioned Leopold's justification of the land ethic. For one thing, it seems that Leopold jumps too quickly from a descriptive account of how the land is, to a prescriptive account of what we ought to do. In other words, even if Leopold's accounts of the land and its energy flows are correct, why should we preserve it? What precisely is it about the biotic community that makes it deserving of moral standing? Unfortunately, Leopold seems to offer no answers to these important questions, and thus no reason to build our environmental obligations around his land ethic. However, J. Baird Callicott has argued that such criticisms of Leopold are unfair and misplaced. According to Callicott, Leopold lies outside of mainstream moral theory. Rather than assign moral standing on the identification of some

particular characteristic, such as consciousness or a biological good of one's own, Leopold is claimed to accord moral standing on the basis of moral sentiment and affection. Thus, the question is not, what quality does the land possess that makes it worthy of moral standing? But rather, how do we feel about the land (Callicott 1998)? In this light, the land ethic can be seen as an injunction to broaden our moral sentiments beyond self-interest, and beyond humanity to include the whole biotic community. This, so the argument goes, bridges the gap between the descriptive and the prescriptive in Leopold's thought.

Of course, some have questioned whether sentiment and feelings are suitable foundations for an environmental ethic. After all, there seem to be plenty of people out there who have no affection for the biotic community whatsoever. If Leopold's injunction is ignored by such people, must we simply give up hope of formulating any environmental obligations? In the search for more concrete foundations, Lawrence E. Johnson (1993) has built an alternative case for according moral standing to holistic entities. Johnson claims that once we recognize that interests are not always tied to conscious experience, the door is opened to the possibility of nonconscious entities having interests and thus moral standing. So, just as breathing oxygen is in the interests of a child, even though the child has neither a conscious desire for oxygen, nor any understanding of what oxygen is, so do species have an interest in fulfilling their nature. This is because both have a good of their own, based on the integrated functioning of their life processes (p. 142). Children can flourish as living things, and so too can species and ecosystems; so, according to Johnson, both have interests that must be taken into account in our ethical deliberations.

But even if we accept that moral standing should be extended to holistic entities on this basis, we still need to consider how we are then to flesh out our moral obligations concerning the environment. For some, this is where holistic ethics fail to convince. In particular, it has been claimed that holistic ethics condone sacrificing individuals for the sake of the whole. Now while many holistic philosophers do explicitly condone sacrificing individuals in some situations, for example by shooting rabbits to preserve plant species, they are reluctant to sacrifice human interests in similar situations. But isn't the most abundant species destroying biotic communities *Homo sapiens*? And if human individuals are just another element within the larger and more important biotic

community, is it not necessary under holistic ethics to kill some of these “human pests” for the sake of the larger whole? Such considerations have led Tom Regan (2004[1983]) to label the implications of holistic ethics as “environmental fascism” (p. 362). In response, proponents of such ethics have claimed that acknowledging moral standing in holistic entities does not mean that one must deny the interests and rights of human beings. They claim that granting moral standing to “wholes” is not the same thing as taking it away from individuals. While this is obviously true, that still leaves the question of what to do when the interests of wholes clash with the interests of individuals. If humans cannot be sacrificed for the good of the whole, why can rabbits?

The answer that has been put forward by Callicott claims that while the biotic community matters morally, it is not the only community that matters. Rather, we are part of various “nested” communities all of which have claims upon us. Thus, our obligations to the biotic community may require the culling of rabbits, but may not require the culling of humans. This is because we are part of a tight-knit human community, but only a very loose human-rabbit community. In this way, we can adjudicate clashes of interest, based on our community commitments. This communitarian proposal certainly seems a way out of the dilemma. Unfortunately, it faces two key problems: first, just who decides the content and strength of our various community commitments; and second, if human relationships are the closest, does all this lead back to anthropocentrism? As for the first point, if deciding on our community attachments is left up to individuals themselves, this will lead to quite diverse and even repugnant moral obligations. For example, if an individual believes that he has a much stronger attachment to white males than to black women, does this mean that he can legitimately favor the interests of the former over the latter? If not, and an objective standard is to be imposed, we are left with the enormous problem of discovering this standard and reaching consensus on it. Secondly, if our moral commitments to the biotic community are trumped by our obligations to the human community, doesn’t this lead us back down the path to anthropocentrism—the very thing the holist wants to avoid?

Without doubt, extending moral standing to the degree of holistic ethics requires some extremely careful argumentation when it comes to working out the precise content of our environmental obligations.

RADICAL ECOLOGY

Not all philosophers writing on our obligations concerning the environment see the problem simply in terms of extending moral standing. Instead, many thinkers regard environmental concerns to have warranted an entirely new ideological perspective named after its biological counterpart, "ecology." While the ideas and beliefs within this "radical ecology" movement are diverse, they possess two common elements that separate them from the ethical extensionism outlined above. First of all, none see extending moral standing as sufficient to resolve the environmental crisis. They argue that a broader philosophical perspective is needed, requiring fundamental changes in both our attitude to and understanding of reality. This involves reexamining who we are as human beings and our place within the natural world. For radical ecologists, ethical extensionism is inadequate because it is stuck in the traditional ways of thinking that led to these environmental problems in the first place. In short, it is argued that ethical extensionism remains too human-centered, because it takes human beings as the paradigm examples of entities with moral standing and then extends outwards to those things considered sufficiently similar. Secondly, none of these radical ecologies confine themselves solely to the arena of ethics. Instead, radical ecologies also demand fundamental changes in society and its institutions. In other words, these ideologies have a distinctively political element, requiring us to confront the environmental crisis by changing the very way we live and function, both as a society and as individuals.

Deep Ecology

Deep ecology is perhaps most easily understood when considered in opposition to its "shallow" counterpart. According to deep ecologists, shallow ecology is anthropocentric and concerned with pollution and resource depletion. Shallow ecology might thus be regarded as very much the mainstream wing of environmentalism. Deep ecology, in contrast, rejects anthropocentrism and takes a "total-field" perspective. In other words, deep ecologists are not aiming to formulate moral principles concerning the environment to supplement our existing ethical framework. Instead, they demand an entirely new worldview and philosophical perspective. According to Arne Naess (1973), the Norwegian philosopher who first outlined this shallow-

deep split in environmentalism, deep ecologists advocate the development of a new eco-philosophy or "ecosophy" to replace the destructive philosophy of modern industrial society. While the various eco-philosophies that have developed within deep ecology are diverse, Naess and George Sessions have compiled a list of eight principles or statements that are basic to deep ecology:

1. The well-being and flourishing of human and nonhuman life on Earth have value in themselves (i.e., intrinsic value, inherent worth). These values are independent of the usefulness of the non-human world for human purposes.
2. Richness and diversity of life forms contribute to the realization of these values and are also values in themselves.
3. Humans have no right to reduce this richness and diversity except to satisfy vital needs.
4. The flourishing of human life and cultures is compatible with a substantially smaller population. The flourishing of nonhuman life requires a smaller human population.
5. Present human interference with the nonhuman world is excessive, and the situation is rapidly worsening.
6. Policies must therefore be changed. These policies affect basic economic, technological and ideological structures. The resulting state of affairs will be deeply different from the present.
7. The ideological change will be mainly that of appreciating life quality (dwelling in situations of inherent value) rather than adhering to an increasingly higher standard of living. There will be a profound awareness of the difference between bigness and greatness.
8. Those who subscribe to the foregoing points have an obligation directly or indirectly to try to implement the necessary changes (Naess 1986).

But while Naess regards those who subscribe to these statements as supporters of deep ecology, he does not believe it to follow that all such supporters will have the same worldview or "ecosophy." In other words, deep ecologists do not offer one unified ultimate perspective, but possess various and divergent philosophical and religious allegiances.

Naess's own ecosophy involves just one fundamental ethical norm: "Self-realization!" For Naess, this norm involves giving up a narrow egoistic conception of the self in favor of a wider more comprehensive Self (hence the deliberate capital "S"). Moving to this wider Self involves recognizing that as human beings we are not removed from nature, but are interconnected with it. Recognizing our wider Self thus involves identifying ourselves with all other life forms on the planet. The Australian philosopher Warwick Fox (1990) has taken up this theme of self-realization in his own eco-philosophy, "transpersonal ecology." Fox does not regard environmental ethics to be predominantly about formulating our moral obligations concerning the environment, but instead views it as about the realization of an "ecological consciousness." For Fox, as with Naess, this consciousness involves our widest possible identification with the nonhuman world. The usual ethical concern of formulating principles and obligations thus becomes unnecessary, according to Fox, for once the appropriate consciousness is established, one will naturally protect the environment and allow it to flourish, for that will be part and parcel of the protection and flourishing of oneself.

Critics of deep ecology argue that it is just too vague to address real environmental concerns. For one thing, in its refusal to reject so many worldviews and philosophical perspectives, many have claimed that it is difficult to uncover just what deep ecology advocates. For example, on the one hand, Naess offers us eight principles that deep ecologists should accept, and on the other he claims that deep ecology is not about drawing up codes of conduct, but adopting a global comprehensive attitude. Now, if establishing principles is important, as so many ethicists believe, perhaps deep ecology requires more precision than can be found in Naess and Sessions's platform. In particular, just how are we to deal with clashes of interests? According to the third principle, for example, humans have no right to reduce the richness and diversity of the natural world unless to meet vital needs. But does that mean we are under an obligation to protect the richness and diversity of the natural world? If so, perhaps we could cull non-native species such as rabbits when they damage ecosystems. But then, the first principle states that nonhuman beings such as rabbits have inherent value, and the fifth principle states that human interference in nature is already excessive. So just what should we do?

Clearly, the principles as stated by Naess and Sessions are too vague to offer any real guide for action.

However, perhaps principles are not important, as both Naess and Fox have claimed. Instead, they claim that we must rely on the fostering of the appropriate states of consciousness. Unfortunately, two problems remain. First of all, it is not at all clear that all conflicts of interest will be resolved by the adoption of the appropriate state of consciousness. For even if I identify myself with all living things, some of those things, such as bacteria and viruses, may still threaten me as a discrete living organism. And if conflicts of interest remain, don't we need principles to resolve them? Secondly, and as we saw with Leopold's land ethic, just what are we to do about those who remain unconvinced about adopting this new state of consciousness? If there aren't any rational arguments, principles, or obligations to point to, what chance is there of persuading such people to take the environmental crisis seriously?

At this point deep ecologists would object that such criticisms remain rooted in the ideology that has caused so much of the crisis we now face. For example, take the point about persuading others. Deep ecologists claim that argument and debate are not the only means we must use to help people realize their ecological consciousness; we must also use such things as poetry, music, and art. This relates back to the point I made at the beginning of the section: deep ecologists do not call for supplementary moral principles concerning the environment, but an entirely new worldview. Whether such a radical shift in the way we think about ourselves and the environment is possible, remains to be seen.

Social Ecology

Social ecology shares with deep ecology the view that the foundations of the environmental crisis lie in the dominant ideology of modern western societies. Thus, just as with deep ecology, social ecology claims that in order to resolve the crisis, a radical overhaul of this ideology is necessary. However, the new ideology that social ecology proposes is not concerned with the "self-realization" of deep ecology, but instead the absence of domination. Indeed, domination is the key theme in the writings of Murray Bookchin, the most prominent social ecologist. For Bookchin, environmental problems are directly related to social problems. In particular, Bookchin claims that the hierarchies of

power prevalent within modern societies have fostered a hierarchical relationship between humans and the natural world (Bookchin 1982). Indeed, it is the ideology of the free market that has facilitated such hierarchies, reducing both human beings and the natural world to mere commodities. Bookchin argues that the liberation of both humans and nature are actually dependent on one another. Thus his argument is quite different from Marxist thought, in which man's freedom is dependent on the complete domination of the natural world through technology. For Bookchin and other social ecologists, this Marxist thinking involves the same fragmentation of humans from nature that is prevalent in capitalist ideology. Instead, it is argued that humans must recognize that they are part of nature, not distinct or separate from it. In turn then, human societies and human relations with nature can be informed by the non-hierarchical relations found within the natural world. For example, Bookchin points out that within an ecosystem, there is no species more important than another, instead relationships are mutualistic and interrelated. This interdependence and lack of hierarchy in nature, it is claimed, provides a blueprint for a non-hierarchical human society (Bookchin 2001).

Without doubt, the transformation that Bookchin calls for is radical. But just what will this new non-hierarchical, interrelated, and mutualistic human society look like? For Bookchin, an all powerful centralized state is just another agent for domination. Thus in order to truly be rid of hierarchy, the transformation must take place within smaller local communities. Such communities will be based on sustainable agriculture, participation through democracy, and, of course, freedom through non-domination. Not only then does nature help cement richer and more equal human communities, but transformed societies also foster a more benign relationship with nature. This latter point illustrates Bookchin's optimistic view of humanity's potential. After all, Bookchin does not think that we should condemn all of humanity for causing the ecological crisis, for instead it is the relationships within societies that are to blame (Bookchin 1991). Because of this, Bookchin is extremely critical of the anti-humanism and misanthropy he perceives to be prevalent in much deep ecology.

One problem that has been identified with Bookchin's social ecology is his extrapolation from the natural world to human society. Bookchin argues that the interdependence and lack of hierarchy within nature provides a

grounding for non-hierarchical human societies. However, as we saw when discussing Aldo Leopold, it is one thing to say how nature is, but quite another to say how society ought to be. Even if we accept that there are no natural hierarchies within nature (which for many is dubious), there are plenty of other aspects of it that most of us would not want to foster in our human society. For example, weak individuals and weak species are often killed, eaten, and out-competed in an ecosystem. This, of course, is perfectly natural and even fits in with ecology's characterization of nature as interconnected. However, should this ground human societies in which the weak are killed, eaten, and out-competed? Most of us find such a suggestion repugnant. Following this type of reasoning, many thinkers have warned of the dangers of drawing inferences about how society should be organized from certain facts about how nature is (Dobson 1995:42).

Some environmental philosophers have also pointed to a second problem with Bookchin's theory. For many, his social ecology is anthropocentric, thus failing to grant the environment the standing it deserves. Critics cite evidence of anthropocentrism in the way Bookchin accounts for the liberation of both humans and nature. This unfolding process will not just occur of its own accord, according to Bookchin; rather, human beings must facilitate it. Of course, many philosophers are extremely skeptical of the very idea that history is inevitably "unfolding" towards some particular direction. However, some environmental philosophers are more wary of the prominent place that Bookchin gives to human beings in facilitating this unfolding. Of course, to what extent this is a problem depends on one's point of view. After all, if humans cannot ameliorate the environmental problems we face, is there much point doing environmental ethics in the first place? Indeed, Bookchin himself has been rather nonplussed by this charge, and explicitly denies that humans are just another community in nature. But he also denies that nature exists solely for the purposes of humans. However, the critics remain unconvinced, and believe it to be extremely arrogant to think that humans know what the unfolding of nature will look like, let alone to think that they can bring it about (Eckersley 1992:154-156).

Ecofeminism

Like social ecology, ecofeminism also points to a link between social domination and the domination of the natural world. And like both deep ecology and social ecology, ecofeminism calls for a radical overhaul of the prevailing philosophical perspective and ideology of western society. However, ecofeminism is a broad church, and there are actually a number of different positions that feminist writers on the environment have taken. In this section I will review three of the most prominent.

Val Plumwood offers a critique of the rationalism inherent in traditional ethics and blames this rationalism for the oppression of both women and nature. The fundamental problem with rationalism, Plumwood claims, is its fostering of dualisms. For example, reason itself is usually presented in stark opposition to emotion. Traditional ethics, Plumwood argues, promote reason as capable of providing a stable foundation for moral argument, because of its impartiality and universalizability. Emotion, on the other hand, lacks these characteristics, and because it is based on sentiment and affection makes for shaky ethical frameworks. Plumwood claims that this dualism between reason and emotion grounds other dualisms in rationalist thought: in particular, mind/body, human/nature and man/woman. In each case, the former is held to be superior to the latter (Plumwood 1991). So, for Plumwood, the inferiority of both women and nature have a common source: namely, rationalism. Once this is recognized, so the argument goes, it becomes clear that simple ethical extensionism as outlined above is insufficient to resolve the domination of women and nature. After all, such extensionism is stuck in the same mainstream rationalist thought that is the very source of the problem. What is needed instead, according to Plumwood, is a challenge to rationalism itself, and thus a challenge to the dualisms it perpetuates.

However, while it is perfectly possible to acknowledge the rationalism present in much mainstream ethical thinking, one can nevertheless query Plumwood's characterization of it. After all, does rationalism necessarily promote dualisms that are responsible for the subjugation of women and nature? Such a claim would seem odd given the many rationalist arguments that have been put forward to promote the rights and interests of both women and the natural world. In addition, many thinkers would argue that rationalist

thought is not the enemy, but instead the best hope for securing proper concern for the environment and for women.

Karen J. Warren (1990) has argued that the dualisms of rationalist thought, as outlined by Plumwood, are not in themselves problematic. Rather, Warren claims that they become problematic when they are used in conjunction with an "oppressive conceptual framework" to justify subordination. Warren argues that one feature inherent within an oppressive conceptual framework is the "logic of domination." Thus, a list of the differences between humans and nature, and between men and women, is not in itself harmful. But once assumptions are added, such as these differences leading to the moral superiority of humans and of men, then we move closer to the claim that we are justified in subordinating women and nature on the basis of their inferiority. According to Warren, just such a logic of domination has been prevalent within western society. Men have been identified with the realm of the "mental" and "human," while women have been identified with the "physical" and the "natural." Once it is claimed that the "natural" and the "physical" are morally inferior to the "human" and "mental," men become justified in subordinating women and nature. For Warren, then, feminists and environmentalists share the same goal: namely, to abolish this oppressive conceptual framework.

Other ecofeminists take a quite different approach to Plumwood and Warren. Rather than outlining the connections between the domination of women and of nature, they instead emphasize those things that link women and the natural world. Women, so the argument goes, stand in a much closer relationship to the natural world due to their capacity for child-bearing. For some ecofeminists, this gives women a unique perspective on how to build harmonious relationships with the natural world. Indeed, many such thinkers advocate a spiritualist approach in which nature and the land are given a sacred value, harking back to ancient religions in which the Earth is considered female (Mies & Shiva 1993).

For writers such as Plumwood, however, emphasizing women's "naturalness" in this way simply reinforces the dualism that led to women's oppression in the first place. Placing women as closer to nature, according to Plumwood, simply places them closer to oppression. Other critics argue that

the adoption of a spiritualist approach leads feminists to turn their attention inwards to themselves and their souls, and away from those individuals and entities they should be trying to liberate. However, in response, these ecofeminists may make the same point as the deep ecologists: to resolve the environmental problems we face, and the systems of domination in place, it is the consciousness and philosophical outlook of individuals that must change.

THE FUTURE OF ENVIRONMENTAL ETHICS

Given the increasing concern for the environment and the impact that our actions have upon it, it is clear that the field of environmental ethics is here to stay.

However, it is less clear in what way the discipline will move forward. Having said that, there is evidence for at least three future developments. First of all, environmental ethics needs to be and will be informed by changes in the political efforts to ameliorate environmental problems. Environmental ethics concerns formulating our moral obligations regarding the environment. While this enterprise can be, and often is, quite abstract, it is also meant to engage with the real world. After all, ethicists are making claims about how they think the world ought to be. Given this, the effectiveness of states and governments in "getting there" will affect the types of ethics that emerge. For example, the Kyoto Protocol might be regarded as the first real global attempt to deal with the problem of climate change. However, without the participation of so many large polluters, with the agreed reductions in greenhouse gas emissions so small, and with many countries looking like they may well miss their targets, many commentators already regard it as a failure. Ethicists need to respond not just by castigating those they blame for the failure. Rather they must propose alternative and better means of resolving the problems we face. For example, is it more important to outline a scheme of obligations for individuals rather than states, and go for a bottom-up solution to these problems? Alternatively, perhaps businesses should take the lead in tackling these problems. Indeed, it may even be in the interests of big business to be active in this way, given the power of consumers. It is quite possible then, that we will see business ethics address many of the same issues that environmental ethics has been tackling.

However, the effects of environmental ethics will not be limited to influencing and informing business ethics alone, but will undoubtedly feed into and merge with more mainstream ethical thinking.

After all, the environment is not something one can remove oneself from. In light of this, once it is recognized that we have environmental obligations, all areas of ethics are affected, including “just war” theory, domestic [distributive justice](#), global distributive justice, human rights theory, and many others. Take global distributive justice as an example: if one considers how climate change will affect people throughout the world so differently—affecting individuals’ homes, sanitation, resistance from disease, ability to earn a living, and so on—it is clear that consideration of the environment is essential to such questions of justice. Part of the job of the environmental ethicist will thus be to give such disciplines the benefit of his or her expertise.

Finally, environmental ethics will of course be informed by our scientific understanding of the environment. Whether it be changes in our understanding of how ecosystems work, or changes in the evidence concerning the environmental crisis, it is clear that such change will inform and influence those thinkers writing on our environmental obligations.

Deep Ecology

David R. Keller

(from *Encyclopedia of Environmental Ethics and Philosophy*, Second Edition, 2008)

[Edited and abridged for readability and for the purposes of this class. ~ Dr. Bradley H. Brewster]

Adherents of the deep ecology movement share a dislike of the human-centered value system at the core of European and North American industrial culture. Deep ecologists argue that environmental philosophy must recognize the values that inhere objectively in nature independently of human wants, needs or desires.

The popularity of deep ecology spans from headline-grabbing environmental activists dressed in coyote costumes to scholars of an astonishing assortment of backgrounds and interests. Authors have made connections between deep ecology and ecological science (Golley 1987), religions from around the world (Barnhill & Gottlieb 2001), New Age spirituality (LaChapelle 1978), direct action/ecological sabotage (Foreman 1991), the poetry of Robinson Jeffers (Sessions 1977), the land ethic of Aldo Leopold (Devall & Sessions 1985), the monism of Baruch Spinoza (Sessions 1977, 1979, 1985; Naess 2005), and the phenomenology of Martin Heidegger (Zimmerman 1986). Such variety is invigorating, but it makes it difficult to find the common thread in all these diverse manifestations of deep ecology. As one commentator has observed, "Any one who attempts to reconcile Heidegger's with Leopold's contributions to deep ecology finds the going rugged" (Oelschlaeger 1991:304). (To differentiate between the broad popular and narrow academic usages of deep ecology, the term "Deep Ecology" will be used to denote the latter.)

Much more narrowly, deep ecology represents the psychologization of environmental philosophy. Deep ecology in this sense refers to an *egalitarian* and *holistic* environmental philosophy founded on phenomenological methodology. By way of direct experience of nonhuman nature, one recognizes the equal intrinsic worth of all biota as well as one's own ecological interconnectedness with the lifeworld in all its plenitude.

Understanding Deep Ecology in its academic sense demands reading the work of four environmental philosophers: the Norwegian Arne Naess, the Americans George Sessions and David Rothenberg, and the Australian Warwick Fox. Deep Ecology is inextricably associated with Naess (Katz et al. 2000:xv) and owes its prominence to him. Naess's many strengths—strong will, humble demeanor, playful personality, estimable academic reputation, aversion to judgment, predilection for inclusivity, and an odd mix of interests—have stimulated many others to spend considerable amounts of time, talent, and energy teasing out the nuances of his creative insights.

Origins of the Deep Ecology Movement

Arne Naess invented the term "deep ecology" in a famous 1973 English-language article, "The Shallow and the Deep, Long-Range Ecology Movement: A Summary." By "ecology movement," Naess means a cosmology or worldview. Naess faults European and North American civilization for the arrogance of its human-centered instrumentalization of nonhuman nature. He contrasts his new "deep" (or radical) ecological worldview with the dominant "shallow" (or reform) paradigm. The shallow worldview, which he finds to be typical of mainstream environmentalism, is merely an extension of European and North American anthropocentrism—its reasons for conserving wilderness and preserving biodiversity are invariably tied to human welfare, and it prizes nonhuman nature mainly for its use-value. The deep ecological worldview, in contrast, questions the fundamental assumptions of European and North American anthropocentrism—that is, it digs conceptually deeper (Fox 1995:91-94). In doing so, deep ecological thinking "is not a slight reform of our present society, but a *substantial reorientation of our whole civilization*" (Naess 1989:45). This radicalism has inspired environmental activists of many stripes to hoist up Deep Ecology as their banner in calling for nothing less than the redirection of human history (Manes 1990).

Naess, like Socrates, makes no claims to certainty. In word and deed, Naess instead has inspired others to engage in deep philosophical questioning through example. Naess's own environmental philosophy, ecosophy T (Naess 1986:26-29)—named for his secluded boreal hut, Tvergastein (Naess 1989:4)—is meant to serve as a template for other personal ecosophies (philosophies of ecology).

Academic Definitions of Deep Ecology

Deep Ecology rests on two fundamentals: an axiology [the study of the criteria of value systems in ethics] of “biocentric egalitarianism” and an ontology [the study of existence] of metaphysical holism which asserts that the biosphere does not consist of discrete entities but rather internally related individuals that make up an ontologically unbroken whole. Both principles are rooted in an intuitive epistemology [the study of knowledge and knowing, of how we know what we know] reminiscent of Descartes’ “clear and distinct” criteria—once you grasp them, their truth is beyond doubt.

The first principle, *biocentric egalitarianism*—known also by other phrases that combine biocentric, biospherical, and ecological with equality and egalitarianism (Naess 1973:95; Devall and Sessions 1985:67-69)—holds that biota have equal intrinsic value; it denies differential valuation of organisms. In the words of Naess (1973), “*the equal right to live and blossom* is an intuitively clear and obvious value axiom” (p. 96). In the words of the sociologist Bill Devall, writing with George Sessions, “all organisms and entities in the ecosphere, as parts of the interrelated whole, are equal in intrinsic worth” (1985:67). Naess (1973) shrewdly preempts invariable attacks on this idea of the equal worth of all organisms by adding the qualifier “in principle” because “any realistic praxis necessitates some killing, exploitation, and suppression” (p. 95). This qualifier has not, however, staved off criticisms of biocentric egalitarianism.

The valuing of human beings over other life forms in the teleology of a great chain of being (Lovejoy 1936) has been a key feature of the European-North American intellectual tradition—and, to the dismay of deep ecologists, also a feature of some prominent variants of environmental ethics (Birch & Cobb 1981; Bookchin 1982; Rolston 1988). Biocentric egalitarianism aims directly at this target. By denying humans special moral consideration, Deep Ecology is not just nonanthropocentric, but anti-anthropocentric (Watson 1983).

Sessions has categorically rejected any differential axiology on the grounds that hierarchies of value lay the groundwork for claims of moral superiority. Quoting John Rodman (1977:94), Sessions (1985) cautions that any comparative axiology merely reinstates a “pecking order in this moral

barnyard" (p. 230). At a 1979 conference devoted to reminding philosophers of the purpose of their discipline (namely, deep questioning), Sessions warned environmental ethicists of the temptation of looking to a metaphysics based on intensity of sentience. "The point is not whether humans in fact do have the greatest degree of sentience on this planet (although dolphins and whales might provide a counter instance), deep ecologists argue that the degree of sentience is *irrelevant* in terms of how humans relate to the rest of Nature" (p. 18).

The second principle is *metaphysical holism*. One can apprehend ontological interconnectedness through enlightenment or "self-realization" (Devall & Sessions 1985:67-69; Naess 1987). As Fox (1984) says, "It is the idea that we can make no firm ontological divide in reality between the human and the nonhuman realms. ... [T]o the extent that we perceive boundaries, we fall short of deep ecological consciousness" (p. 196). Through this awakening, the ontological boundaries of the self extend outward, incorporating more and more of the lifeworld into the self. This insight discloses that there is in reality only one big Self, the lifeworld, a notion developed in the article "The World Is Your Body" (Watts 1966).

This method of self-realization is identification: By recognizing the intrinsic worth of other living beings, one recognizes the solidarity of all life forms. Naess (1987), upon watching a flea immolate itself in an acid bath under a microscope, empathized with the suffering flea, identified with it, and thereby felt deeply connected with the entire lifeworld (p. 36).

Once ontological boundaries between living beings are recognized as illusory, one realizes that biospherical interests are one's own. Devall and Sessions (1985) assert that "if we harm the rest of Nature then we are harming ourselves. There are no boundaries and everything is interrelated" (p. 68). In the words of the environmental activist John Seed, the statement "I am protecting the rain forest" develops into "'I am part of the rain forest protecting myself.' I am that part of the rain forest recently emerged into thinking. ... [T]he change is a spiritual one, thinking like a mountain, sometimes referred to as 'Deep Ecology'" (Devall & Sessions 1985:199). Because the rainforest is part of John Seed, he is inherently obliged to look after its welfare. The rainforest's well-being and needs are indistinguishable from Seed's.

Naess and Sessions have emphatically emphasized the phenomenological spirit of deep ecology and downplayed dicta; the psychological realization of metaphysical holism makes ethics superfluous. As Naess has said, "I'm not much interested in ethics or morals. I'm interested in how we experience the world." (Fox 1995:219). In Sessions words, "The search ... is not for environmental ethics but for ecological consciousness" (Fox 1995:225).

Critiques of Deep Ecology

The deep-ecological principles of biocentric egalitarianism and metaphysical holism have elicited robust critiques. Some of the most interesting debates have centered on the normative status of Deep Ecology. Naess maintains that Deep Ecology is essentially *descriptive*. For Naess, unmitigated empiricism or "ecophenomenology" (Brown & Toadvine 2003) promotes a direct experience of the qualities of nature—its "concrete contents" (Naess 1985). Deep Ecology, he argues, is simply an enumeration of general principles that command the assent of persons open to the direct apprehension of nature.

Scholars have found the disclaimer that Deep Ecology is not a normative system—and ought not be judged as such—disingenuous. They have treated Deep Ecology as the legitimate object of the analysis of moral philosophy. Some regard Deep Ecology as strident axiological egalitarianism that is useless in adjudicating conflicting interests. If all organisms are of equal value, then there is no basis upon which to make prescriptions because the kind of value distinctions necessary for evaluating the moral situations of environmental ethics are deliberately disqualified. The principle of biocentric egalitarianism, on this view, renders Deep Ecology impotent as an ethical theory. Environmental ethics is predicated on the possibility of a *nonegalitarian* axiology. In the words of the American philosopher Bryan Norton (1991), "The 120,000th elk cannot be treated equally with one of the last California condors—not, at least, on a reasonable *environmental* ethic" (p. 224). Baird Callicott (1980) has surmised that environmental ethics must manifestly not "accord equal moral worth to each and every member of the biotic community" (p. 327). These scholars argue, therefore, that biocentric egalitarianism must be scrapped (Sylvan 1985).

In a similar vein Fox (1984) has argued that the leveling axiology of orthodox Deep Ecology must be forsworn. If all organisms are really of equal intrinsic worth, the deep-ecological doctrinaire might just as well eat veal as vegetables. In reality, Fox predicted, deep ecologists probably tend to be vegetarians, because—in the words of Alan Watts—“cows scream louder than carrots” (p. 198). Orthodox Deep Ecology, Fox contends,

does itself a disservice by employing a definition of anthropocentrism which is so overly exclusive that it condemns more or less any theory of value that attempts to guide “realistic praxis.” Unless deep ecologists take up this challenge and employ a workable definition of anthropocentrism, they may well become known as the advocates of “Procrustean Ethics” as they attempt to fit all organisms to the same dimensions of intrinsic value. (pp. 198-99).

Not eager to be labeled a procrustean ethicist, Fox persuasively argues for a position that abandons biocentric egalitarianism and instead asserts that all biota *have* intrinsic value but are not *equal* in intrinsic value because the “richness of experience” differs (p. 198). On this point Fox aligns himself with the Whiteheadian-inspired environmental ethics based on intensity of sentience (Ferré 1994) that Sessions so adamantly opposes.

To mark the difference between his sophisticated reformulation of deep ecological thinking from orthodox Deep Ecology, Fox (1995) rechristened his theory *transpersonal ecology*. Fox (2006) has since moved beyond Deep Ecology and has developed a more integrated approach that encompasses interhuman ethics, the ethics of the natural environment, and the ethics of the human-constructed environment. In contrast, Sessions has reasserted the importance of deep ecology’s ecological realism as opposed to social constructivism (2006) as the philosophical foundation for a “new environmentalism of the twenty-first century” (1995).

Naess has steadfastly resisted any gradations or differentiations of intrinsic value among organisms in light of such criticisms. Responding to Fox, Naess (1984) wrote that *some* intrinsic values *may* differ, but not the kind he talks about. He and Fox, said Naess, “probably do not speak about the same intrinsic view” (p. 202). Naess has reiterated his intuition that “living beings

have a right, or an intrinsic or inherent value, or value in themselves, that is *the same for all of them*" (p. 202). As Naess conceded early on, brute biospherical reality entails some forms of killing, exploitation, and suppression of other living beings (Naess 1973); the aim is to do more good than harm, to respect on an equal basis the right of every life form to flourish (Naess 1984). Nevertheless, some philosophers have found such a guideline essentially vacuous, like vowing honesty until lying is warranted (Sylvan 1985a), thus undermining the very foundation of the principle itself. If any realistic practice deals with few situations where biota may be valued equally, then the principle is empty.

According to some critics, there are irresolvable structural tensions between biocentric egalitarianism and metaphysical holism in ecological value systems (Keller 1997). They argue that, in light of the real functions of living natural systems, it is impossible to even come close to affirming both the ability of all individuals to flourish to old age and the integrity and stability of ecosystems. The necessity of exterminating ungulates such as goats and pigs for the sake of the health of fragile tropical-island ecosystems is but one example. Regard for the health of whole ecosystems might, therefore, require treating individuals differently, because individuals of different species have unequal utility (or disutility) for wholes; if that were the case, then viewed from the standpoint of an entire ecosystem, biocentric egalitarianism and metaphysical holism might be mutually exclusive and inconsistent with each other to the extent that at least one would have to be abandoned—or perhaps both (Keller 1997).

Deep Ecology, Social Ecology, and Ecofeminism

Social Ecologists and ecofeminists have also formulated robust critiques of Deep Ecology. Social Ecologists, speaking as secular humanists of the European Enlightenment tradition, have excoriated biocentric egalitarianism as misanthropic. In particular Murray Bookchin (1988) criticized Deep Ecology for reducing humans from complex social beings to a simple species, a scourge that is "overpopulating" the planet and "devouring" its resources (p. 13). Bookchin argues that Deep Ecologists' ahistorical "zoologization" prevents them from seeing the real *cultural* causes of environmental problems (p. 18).

In the estimation of ecological feminists, the idea of self-realization is patriarchal. The Australian philosopher Val Plumwood (1993), for instance, argued that the notion of the expanded self results in "boundary problems" stemming from the impulse of subordination (p. 178). There are serious conflicts of interest between constituent members of larger wholes, and, she has argued, expansionary selfhood does not adequately recognize the reality of these conflicts. In the political arena, she contends, the expansionary holist is forced into the arrogant position of implying that anyone in disagreement does not in fact *understand* what is in her or his own best interest. Instead of approaching a situation of conflicting interests with a conciliatory attitude (e.g., "I realize your interests are different from my interests, so here we have a real conflict of interest that we need to resolve by compromise"), the expansionary holist approaches the situation, tacitly or overtly, self-righteously (e.g., "I know what your *real* interests are, and here we have a conflict because you don't seem to understand what your own interests are—whereas I do, fortunately for you."). Ecofeminists suspect that self-realization is a front for an imperialistic philosophy of self, springing from "the same motive to control which runs a continuous thread through the history of patriarchy" (Salleh 1984:344).

Consider the activist John Seed. According to the ecofeminist critique, there is nothing to guarantee that the needs of the rainforest should govern those of Seed: Why should Seed's needs not dictate the needs of the rainforest? (Plumwood 1993). Or why should the needs of unemployed loggers not trump the needs of Seed and the forest? Even while consenting to some of the insights of deep ecological questioning, for the unemployed logger the need to feed and cloth her or his children might easily outweigh any concern for ecosystemic integrity and stability.

Furthermore, some ecofeminists argue, affirming the ontological interconnectedness of all human and nonhuman organisms and the nonliving environment does not necessitate an embrace of the holism of self-realization. In an article that has become required reading for students of Deep Ecology, the Australian philosopher Richard Sylvan (1985b) notes that the premise that individuals are not absolutely discrete does not entail the conclusion that all relations are internal and that individuals are ontological chimeras: "Certainly, removing human apartheid and cutting back human supremacy are crucial in getting the deeper value theory going. But for this it is quite unnecessary to go

the full metaphysical distance to extreme holism, to the shocker that there are no separate things in the world, no wilderness to traverse or for Muir to save. A much less drastic holism suffices for these purposes" (p. 10).

Conclusion

Taken together, these various critiques have contributed to a significant consensus that Deep Ecology has reached its logical conclusion and has exhausted itself (Fox 1995). For example, in the respected textbook *Environmental Philosophy* (Zimmerman et al. 2005), the section on Deep Ecology, which enjoyed a coveted place in the first three editions, was eliminated in the fourth.

Compared to other prominent theories, Deep Ecology has not crystallized into a complete system. As Rothenberg states in the English revision of Naess's earlier *Økologi, samfunn, og livsstil*, deep ecological thinking is process without end (Naess 1989, Rothenberg 1996). For Rothenberg (1996), Deep Ecology is a set of prescient "hints" about the real relations of culture and nature.

Deep Ecology is less a finished product than a continuing, impassioned plea for the development of ecosophies that merge shared nonanthropocentric core principles. At the same time it is clear that Deep Ecology has earned a permanent and well-deserved place in the history of environmental philosophy; that this outlook has generated an abundance of academic articles and books in the field of environmental philosophy is ample testimony to its enduring influence and importance.