

Respect for Life: Can Zen Buddhism Help in Forming an Environmental Ethic?

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Environmental ethics stretches Western ethics to a breaking point. All ethics seeks an appropriate respect for life. This has required applying ethics to business, law, medicine, technology, international development, and nuclear disarmament—especially where science, pure and applied, has given us recent understanding and power, coupled with deeper sensitivities to human rights discovered by ethics and religion. But none of these asks whether there can be duties past humans. Respect for life demands an ethic concerned with human welfare, analogous to the others and now concerning the environment. But respect for life in environmental ethics goes further, to ask whether there can be nonhuman objects of duty. We need an ethic for the nature that mixes with culture, even an ethic for wild nature.

Western ethics, classically, has not thought that it needed values outside of human subjects, but environmental ethics must be more biologically objective, that is, nonanthropocentric. It challenges the separation of science and ethics, trying to reform both a science that has found nature value free and an ethics that assumes that only humans count morally. This has been conceptually difficult because Western science and ethics have agreed on a boundary between fact and value, between what *is* and what *ought* to be. That life exists is an indisputable biological fact—not only human life but five million other species on planet Earth. One ought to respect life. That is an indisputable ethical imperative. But how do we move from biology to ethics? How do we enjoin respect not only for human life but for the millions of other species? How do we distribute this respect to humans, animals, plants, species, ecosystems? When the West attempts to form an environmental ethic, we reach a breaking point.

Under that strain, an Eastern turn seems promising. Zen Buddhism has an enviable respect for life. It does not post boundaries between facts and values, between humans and the natural world. In the West, nature is devoid of intrinsic value but has its instrumental values increased by the powers of science and technology; nature is a mere resource to exploit. But Zen is not anthropocen-

tric, not prone to exploit. Rather Buddhism promises to chasten and contain human desires and thirsts, to fit humans to their sources, their surrounding world. Zen Buddhism knows how, we are told, to give an inclusive unity to all things without robbing each individual of its own special meaning in the universe. It knows how to integrate the science of life and the sanctity of life.

An ethics is nothing unless it can move from theory to practice. We in the West need these insights in a form that can be operational, deriving action from principle. We need an analysis that maps ethics onto biology across the whole spectrum of life, humans and nonhumans, animals, plants, species, ecosystems. Much in recent biology has been cellular and molecular, and that presents its challenges in forming a respect for organismic life—from the skin in. But much in recent biology has also been ecological and that presents its challenges forming a respect for ecosystemic life, from the skin out. The classical Western respect for human life does not extend easily into these domains. Perhaps Zen Buddhism can help, though, I suspect, this will stretch its own classical outlook.

What follows, accordingly, is a series of challenges to Zen Buddhism to help form an environmental ethic. Each challenge also concedes inadequacies in ethical principles in the West.

1. *Higher Animals*

Ethicists in the West made a first breakthrough past the traditional boundaries of interhuman ethics when confronting higher animals. The scientific, humanistic centuries since the Western Enlightenment (so-called) have not been sensitive ones for animals, owing to the Cartesian legacy. (Buddhists, who found Enlightenment two millennia earlier, may have misgivings about this Western Enlightenment.) Animals were now believed to be mindless, living matter; biology became mechanistic. Even psychology, rather than defending animal experience, has been behaviorist. Western philosophy has protested little, being concerned with locating values wholly in human experience while it dis-spirited and devalued nature. Across several centuries of hard science and humanist ethics little compassion has been felt for animals.

The progress of science itself first blurred the human-nonhuman boundary line. Animal anatomy, biochemistry, cognition, perception, experience, behavior, and evolutionary history are kin to our own. Ethical progress further smeared the boundary. Sensual pleasures are a good thing; ethics should be egalitarian, nonarbitrary, nondiscriminatory. There are ample scientific grounds for the claim that animals enjoy pleasures and suffer pains; and ethically, no grounds to value

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these experiences in humans but not in animals. So, both logically and psychologically, the West has been making a vigorous reassessment of human duties to sentient life. The world cheered in the fall of 1988 when humans rescued two whales from the winter ice.

"The question is not, Can they reason, nor Can they talk? but, Can they suffer?" said Jeremy Bentham, insisting that animal utility counts too. This gain is a vital breakthrough past humans, and the first lesson in environmental ethics has been learned. But the risk is a moral extension that yields a psychologically based ethic that counts only felt experience. We respect life in our nonhuman but near-human animal cousins, a semi-anthropocentric and still quite subjective ethics. There has, in fact, not been much theoretical breakthrough, no paradigm shift. The promised environmental ethics degenerates into an animal ethics or even a mammal ethics.

There is still anomaly and conceptual strain. When we try to use psychologically based ethics to protect the flora or even the insentient fauna, to protect endangered species or ecosystems, we can only stammer. Wild nature is prolific, but not very compassionate, and what does it mean to respect life at the same time that we value natural processes? A bison fell through the ice into a river in Yellowstone Park; the environmental ethics there, letting nature take its course, forbade would-be rescuers from either saving or mercy killing the suffering animal. When the bighorn sheep of Yellowstone caught pinkeye, were blinded, injured, and starving as a result, 300 bighorns perished, over half the herd. Wildlife veterinarians wanted to treat the disease, but the Yellowstone ethicists left them to suffer, seemingly not respecting their life. Had they no mercy? No respect for life?

A drowning human would have been saved at once, a child with pinkeye given medical treatment. A simple ethics by extension seems too nondiscriminating; we cannot separate an ethics for humans from an ethics for wildlife. To treat wild animals with compassion learned in culture does not appreciate their wildness. Man, said Socrates, is the political animal; humans maximally are what they are in culture, where the natural selection pressures (impressively productive in ecosystems) are relaxed without detriment to the species *Homo sapiens*, and indeed with great benefit to its member persons. Wild and even domestic animals cannot enter culture; they do not have that capacity. They cannot acquire language at sufficient levels to take part in culture; they cannot make their clothing, or build fires, much less read books or receive an education.

Culture does make a relevant ethical difference. Can animals talk? and, Can they reason?, indicating cultural capacities, are relevant questions, not just, Can

they suffer? Respect for life in its suffering is part of the analysis, but something about treating humans as equals with suffering bison or sheep seems to reduce humans to merely animal levels of value, a "no more" counterpart in ethics of the "nothing but" fallacy often met in science. Humans are "nothing but" naked apes. Something about treating bison and sheep as the equals of humans seems to elevate them unnaturally, rather than valuing them for what they are. There is something insufficiently discriminating in such judgments—species blind in a bad sense, blind to the real differences among species and to valuational differences that do count morally. To the contrary, a discriminating ethicist will insist on preserving the differing richness of valuational complexity, wherever found.

To minimize suffering, animal as well as human, is indeed imperative in culture where animals are removed from nature and bred, but it may be misguided where animals remain wild in ecosystems. This ethics has to consider how, while intrinsic pain is a bad thing whether in humans or in sheep, pain in ecosystems is instrumental pain, through which the sheep are naturally selected for a more satisfactory adaptive fit. Pain in a medically skilled culture is pointless, once the alarm to health is sounded, but pain operates functionally in bighorns in their niche, even after it becomes no longer in the interests of the pained individual. To have interfered in the interests of the blinded sheep would have weakened the species. It is hard to see, however, that the pains of the doomed bison were any longer functional, or that its mercy killing would have upset the ecosystem. Even the question, Can they suffer? is not as simple as Bentham thought. What we *ought* to do depends on what *is*. The *is* of nature differs significantly from the *is* of culture, even when similar suffering is present in both.

At this point we in the West struggle to form a coherent analysis. We have discovered that animals count morally, though not yet solved the challenge of how to count them. Can Zen Buddhism help? Suffering is the first noble truth in Buddhism; the cause of suffering in desires is the second. Compassion is its greatest virtue. The elimination of suffering is its ultimate promise. Buddhism has made a well-sifted analysis of the forces that drive suffering in nature and in culture. Can it now apply this to help the West distinguish between rescuing humans and letting nature take its course with suffering wildlife? Does the "Great Sympathy" recommend mercy killing the drowning bison? Treating the bighorn sheep with pinkeye? Feeding deer in a harsh winter? Does it distinguish between respect for life in culture and respect for wild life under the forces of natural selection?

We have discovered that animals enjoy psychological lives, subjective ex-

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periences, felt interests and satisfactions—all intrinsic values that count morally when humans encounter them. We have also discovered that the pains, pleasures, interests, and welfare of individual animals are only one of the considerations in a more complex environmental ethic that cannot be reached by simply counting or even eliminating suffering. We have to travel further into a more biologically based ethics.

2. *Organisms*

If we are to respect life—all of it—we have another boundary to cross, from zoology to botany, from sentient to nonsentient life. Here, although suffering, the first Buddhist truth, may no longer be a relevant category, the greatest Buddhist commandment, non-injury, *ahimsa*, may be. For life can be injured, undergo harm, even when it is not sentient. Plants cannot suffer, since they have no central nervous system, but they can be harmed. In the Rawah Wilderness in alpine Colorado, old signs read, "Please leave the flowers for others to enjoy." When they rotted out, the new signs urged a less humanist ethic: "Let the flowers live!" Zen Buddhists would have approved.

Alfred Lord Tennyson was moved by a flower in the crannied wall, hoping that if he could understand the little flower, he should know all in all, what God is and man is. His trouble in part, symptomatic of the West, was that he plucked it out, root and all, and held it in his hand. Unsurprisingly, the lifeless plant resisted his analysis. Basho, the Japanese poet, knew better, and got down on all fours to peer at the tiny nazuna:

When I look carefully
I see the nazuna blooming
By the hedge.

Basho let the flowers live! A bodhisattva vows not to enter nirvana until the last blade of grass is enlightened. That is perhaps hyperbole, but hyperbole that respects all life. Of course, Basho, like Tennyson, ate vegetables, as do we all. Zen Buddhism gives promise of caring for plants as well as animals. Can it help us form an ethic that cares for life in its flourishing, sentient or not?

First, we need to be able to say, in logically persuasive form, what it is about objective life that warrants admiring respect even when it sponsors no subjective life. Western ethics stammers to say. Trees and flowers cannot care, so why should humans? We are not considering animals that are close kin, or can suffer or experience anything. Plants are not valuers with preferences that can be satisfied or frustrated. It seems odd to claim that plants need our sympathy,

odd to ask that we should consider their point of view. They have no subjective life, only objective life. The questions seem wrong, because they are coming out of too narrow a paradigm, one that respects only psychological life. You see why I earlier worried about just extending a humanist ethic to mammal cousins.

We need an ethical creativity that can go past a humanist, hedonist logic to a "bio-logic." Pains, pleasures, psychological experience will no longer be useful categories, but we must orient ourselves by extending logical, propositional, cognitive, and normative categories into biology. Nothing matters to a tree, but much is vital. An organism is a spontaneous, self-maintaining system, sustaining and reproducing itself, executing its program, making a way through the world, checking against performance by means of responsive capacities with which to measure success. It can reckon with vicissitudes, opportunities, and adversities that the world presents. Something more than physical causes, even though less than sentience, is operating within every organism. There is *information* superintending the causes; without it, the organism would collapse into a sand heap. This information is a modern equivalent of what Aristotle called formal and final causes; it gives the organism a *telos*, "end," a kind of (nonfelt) goal. It is, I gather, what Buddhism has called *tanha*, drives that propel organic life in the world of dependent origination—only in environmental ethics we want to affirm, not extinguish, this *tanha* as the vital impulse of life.

We have learned in bioscience that life runs down to the molecular level. The DNA is essentially a linguistic molecule. By a serial "reading" of the DNA, a polypeptide chain is synthesized, such that its sequential structure determines the bioform into which it will fold. Ever-lengthening chains (like ever-longer sentences), are organized into genes (like paragraphs and chapters). Diverse proteins, lipids, carbohydrates, enzymes—all the life structures—are "written into" the genetic library. The DNA is thus a *logical set*, not less than a biological set, informed as well as formed. Organisms use a sort of symbolic logic, use these molecular shapes as symbols of life. The novel resourcefulness lies in the epistemic content conserved, developed, and thrown forward to make biological resources out of the physicochemical sources. This executive steering core is cybernetic—partly a special kind of cause and effect system, and partly something more: partly a historical information system discovering and evaluating ends so as to map and make a way through the world, partly a system of significances attached to operations, pursuits, resources. In this sense, the genome is a set of conservation molecules.

The genetic set is really a *propositional set*, recalling how the Latin *propositum* is an assertion, a set task, a theme, a plan, a proposal, a project, as well as a

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cognitive statement. It is also a motivational set, unlike human books, since these life motifs are set to drive the movement from genotypic potential to phenotypic expression. Given a chance, these molecules seek organic self-expression. They thus proclaim a life way; an organism, unlike an inert rock, claims the environment as source and sink, from which to abstract energy and materials, and into which to excrete them. It "takes advantage" of its environment. Life thus arises out of earthen sources (as do rocks), but life turns back on its sources to make resources out of them (unlike rocks). An acorn becomes an oak; the oak stands on its own.

So far we have only description. We begin to pass to value when we describe the genetic set as a *normative set*; it distinguishes between what is and what *ought to be*. This does not mean that the organism is a moral system, for there are no moral agents in nature, but that the organism is an axiological, evaluative system. So the oak grows, reproduces, repairs its wounds, and resists death. The physical state that the organism seeks, idealized in its programmatic form, is a valued state. *Value* is present in this achievement. *Vital* seems a better word for it than biological.

A life is defended for what it is in itself, without further contributory reference, although, given the structure of all ecosystems, such lives necessarily do have further contributory reference. The organism has something it is conserving, something for which it is standing: its life. Wild organisms have their own standards, fit into their niche though they must. They promote their own realization, at the same time that they track an environment. They have a technique, a know-how. Every organism has a *good-of-its-kind*; it defends its own kind as a *good kind*. We need an ethic affirming that each organismic individual, taken as a point experience in the web of interconnected life, is *per se* an intrinsic value. We need a biocentric ethic, not just an anthropocentric or psychocentric one.

It may not be enough simply to find, descriptively, that a biological identity is conserved. We cannot make the prescriptive injunction: Let it live! until we evaluate and endorse each natural kind. We need to know that what is organismically defended as a good kind is indeed philosophically a good kind. We need to know whether there are any bad kinds. It certainly seems to many, for instance, that even if disease microbes, nonsentient living organisms, have a good of their kind, that nevertheless they are not good kinds. The *Chlamydia* microbe, which causes pinkeye, flourished under the Yellowstone ethic that let nature take its course, destroying the bighorns. To some that seemed respect for life gone awry, since bighorns are a good kind, whose sufferings count moral-

ly, while *Chlamydia* microbes are bad kinds, nor do they suffer when killed. How do we move, with discretion and without sentience, from wild life to the value of life?

Can Zen Buddhism help? It finds that plants no more no less than humans are transient expressions of the Buddha-reality, that they are to be enjoyed immediately in all their variety and profusion. Accepting all aspects of the Buddha-reality, we look with glad-hearted openness at all natural kinds directly and with childlike candor. That is a noble vision, but can we make it operational? There is, I suppose, Buddha nature in the *Chlamydia* microbes and equally so in the bighorns. There is Buddha nature in the wildflowers, but does it vanish when they are picked? We in the West cannot go to the level of the Buddha nature, short of conversion to Buddhism, although there may be some naturalistic analogue to which we can appeal. Still, a Buddha-centric ethic will not be available for export; better if the ethic can be biocentric.

Probably even Buddhists do not wish to value wildflowers, bighorns, and microbes, just because they can abstract Buddha essence from them; they want to value them in their autonomy, as natural kinds with biological identity, in their dynamic own-being, even though Buddhists may know that ultimately this is evanescent. An American philosopher attending a meeting of Japanese research biologists some years back was impressed when the biologists began with a silent minute of appreciative respect for the frogs that had been sacrificed in their research. That would not have occurred at such a meeting in the West, and he reports that he found the moment of silence quaint at the time, but has since come to believe that Japanese biology has a respect for life unknown in the West.

Has Buddhism a logic of biology derived from Buddhist experience of life that values the phenomena as well as the underlying noumena? Is there a *tanha*, somatic self-assertion, that Zen Buddhists value and affirm so as to defend the intrinsic value of wild life without experience, and to place such life on the full field of environmental values? Do Buddhists think that a lotus flower has value intrinsically?

Secondly, we need to distribute our care. In Yosemite National Park for almost a century humans entertained themselves by driving through a tunnel cut in a giant sequoia. Two decades ago the Wawona tree, weakened by the cut, blew down in a storm. Some Americans said: "Cut us another drive-through sequoia." The Yosemite environmental ethicists said: "No! You ought not to mutilate majestic sequoias for amusement. Respect their life!" At the same time, U.S. national forest policy regularly cuts redwood trees for roof shingles, since shelter is a serious affair. How then do we grade respect for life, so that we forbid drive-

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through sequoias but still cut timber to put a roof over our heads? We let the wildflowers live, but eat our vegetables.

The redwood cutting policy is contested by some, myself included, who maintain that cathedral groves of redwoods ought not be cut at all. Others, not myself, feel this so intensely that they spike redwood trees to prevent their harvest. For them respect for the lives of redwood trees, at least in the case of the surviving virgin forests, overrides all human needs and even warrants some risk of injury to humans. For, should these groves be sawed, the spikes will shatter the teeth of the giant sawblades and put mill operators at risk. Just how radical ought an environmental ethic to be?

Wildflowers live; wildflowers ought to live. Sequoias live; let them be—unmutilated. Afraid of the naturalistic fallacy, the best that most Western ethicists can say is that people should enjoy letting flowers live or that it is silly to cut drive-through sequoias and aesthetically more excellent for humans to appreciate them for what they are. Most will deplore environmental radicals who insist that redwoods live even at threat to human life. They argue with humanistic reasons that really do not take into account what biological conservation is in the deepest sense. They respect only human life. Zen seems to have a much more comprehensive ethic—if we can translate that for application in the West.

3. Species

A comprehensive ethic has further biological levels to explore. Next is that of species. Respect for life means respect for species, for the wild forms of life. A species exists; a species ought to exist. We must move from biology to ethics with care. This demands an unprecedented mix of biology and ethics, moving past organic lives to a concern for species.

On San Clemente Island, the U.S. Fish and Wildlife Service and the California Department of Fish and Game planned to shoot two thousand feral goats to save three endangered plant species, of which the surviving individuals numbered only a few dozens. After a protest, some goats were trapped and relocated. But trapping all was impossible and many hundreds were killed. We count plant species more than mammal lives, a few plants more than a thousand goats.

Those who wish to return rare species of big cats to the wilds have asked about killing genetically inbred cats, presently held in zoos, in order to make space available for the cats needed to reconstruct and maintain a population genetically more likely to survive upon release. All the Siberian tigers in zoos in North

America are descendants of seven animals; if these were replaced by others nearer to the wild type and with more genetic variability, the species could be saved in the wild. When we move to the level of species, we may kill individuals for their good of their kind.

Or we may now refuse to let nature take its course. The Yellowstone ethicists let the bison drown, callous to its suffering; they let the blinded bighorns die. But in the spring of 1984 a sow grizzly and her three cubs walked across the ice of Yellowstone Lake to Frank Island, two miles from shore. They stayed several days to feast on two elk carcasses, when the ice bridge melted. Soon afterward, they were starving on an island too small to support them. This time the Yellowstone ethicists promptly rescued the grizzlies and released them on the mainland, in order to protect an endangered species. They were not rescuing individual bears so much as saving the species.

Coloradans are considering whether to build the Two Forks Dam to supply urban Denver with water. This would require destroying a canyon and altering the Platte River flow, with many negative environmental consequences, including further endangering the whooping crane and endangering a butterfly, the Pawnee montane skipper. Elsewhere in the state, water development threatens several fish species, including the humpback chub, which requires the turbulent spring runoff stopped by dams. Does the good of humans who wish more water for development, both for industry and for bluegrass lawns, override the presumption that one ought not to imperil endangered cranes, butterflies, fish?

A consideration of species is challenging because it offers a biologically based counterexample to the focus on individuals—typically sentient and usually persons—so characteristic in classical Western ethics. In an evolutionary ecosystem, it is not mere individuality that counts; but the species is also significant because it is a dynamic life form maintained over time. The individual represents (re-presents) a species in each new generation. It is a token of a type, and the type is more important than the token. That seems right, but Western ethics stammers to say why.

An ethic for species has two parts: first, that species exist; secondly, that species ought to exist. Species exist only as instantiated in individuals yet are as real as individual plants or animals. The claim that there are specific forms of life historically maintained in their environments over time seems as certain as anything else we believe about the empirical world. At times biologists revise the theories and taxa with which they map these forms, but species are not so much like lines of latitude and longitude as like mountains and rivers, phenomena objectively there to be mapped. The edges of these natural kinds will sometimes

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be fuzzy, to some extent discretionary. One species will slide into another over evolutionary time. But it does not follow from the fact that speciation is sometimes in progress that species are merely made up, not found as evolutionary lines with identity in time as well as space.

A species lacks moral agency, reflective self-awareness, sentience, or organic individuality. In an individual organism, the organs report to a center; the good of a whole is defended. The members of a species report to no center. A species has no self. It is not a bounded singular. There is no analogue to the nervous hookups or circulatory flows that characterize the organism. Therefore, say most conservative Western ethicists, specific-level processes cannot count morally. Duties must attach to singular lives, most evidently those with a self, or some analogue to this.

But having a biological identity reasserted genetically over time is as true of the species as of the individual. Identity need not attach to the centered organism; it can persist as a discrete, vital pattern over time. Thinking this way, the life that the individual has is something passing through the individual as much as something it intrinsically possesses. The individual is subordinate to the species, not the other way around. The genetic set, in which is coded the *telos*, the *tanha*, is as evidently the property of the species as of the individual through which it passes. A consideration of species strains any ethic fixed on individual organisms, much less on sentience or persons.

The species line is the more fundamental living system, the whole, of which individual organisms are the essential parts. Processes of value found first in an organic individual reappear at the specific level: defending a particular form of life, pursuing a pathway through the world, resisting death (extinction), regeneration maintaining a normative identity over time. It is as logical to say that the individual is the species' way of propagating itself as to say that the embryo or egg is the individual's way of propagating itself. If, at the specific level, these processes are just as evident, or even more so, what prevents duties arising at that level? The appropriate survival unit is the appropriate level of moral concern.

The dignity resides in the dynamic form; the individual inherits this, exemplifies it, and passes in on. The species too has its integrity, its individuality; and it is more important to protect this than to protect individual integrity. Hence the rescue of the sow grizzly and her cubs, the killing of genetically inferior cats for the good of the species, the killing of goats to protect plant species. Coloradans would not hesitate to kill fish, butterflies, or cranes for water development, but they do hesitate whether this development justifies the extinction of

fish, butterfly, and crane species.

A shutdown of the life stream is the most destructive event possible. The wrong that humans are doing, or allowing to happen through carelessness, is stopping the historical vitality of life, the flow of natural kinds. Every extinction is an incremental decay in this stopping life, no small thing. Every extinction is a kind of superkilling. It kills forms (*species*), beyond individuals. It kills "essences" beyond "existences," the "soul" as well as the "body." It kills collectively, not just distributively. "Ought species *x* to exist?" is a distributive increment in the collective question, "Ought life on Earth to exist?" Life on Earth cannot exist without its individuals, but a lost individual is always reproducible, a lost species is never reproducible. The answer to the species question is not always the same as the answer to the collective question, but, since life on Earth is an aggregate of many species, the two are sufficiently related that the burden of proof lies with those who wish deliberately to extinguish a species and simultaneously to care for life on Earth.

One form of life has never endangered so many others. Never before has this level of moral question—superkilling by a superkiller—been deliberately faced. Humans have more understanding than ever of the natural world they inhabit, and of the speciating processes, more predictive power to foresee the intended and unintended results of their actions, and more power to reverse the undesirable consequences. The duties that such power and vision generate no longer attach simply to individuals or persons but are emerging duties to specific forms of life. If, in this world of uncertain moral convictions, it makes any sense to claim that one ought not to kill individuals without justification, it makes more sense to claim that one ought not to superkill the species without superjustification. Several billion years worth of creative toil, several million species of teeming life, have been handed over to the care of this late-coming species in which mind has flowered and morals have emerged. Ought not this sole moral species do something less self-interested than count all the produce of an evolutionary ecosystem as nothing but human resources? Such an attitude hardly seems biologically informed, much less ethically adequate. It is too provincial for intelligent humanity.

There is something overspecialized about an ethic, held by the dominant class of *Homo sapiens*, that regards the welfare of only one of several million species as an object and beneficiary of duty. There is something morally naive about living in a reference frame where one species takes itself as absolute and values everything else relative to its utility. If true to their specific epithet, ought not *Homo sapiens* value this host of species as something with a claim to care in

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its own right? Life on Earth is a many splendored thing; extinction dims its lustre. A reverence for life seems called for.

Such are the emerging convictions in a Western environmental ethic, but we cannot reach them without radically altering our classical patterns of thought. Can Zen Buddhists help? Zen seems to have known all along that singularity, centeredness, selfhood, individuality, are not the only processes to which duty attaches, and to have had a generalized sense of life's enlargement. Although the root of *nirvana* suggests extinction on the noumenal level, at least on the phenomenal level Zen seems to value identity through time at the same time that it accepts dynamism and change. It enjoys the splendor of life. But why is the species more important than the individual, the type more than the token? Because there is a Buddha essence underlying a transient instance of its existence? Has Zen Buddhism a logic of species by which it can keep species differentiated despite their common Buddha essence? From this can it derive duties to species, regardless of pragmatic human attachments and utilities?

Buddhism has co-existed with the wild life of South and East Asia for thousands of years. Many of these animals and plants are now endangered. Can Zen Buddhism out of its experience help the West to decide whether to shoot feral goats to protect endangered plants, to kill genetically inbred cats and replace them with better cats more likely to survive in the wild? Would it let the bison drown and yet rescue the stranded grizzly sow and her cubs? Would it find superior value in human development, one that overrides the good of cranes, butterflies, and fish? Or does it find that humans ought to yield their development where this threatens species?

4. *Ecosystems*

A species is what it is where it is. An environmental ethics must form a land ethic, appropriate respect for the biotic communities in which all destinies are entwined. Our concern must be for ecosystems as the fundamental unit of survival. "A thing is right," said Aldo Leopold, "when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise."¹ Such an ethic has proved difficult conceptually and troublesome operationally. Again, we have two parts to the ethic: first, that ecosystems exist; secondly, that ecosystems ought to exist; and we need a logic by which to move from the biological claim to the ethical claim. Perhaps there are resources within Zen Buddhism to help. The famous metaphor of Indra's net, with its central candle and sparkling gems all round, each reflecting the other, suggests

interpenetrating beauty in a world network. Can this supply an ecosystem model?

Giant forest fires raged over Yellowstone National park last summer, consuming nearly a million acres, despite the efforts of a thousand firefighters. By far the largest fires ever known in the park, the fires seemed a disaster. But the Yellowstone land ethic enjoins: Let nature take its course. Let it burn! So the fires were not fought at first, but in midsummer national authorities overrode that policy and ordered the fires put out. Even then, weeks later, fires continued to burn, partly because they were too big to control, but partly too because Yellowstone personnel did not really want the fires put out. Despite the evident destruction of trees, shrubs, wildlife, they believe that fires are a good thing. Fires reset succession, release nutrients, recycle materials, renew the biotic community.

An important tree in the Yellowstone ecosystem is the aspen. While some aspen stands are climax and self-renewing, many are seral and give way to conifers. Aspen groves support many birds and much wildlife, especially the beavers, whose activities maintain the riparian zones. Aspen are rejuvenated after fires, and the Yellowstone land ethic wants the aspen for its critical role in the biotic community. Elk browse the young aspen stems. To a degree this is a good thing, since it gives elk critical nitrogen, but in excess it is a bad thing. The elk have no predators since the wolves are gone, and as a result they overpopulate. Excess elk also destroy the willows and this in turn destroys the beavers. So, in addition to letting fires burn, rejuvenating the aspen might require managers to cull hundreds of elk—all for the sake of a healthy ecosystem.

The Yellowstone ethic wishes to restore wolves to the greater Yellowstone ecosystem. At the level of species, this is partly for what the wolf is in itself, but it is partly because the greater Yellowstone ecosystem does not have its full integrity, stability, and beauty without this majestic animal at the top of the trophic pyramid, a sparkling gem, as it were, at the top of Indra's net. Restoring the wolf as a top predator would mean suffering and death for many elk, but that would be a good thing for the aspen and willows, for the beavers and riparian habitat, with mixed benefits for the bighorns and mule deer, whose food the overpopulating elk consume, but who would also be consumed by the wolves. Restoration of wolves would have to be done over the protests of ranchers who worry about wolves eating their cattle; many also believe that the wolf is a blood-thirsty killer, a bad kind—not a sparkling gem at all. Nevertheless, the Yellowstone ethic demands wolves, as it does fires, in appropriate respect for life in its ecosystem.

Letting nature take its ecosystemic course is why the Yellowstone ethic for-

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bade rescuing the drowning bison, but rescued the sow grizzly with her cubs, the latter to insure that the big predators remain. After the bison drowned, coyotes and magpies, foxes and ravens fed on the carcass. Later, even a grizzly bear fed on it. All this is a good thing because the system cycles on, and the great bear, like the wolves, is a sparkling gem in the network. On that account rescuing the whales trapped in the winter ice seems less of a good thing, when we note that rescuers had to drive away polar bears that attempted to eat the dying whales.

Classical, humanistic ethics finds ecosystems unfamiliar territory. It is difficult to get the biology right, and, superimposed on the biology, to get the ethics right. A forest can seem a loose collection of externally related parts, the collection of fauna and flora a jumble, hardly a community. The plants and animals within an ecosystem have needs, but their interplay can seem simply a matter of distribution and abundance, birth rates and death rates, population densities, parasitism and predation, dispersion, checks and balances, stochastic process. There is not really enough integrated process to call the whole a community.

An ecosystem such as Yellowstone, the conservative ethicist will say, is too low a level of organization to be respected intrinsically. Unlike higher animals, ecosystems have no experiences; they do not and cannot care. Unlike plants, an ecosystem has no organized center, no genome. It does not defend itself against injury or death. Unlike a species, there is no ongoing *telos*, no biological identity reinstated over time. The organismic parts are more complex than the community whole. More troublesome still, an ecosystem can seem a jungle where the fittest survive, a place of contest and conflict, beside which the organism is a model of cooperation. In animals, the heart, liver, muscles and brain are tightly integrated, as are the leaves, cambium, and roots in plants. But the ecosystem community so-called is pushing and shoving between rivals, each aggrandizing itself, or else all indifference and haphazard juxtaposition, nothing to call forth our admiration. The model of Indra's net no longer seems to fit.

The challenge is to find a clear model of community and to discover an ethics for it—better biology for better ethics. The community connections are looser than the organism's internal interconnections, but not less significant. Admiring organic unity in organisms and stumbling over environmental looseness is like valuing mountains and despising valleys. The matrix the organism requires in order to survive is the open, pluralistic ecology. Internal complexity—heart, liver, muscles, brain—arises as a way of dealing with a complex, tricky environment. The skin-out processes are not just the support; they are the subtle source of the skin-in processes. In the complete picture, the outside is as vital as the

inside. Had there been either simplicity or lock-step concentrated unity in the environment, no organismic unity could have evolved. Nor would it remain. There would be less elegance in life.

To look at one level for what is appropriate at another makes a category mistake. One should not look for a single center or program in ecosystems, much less for subjective experiences. Instead, one should look for a matrix, for interconnections between centers (individual plants and animals, dynamic lines of speciation), for creative stimulus and open-ended potential. Everything will be connected to many other things, sometimes by obligate associations, more often by partial and pliable dependencies; and, among other things, there will be no significant interactions. There will be functions in a communal sense: shunts and criss-crossing pathways, cybernetic subsystems and feedback loops. An order arises spontaneously and systematically when many self-concerned units jostle and seek their own programs, each doing their own thing and forced into informed interaction. Is this compatible with Indra's net?

The system is a prolife process. Unlike moral agents, it is incapable of consciously respecting life, and yet the system does, in its own way, respect life, indifferent though it may sometimes seem. Though there is no *Nature* in the singular, the system has a nature, a loading that pluralizes, putting *natures* into diverse kinds, nature₁, nature₂, nature₃, ... nature_n. It does so using random elements (in both organisms and communities), but this is a secret of its fertility, producing steadily intensified interdependencies and options. An ecosystem has no head, but it has a "heading" for species diversification, support, and richness. Through not a superorganism, it is a kind of vital field.

Ethical humanists will say that ecosystems are of value only because they contribute to human experiences. But that mistakes the last chapter for the whole story, one fruit for the whole plant, one gem for the whole net. Humans count enough to have the right to flourish there, but not so much that they have the right to degrade or shut down ecosystems, not at least without a burden of proof that there is an overriding cultural gain. Those who have traveled part way into environmental ethics will say that ecosystems are of value because they contribute to animal experiences or to organismic life. But the radical view sees that the stability, integrity, and beauty of biotic communities is what is most fundamentally to be conserved. That, however, is difficult ground for Western ethics to reach.

Zen Buddhism has promise because it seems to know communities. In front of Eiheiji, Dogen's mountain temple, there stands the Half-Dipper Bridge, so named because the Zen sage was accustomed to drink there; but he would take

only half a dipperful and pour the rest back into the river, rejoicing in its onward flow. Zen seems to know wholeness and to decry reduction. Zen rejoices in multiplicity in unity and unity in multiplicity, ten thousand things with a single root. The spinning world is complementary opposites, interpenetrating yang and yin, life and death, the one seeded in the other, processes in flow, seasonal return. It seems to enjoy letting nature take its course. But what is the relation between the gems and the network? Does Zen have a model, a metaphysics, that is compatible with scientific ecology, perhaps one that can even provide inspiration for a land ethic? Are there duties to ecosystems, not only in addition to but even overriding duties to species and individuals?

Can Zen help the West to form an operational ecological ethic? Does it let forest fires burn? Has it a rationale for killing elk to regenerate aspen for community integrity and stability? Does it want wolves in its ecosystems, even though they live by killing, and though ranchers oppose them? Does Zen leave bison to drown, bighorns to their parasites, and oppose the rescue of whales caught in winter ice, in the name of the integrity, stability, and beauty of the ecosystem?

It would be unreasonable, of course, to expect the informing vision to provide every practical decision; the philosophical and religious world view provides only orientation, specific directions of travel have to be figured out on site after learning biological details. A metaphysics is not a blueprint for action, but neither should it be too vague to translate into action in a meaningful way. It ought to function as a diagnostic symbol to suggest an ethic of respect for life, discriminating between the higher animals, organisms, species, and ecosystems, to suggest how humans should weight these levels, how humans should count their own goods in encounter with the natural world.

5. Value Theory

In practice the ultimate challenge of environmental ethics is the conservation of life on Earth. In principle the ultimate challenge is a value theory profound enough to support that ethic. In wild nature there is negentropic construction in dialectic with entropic teardown, a process for which we hardly yet have an adequate scientific, much less a valuational theory. Perhaps this is yang complementing yin. The historical result, the evolution and ecology of living landscapes, is nature's most striking feature, one that ultimately must be valued and of value. In one sense nature is indifferent to mountains, rivers, fauna, flora, forests and grasslands. In another sense nature has bent toward making and remaking these millions of kinds for several billion years.

The trouble in the West is that evolutionary biology does not supply any programmatic evolution toward value. Darwin finds only natural selection for survival of the best adapted without advancement; the course of nature is a random walk. Whatever the past, ecology does find biotic community, though often it is uncertain how to model it. Modern philosophy finds nature to be valueless except instrumentally as it satisfies human preferences. For an adequate environmental ethic we need an account by which natural selection explores new niches and elaborates kinds, even selects upslope toward higher values, at least along some trends within some ecosystems.

Nature is a value carrier. We value a thing to discover that we are under the sway of its *valence*, inducing our behavior. It has among its "strengths" (Latin: *valeo*, be strong) this capacity to carry value. Some of the values that nature carries are up to us, our assignment. But fundamentally there are powers in nature that move to us and through us. We need a principle in nature charging up values.

There is no value without an evaluator. So runs a well-entrenched dogma in the West. Humans clearly evaluate their world; sentient animals may also. But plants cannot evaluate their environment; they have no options and make no choices. *A fortiori*, species and ecosystems, Earth and Nature cannot be bona fide evaluators. Western ethicists hang on to the claim that value, like a tickle or remorse, must be felt to be there. Its *esse* is *percipi*. Nonsensical value is nonsense. Such ethicists are often resolute subjectivists who cling closely to inner experience.

But the valuing subject in an otherwise valueless world is an insufficient premise for an environmental ethic. Science has been steadily showing how the consequents (life, mind) are built on their precedents (energy, matter), however much they overleap them. Life and mind appear where they did not before exist, and with this, levels of value emerge that did not before exist. This gives no reason to say that all value is an irreducible emergent at the human (or upper animal) level. We should reallocate value across the whole continuum. Value increases in the emergent climax, but is continuously present in the composing precedents. The system is value-able, able to produce value. We evaluators are among its products.

Some values depend on subjectivity, yet all value is generated within the geosystemic and ecosystemic pyramid. Systemically, value fades from subjective to objective value, but also fans out from the individual to its role and matrix. Things do not have their separate natures merely in and for themselves, but they face outward and co-fit into broader natures. Value-in-itself is smeared out to become value-in-togetherness. Value seeps out into the system, and we lose our

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capacity to identify the individual as the sole locus of value.

Intrinsic value, that of an individual "for what it is in itself," becomes problematic in a holistic web. True, the system produces such values more and more with its evolution of individuality and freedom. Yet to decouple this from the biotic, communal system is to make value too internal and elementary; this forgets relatedness and externality. Every intrinsic value has leading and trailing *ands* pointing to value from which it comes and toward which it moves. Adapted fitness makes individualistic value too system-independent. Intrinsic value is a part in a whole, not to be fragmented by valuing it in isolation.

Everything is good in a role, in a whole, although we can speak of objective intrinsic goodness wherever a point event, for example, a wildflower, defends a good (its life) in itself. We can speak of subjective intrinsic goodness when such an event registers as a point experience, at which point humans pronounce both their experience and what it is of good without need to enlarge their focus. Neither the wildflower nor the human judges of it require for their respective valuing any further contributory reference.

When eaten by foragers or in death resorbed into humus, the wildflower has its intrinsic value destroyed, transformed into instrumentality. The system is a value transformer where form and being, process and reality, fact and value are inseparably joined. Intrinsic and instrumental values shuttle back and forth, parts-in-wholes and wholes-in-parts, local details of value embedded in global structures, gems in their settings, and their setting-situation a corporation where value cannot stand alone. Every good is in community. As we progress from descriptions of fauna and flora, of cycles and pyramids, of autotrophs coordinated with heterotrophs, of stability and dynamism, on to intricacy, planetary opulence and interdependence, to unity and harmony with oppositions in counterpoint and synthesis, to organisms evolved within and satisfactorily fitting their communities, arriving at length at beauty and goodness, it is difficult to say where the natural facts leave off and where the natural values appear. The sharp *is/ought* dichotomy is gone; the values seem to be there as soon as the facts are fully in, and both alike properties of the system.

How does Zen solve the problem of value in nature and the evaluating mind? Keiji Nishitani claims that ultimately there is only "the field of emptiness" and insists, "Unless man's thinking and doing take place on that field, the various problems that beset humanity can never really be solved." In the Zen phrase, when we are enlightened, "An 'inexhaustible store' emerges whence 'there is not a single thing.'"² Does an environmental ethic have to be solved on the field of emptiness, or not at all? Does it require a metaphysics of emptiness? The

older series of Zen oxherding pictures concluded with the open, empty *sunyata* circle, but the later series conclude with a return to life in the natural world. Can Zen help us in the West to return to the natural, to find our human place under the sun?

For Zen Buddhism, nature is mind-permeable, and that promises well for an environmental ethic. But some Buddhists sometimes claim that the natural world is mind-only. In a text that D. T. Suzuki finds central for Zen thought, Ashvaghosa says, "All phenomena in the world are nothing but the illusory manifestation of the mind and have no reality of their own." In Enlightenment, "the particularization of the surrounding world is annihilated."³ If so, how is an environmental ethics possible?

More positively put, phenomena manifest Buddha essence, when we get to the bottom of things. Even if this is so, before we go deep to the noumena, the West would like, while yet with the phenomena, a theory of objective natural value, value that exists independently of human minds. Does Zen know value without evaluators, in a form that can help us model objective value? Is Zen Buddhism, with its existential focus, capable of an objective thinking that locates value in animals, in plants, in species, in ecosystems?

"However innumerable are the creatures and things peculiar to this world, I vow to save one and all. However immeasurable the guiding Dharma-laws that steer the entire universe from within, I vow to comprehend each and all in myself." That classical Zen Buddhist vow cannot be kept in this modern world without an environmental ethic. A vital philosophical task is the discovery of a whole great ethic that values everything for what it is where it is. A challenge to Zen is to use its insights to help form an environmental ethic—East and West.

¹ Aldo Leopold, *A Sand County Almanac* (New York: Oxford University Press, 1949, 1969), pp. 224-25.

² Keiji Nishitani, "Emptiness and History," *The Eastern Buddhist* 13(1980): 9-30, citations on p.30, p. 11.

³ Ashvaghosa, *Ashvaghosa's Discourse on the Awakening of Faith in the Mahayana*, trans. Teitaro (D. T.) Suzuki (Chicago: Open Court, 1900), pp. 86-87. "Mind" is Suzuki's translation of *alaya-vijnana*, the individual "clinging mind." "On account of non-enlightenment there originates a subjective mind (i.e. *alaya-vijnana*) that becomes conscious of an external world. This we call ignorance (*avidya*)." (p. 97, parentheses and italics in the original.) Ashvaghosa is ca. 100 A. D.; by the time of the Yogacara school (Asanga and Vasubandhu), "mind," *alaya-vijnana*, is also used for the cosmic "receptacle consciousness."