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with Susan Lloyd McGarry

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15. Tu, *Neo-Confucian Thought in Action*, 4–5.
16. Wang Yangming, *Instructions for Practical Living and Other Neo-Confucian Writings*, trans. Wing-tsit Chan (New York: Columbia University Press, 1963), quotations from 278, 210, 216 respectively, hereafer page numbers are cited in the text.
17. Tu, *Confucian Thought*, 32.
18. Wang Yangming, "Sitting at Night at Pi-Hsia Pond," transl. Julia Ching in Ching, *To Acquire Wisdom*, 237. Poem reprinted by permission of John Ching.

Interiority Regained: Integral Ecology and Environmental Ethics

Michael E. Zimmerman

Having wrapped themselves for decades in the mantle of the natural sciences in order to gain credibility, some environmentalists concede that this strategy involves a serious problem. While valuing the natural world highly and calling on others to join them in protecting it, environmentalists typically subscribe to a naturalistic materialism that either excludes values altogether, or else regards them socio-biologically as an adaptive strategy useful for enhancing the survival chances for a certain species. For such naturalism, all phenomena are assumed to have only *exterior* aspects that can be analyzed wholly in third-person terms, that is, as "its." In a world comprised of *its*, there is no place for you, me, and us, that is, for the first- and second-person *interior* domains that comprise aesthetic experience, morality, consciousness, subjectivity, freedom, values, intersubjectivity, and culture, *considered in their own terms*. Naturalism maintains that for something to be, means for it to be a phenomenon analyzable without remainder either into its externally observable parts and behaviors, or else into its functions within an externally observable system. From the perspective according to which there are only *its*, including human *its*, all talk of interiority is naïve, retrograde, and misguided.

Many environmentalists conclude that contemporary environmental problems often arise from anthropocentrism, according to which human rationality, consciousness, subjectivity, soul, or moral capacity justify

dominating nonhuman beings. For such environmentalists, naturalism has worked against anthropocentrism not only by denying that humans are the culmination of evolutionary purpose, because there is no such purpose, but also by eliminating the entire domain of interiority with which spirituality, subjectivity, consciousness, values, and culture are associated. By pulling the rug out from under human arrogance, environmentalists hope to save natural habitat from destruction. Ending cosmic hierarchy displaces humankind from its throne atop the tree of life, for there is no such tree. Instead, life is a bush with many branches, no one of which is higher or more central than any other.

In support of what some deep ecologists called radical biocentric egalitarianism, other anti-hierarchical environmentalists adopt the language of systems theory, according to which all phenomena are merely functional strands in the great cosmic web. In this web, humans have no special standing *vis-à-vis* plants, animals, and even physical habitat. Instead, humans are merely one animal species among others striving to enhance their reproductive advantage over competitors. Read in socio-biological terms, concepts such as rights and values are merely useful fictions that bestow a measure of justification to nature-domineering practices aimed at enhancing the power of humankind over other life forms. In view of all this and more—much more—environmental ethics not only seems impossible, but worse still: it is an embarrassment to the scientifically sophisticated.

Neither biologist nor naturalistic environmentalist would offer a *moral* critique of *non*human species that maximize their reproduction. Population crash and even extinction may result if a species were to overshoot the carrying capacity of its habitat, but there would be no moral failing involved.[1] For the human animal, too, only a *prudential* "ought" can be recommended: We ought to alter our behavior toward the nonhuman domains to promote long-term human survival. Yet, many environmentalists insist that a *moral* "ought" also applies here: We ought to limit our behavior, including our reproductive drive, so that *other* life forms can survive and prosper. The (often tacit) presupposition that only humans are morally responsible for their behavior conflicts with naturalism, which has difficulty accounting for morality, values, and "oughts" *in their own terms*, along with other contents of *interior* domains to which access cannot be gained by the third-person methods of the natural and social sciences.

Integral Ecology: Theoretical Considerations[2]

For those unsatisfied with the paradoxical situation in which environmental ethics is undermined by the naturalism favored by many environmentalists, there are some alternatives. One is the deservedly influential work of the philosopher, Holmes Rolston III, who argues that human beings have a capacity for discerning extra-human moral and aesthetic value, just as they have the capacity for discerning galaxies or amino acid compounds. Another alternative, which I explore in this essay, is Ken Wilber's integral theory, according to which the cosmos is an infinite set of nested wholes, the constituents of which can be described only in terms of multiple perspectives, including those involving the third person (the natural and social sciences), the second person (the humanities), and the first person (phenomenology and fine arts). Wilber insists that however successful the methods of the natural and the social sciences may be, those particular methods pertain only to third-person phenomena, that is, to objects. Without interiority, objects lack the capacity—however meager it may be—to constitute a perspective of their own in which to register or to take account of other things. By restoring an *appropriate* position for interiority in the cosmos, we can solve two related problems.

The first is the widespread modern sense that self-aware humankind is an accident in a meaningless material universe within which there is no place for awareness of any sort. Alienated from body, emotions, nature, and even consciousness, the abstract modern human ego sets out to know and control the material world that seems simultaneously very real and yet completely other. The second problem is the widespread eco-romantic conviction that only by renouncing mind, consciousness, rationality, and other allegedly alienating features of human consciousness, and only by reabsorbing themselves within the patterns of nature, that is, only by scraping off the sorry accretions imposed by 10,000 years of civilization, can human beings regain their lost unity with Mother Nature. Despite important differences, both the modern abstract ego and the eco-romantic self share something in common: an industrial or flatland ontology, according to which the only things that exist are the surfaces or exteriors of things as they appear in terms of third-person perspectives.

Wilber, however, maintains that *interiority* is a basic feature of reality, every bit as real in its own way as mass, energy, space, or time. Moreover, interiority is not restricted to humans or even to animals; instead, interiority goes *all the way down*. According to those who work in the field of bio-semiotics, signaling is a universal feature of life and perhaps of nonlife as well. Signaling cannot be understood merely externally as some mechanical interaction, but points to interior domains—first- and second-person perspectives, however constricted these may be—that correspond

to the externally visible aspect of the signaling that scientists study from the third-person standpoint. What would happen to our conception of terrestrial nature at many different scales if researchers assumed that the phenomena they study—such as animals and plants—had an interior aspect that would have to be taken into account in order fully to characterize the phenomenon in question?[3] How would the science(s) of ecology have to change? Indeed, how would *environmentalism* have to change, perhaps especially with regard to its troubled relationship with human beings, who are endowed with such an extensive, linguistically enhanced mode of interiority?

Most environmentalists abjure talk of transcendence and spirit because they are moderns at heart, that is, they agree that all being is material being. Moreover, because mainstream religions have traditionally limited transcendence (along with interiority or "soul") to humans, environmentalists fear that transcendence-talk only encourages a version of the anthropocentrism that justifies heedless human destruction of natural phenomena. Eco-romantics "think transcendence is destroying Gaia, whereas transcendence is the only way fragments can be joined and integrated and thereby saved."[4] Genuine transcendence is neither anthropocentric nor otherworldly, but always integrated with the world in the nondual embrace described in Mahayana Buddhism's dictum that *samsara* (the cycle of birth and rebirth) is not other than Nirvana.

Drawing on Wilber's work, integral ecologists envision a postindustrial ontology that restores depth to the cosmos by reintegrating what has been dissociated, i.e., the interior, subjective domains that characterize all phenomena. Following Max Weber and Jürgen Habermas, Wilber notes that modernity differentiates among three domains, which he calls the Big Three: 1) consciousness, subjectivity, self, and self-expression (including art), whose mode of truth involves truthfulness and sincerity; 2) ethics, morality, worldview, culture, intersubjective meaning, whose mode of truth involves justice; 3) natural and social science, whose mode of truth involves correct propositions.[5] These three differentiated domains generated the social-cognitive space necessary for free scientific inquiry, new art forms, market economies, and democratic politics, including liberation movements ranging from abolitionism to feminism.

Unfortunately, modernity did not adequately integrate the three domains. Because personal-artistic and cultural-moral truth claims are more complex and contentious than those made by empirical scientific research, and because scientific knowledge brought such important material gains, scientific modes of knowledge marginalized the other two. Natural science could not even notice, much less study, selfhood, interiority, culture, and morality, since empirical inquiry is suited for material phenomena, not for personal and social phenomena. Far from representing nature as a sum of disconnected atoms, as some environmentalists have complained, modern science represented nature as "a perfectly *harmonious and interrelated system*, a great-it-system, and knowledge consisted in patiently and empirically mapping this it-system." Modern science unified the cosmos in terms of the "great 'web of life' conception, a great interlocking order of beings, each mutually interwoven with all others."[6]

The modern rational ego sought to disenchant nature, both to eliminate any lingering concerns about violating "Mother Nature" and to achieve the ideal of rational and moral objectivity. So long as one's reasoning processes are influenced by biological factors (e.g., emotions), so long as one's moral judgment is tainted by personal, familial, tribal, or racial factors, one is not truly rational, impartial, and thus fully human. Following Kant, the modern ego sought to overcome the domain of particularity and corporeality, in order to attain universality and impartiality. But this quest had two major problems. First, moderns could not really admit to a domain transcending the material plane; hence, the ego was left in a transcendental limbo that was made increasingly untenable by the relentlessly reductive processes of scientific materialism. To make up for its own conceptual erasure, so Wilber argues, the modern ego engages in extraordinary, nature-dominating *agency*. To demonstrate its own existence, in other words, the ego set out to subjugate the material domain, i.e., the only domain that supposedly exists. Martin Heidegger, as well as Max Horkheimer and Theodor Adorno, claimed that the striving of modern "man" for world domination showed that he had become an animal seeking power and security. Wilber holds a quite different view. The striving for world domination represents, at least in part, an effort at self-assertion on the part of persons who *intuit* their own (interior and interpersonal) reality, but who cannot find any adequate personal or cultural expression for it. Hence, when Marx said that the point of philosophy is not to reflect on the world, but rather to change it, he sought in part to reemphasize the power of human agency in a world that was increasingly mechanized and devoid of subjectivity.

The second problem with the modern quest for universality was that the justifiable differentiation between mind and body ended up in unjustifiable dissociation:

> The rational ego wanted to rise above nature and its own bodily impulses, so as to achieve a more universal

> compassion found nowhere in nature, but it often simply repressed these natural impulses instead: *repressed* its own biosphere; repressed its own life juices; repressed its own vital roots. The Ego tended to repress both external nature and its own internal nature (the id). And this repression, no doubt, would have something to do with the emergence of a Sigmund Freud, sent exactly at this time (and never before this time) to doctor the dissociations of modernity.[7]

The romantic reaction against rational modernity's humanity-nature split, and against the repression that follows from it, was justified, for something serious was amiss. Nevertheless, romantic efforts to heal this rift went astray because they employed two competing conceptions of nature. The first was the modernist view that nature is the all-encompassing, interrelated web-of-life. Supposedly, modernity had lost touch with this web-of-life, despite asserting that everything is enclosed and flows within it. In positing that culture has deviated from or split off from nature, then, the romantics had to posit a *second* conception of nature, a nature from which humankind *can* deviate. Wilber asks: "What is the relation of this Nature with a capital N that embraces *everything*, versus this nature that is *different* from culture because it is getting ruined by culture?" Romanticism foundered because it could not reconcile these conflicting views of nature. Great romantics, such as Schelling, sought to reconcile this conflict by identifying Nature with an all-embracing Spirit that transcends and includes both culture and nature. Most romantics, however, "simply identified Nature with nature."[8]

Arguably, back-to-nature fantasies reprise this failed romantic effort to overcome the humanity-nature split. "Instead of moving *forward* in *evolution* to the emergence of a Nature or Spirit (or World Soul) that would indeed unify the differentiated mind and nature, [romantics] simply recommend 'back to nature'." The quest for this kind of unity invites psychological and social regression. If nature as biosphere is the "fundamental reality" (Goddess/Gaia), then that which deviates from nature threatens nature. If nature "is the ultimately Real, then culture must be the original Crime." The goal, then, must be to dismantle culture in order to achieve a lost paradise involving unconscious unity with pristine nature. Such a yearning for primal unity with divine nature is tempting, but potentially disastrous both individually and culturally. Moreover, eco-sentimentalism will not halt ecological destruction. Required is a major change in socio-

economic and political institutions, but such change occurs only in tandem with the interior growth and development consistent with "mutual understanding and mutual agreement based upon a worldcentric moral perspective concerning the global commons."[9]

Although criticizing anthropocentrism for wrongly conceiving of subjectivity or consciousness as an exclusive human property, integral ecology also affirms that humans are endowed with a distinctively rich, linguistically articulated mode of interiority. This same interiority makes possible not only the technological power to exploit nonhuman beings, but also the possibility of developing to a moral level capable of calling for limits to human action out of respect for nonhuman beings. What is often called the technological domination of nature could have arisen only in the modern era, with its extraordinary combination of natural science and dynamic economic systems. To significantly limit or transform this dominator hierarchy, in which technologically outfitted humans heedlessly exploit nonhuman nature, more is required than changing the social system or developing new technologies. Corresponding to any exterior sociopolitical, economic, or technological dominator hierarchy is an interior dominator hierarchy. Although modern science and technology have often been used by one group of humans to dominate other groups, the same development of consciousness that generated science and technology was also at work generating worldcentric ethical positions, which affirmed the universal rights of humankind. Environmentalists have explicitly called upon such rights to life and property in working against the untoward consequences of industrial technology, such as water, ground, and air pollution. An interior dominator hierarchy remains in place for most modern people with regard to nonhuman beings. Until a critical mass of people move to postmodern levels of interiority, in which heedless domination of nonhuman beings becomes unacceptable and immoral, environmentalism will remain a reform movement within technological modernity. When this developmental move occurs, but not before, we will see the widespread adoption of what Hans Jonas called "the imperative of responsibility" for the kind of world we want to leave to our human descendants, as well as to those of other species.[10]

This brings us to another major feature of integral ecology—its emphasis on the development that occurs in both exterior and interior aspects of phenomena. Using a term coined by Arthur Koestler, Wilber claims that the basic constituents of the cosmos are holons, which range from atoms through organisms. Holons are simultaneously parts of larger wholes and include within themselves as parts holons that are less complex. Cells

contain and are thus senior to molecules, while cells are contained in organisms and thus are junior to them. In addition to individual holons, there are social holons. The latter differ from the former for several reasons, including the fact that social holons lack the relatively centered kind of interiority that belongs to individual holons.

Every individual holon may be understood as containing four major features, which can be exemplified by the individual human being:

- The human has an individual exterior that includes the body and all its organs, as well as all the behaviors observable from the third-person perspective;
- The human being is also a member of highly complex social structures, which can also be studied by social sciences from the third-person perspective;
- The human being is also endowed with interiority, hence, constitutes a first-person perspective that correlates with neurological events and with externally observable behaviors;
- Finally, the human being is a member of a culture (or cultures) that arises in connection with mutual exchanges of recognition and communication between first and second persons.

The interiors of cultures, including values, religious belief, philosophy, shared purpose, and so on, correlate with various social structures, ranging from political institutions to economic activity. Wilber uses the term "quadrants" to refer to these four basic constituents of holons.

Every holon contains these four different dimensions that correlate with the four major perspectives people can use to analyze any complex phenomenon: first person, second person, third-person individual, and third-person collective. For example, if I wish fully to understand a small mammal, I must attempt to understand not only its behavior (third-person, individual, objective perspective) and its membership in its extended kin base and ecosystem (third-person, collective, interobjective perspective), but also what it is like to be that mammal (first-person perspective) and what is involved in the mammal's intersubjective domain, including its kin base (second-person perspective). As a shorthand measure, Wilber reduces the four perspectives to what he calls The Big Three (see figure 1): I, You/We, and It(s). Hence, integral ecologists state there are three basic perspectives—first person, second person, and third person—in terms of which to analyze any holon, because holons are such that all three perspectives must be brought into play to fully describe holons as constituents of the cosmos.

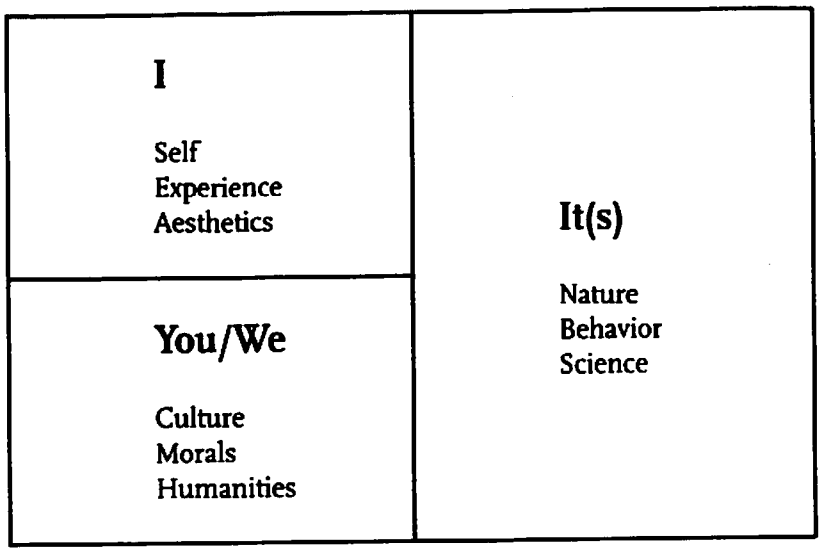

Figure One:
The Big Three

The developmental processes that have characterized history in all quadrants have opened up an indescribably vast hierarchy of different individual and intersubjective perspectives. The perspective taken by a cell establishes a horizon within which phenomena pertinent to the cell can show up. Such a perspective is enormously greater than that of an atom or an inorganic molecular complex, such as a crystal. Likewise, the perspective opened up by a human being is much greater than the perspective held open by a deer mouse. The human perspective expands as the human being matures. Hence, the first-person perspective of a three-year-old child is very different from the first-person perspective of that same person thirty years later. As individuals develop in various domains—whether cognitive, moral, psychosexual, aesthetic, interpersonal, or spiritual—they become capable of generating judgments that are more inclusive, more comprehensive, and more integral.

An integral ecologist is someone who knows that in order to characterize and to devise a solution to an environmental problem, he or she must not only seek insight from many different perspectives, including *the big three*, but must also take into account the different *developmental levels* of people speaking from those perspectives as well as the developmental lev-

els of the public audience to whom such judgments are addressed. Most environmental problems are complex not only in the sense that they are hard to define from the perspective of a particular branch of ecological science, but also in the sense that they are multifaceted such that many different perspectives—cultural, social, political, legal, ethical, religious, and aesthetic—must be utilized to allow the problems to show themselves adequately.

By restricting the term "ecology" to natural science methodologies, that is, third-person perspectives on the exterior facets of individuals and/or collectives, we overlook the fact that dozens of ecological schools adopt a first- or second-person perspective on environmental issues. Integral ecology provides a comprehensive theoretical framework for classifying and coordinating these manifold perspectives. For humans, of course, final or absolute knowledge is impossible because the whole is infinite and still unfolding, whereas human knowledge is finite and perspectival. Yet I assume that it is possible to generate ever more encompassing and inclusive models of this enormously complex and evolving tapestry. Such models provide people with greater capacity for comprehending and intervening in any kind of complex problem, including environmental ones.

Resisting method hegemony, integral ecology is methodologically pluralistic. Integral Methodological Pluralism (IMP) is a collection of practices and injunctions guided by the intuition that everyone's practices bring forth and disclose a different facet of reality. IMP contains three principles: *nonexclusion* (acceptance of truth claims that pass the validity tests for their own paradigms in their respective fields); *enfoldment* (some sets of practices are more inclusive, holistic, comprehensive than others); and *enactment* (phenomena disclosed by various types of inquiry will be different depending in large part on the quadrants, levels, lines, states, types, and bodies of the researchers used to access the phenomena). Wilber describes this commitment to a transmethodological or integral approach:

> The whole point about any truly integral approach is that it touches bases with as many important areas of research as possible before returning very quickly to the specific issues and applications of a given practice. . . . An integral approach [. . .] is a panoramic look at the modes of inquiry (or the tools of knowledge acquisition) that human beings use, and have used, for decades and sometimes centuries. . . . All of the numerous practices or paradigms of human inquiry—including physics, chemistry, hermeneutics, collaborative inquiry, meditation, neuroscience, vision quest, phenomenology, structuralism, subtle energy research, systems theory, shamanic voyaging, chaos theory, developmental psychology—all of those modes of inquiry have an important piece of the overall puzzle . . . .[11]

Integral ecology also reinstates the reality and importance of holarchy: some truth claims are better—more inclusive, more comprehensive, more insightful, more generative—than others. In the case of the natural sciences, integral ecology affirms that truth claims arising in this domain must be taken very seriously when it comes to describing environmental problems. Natural science is not a kind of poetry because science and poetry involve very different methodologies. Nevertheless, natural scientific truth claims must not be allowed to trump truth claims generated by competent practitioners in other domains.[12] Objective claims can be contested by other objective claims and subjective claims judged by subjective claims, so within their respective domains, there is better or worse. One ought not, however, judge a subjective claim by an objective standard because the criteria for truth claims are domain dependent.

Being inclusive does not mean abandoning rigor, but it does require that many different kinds of rigorous inquiry be brought to bear on complex problems. Each discipline has its own methods, practices, injunctions, and community standards in connection with knowledge production. People tend to regard their own approach to environmental issues as the only valid one, or at least considerably more valid than the available alternatives. Such an attitude is not restricted to those who deal with environmental problems, of course. Experts in any given discipline tend to regard their particular approach—their method, their perspective, their way of interpreting things—not only as optimal, but also often as exclusively valid. Clearly, this attitude is inconsistent with integral ecology's call for an all-quadrant approach to characterizing and resolving environmental problems. Moreover, an integral ecologist presupposes that any complex phenomenon—such as "wild animal habitat"—will be named, described, and assessed differently by different communities at different points of development.

An integral thinker no longer identifies with the perspective associated with a specific developmental stage, for instance, premodern conservative, or rational modern, or postmodern multicultural, but instead first recognizes how a given phenomenon—such as habitat loss created by logging—shows up differently from within people occupying each of those stages, and secondly recognizes that there are "warrant to truth" claims made within the perspectives constituted by

different stages of development.

To ascertain the character and consequences of environmental problems, an integral ecologist must solicit first-person accounts (including testimony, diaries, letters, documentaries, and art works) from people affected by or concerned about environmental problems. Hearing the fear, anger, and suffering of people whose health, families, livelihood, or way of life may be harmed by environmentally destructive practices can have a profound effect on how one evaluates such practices. If the point of view of nonhuman life forms were seriously taken into account as well, extinguishing a species or destroying countless plants and animals would require a higher level of justification than is currently required by most environmental impact statements.

Integral ecology also calls on second-person or cultural perspectives. To garner broad support for an initiative to limit habitat loss, an inclusive rhetorical strategy is needed. People exist within a complex of cultural beliefs, attitudes, practices, norms, and interpretative categories. In recent years, ecofeminists, Third-World representatives, and environmental justice advocates have criticized mainstream environmentalists as well as many environmental philosophers for assuming that the white, middle-class, male, American environmentalist perspective (including beliefs, values, norms) is the *true* way of disclosing humanity's relation to nature, rather than a particular way. Mainstream environmentalists who depict genuine nature as "wilderness," that is, pure land untouched by humans, are influenced by aesthetic, moral, and other cultural categories that are not necessarily shared by others. In characterizing an environmental problem, an integral ecologist recognizes the need to discern and to take seriously competing cultural perspectives on what constitutes "nature," as well as on what constitutes beauty, goodness, justice, fairness, compassion, and so on. Indeed, what manifests itself as a *problem* differs from one culture to another.

Examining social and systemic phenomena from a third-person perspective, social scientists attempt to generate knowledge claims that enable them to make predictions about the publicly observable behavior of social groups. Marx's idea that the economic and technological base determines the cultural and personal superstructure has proven to be a powerful presupposition for social science. Marx's point is that individual behavior is largely a function of social roles determined by socioeconomic factors, which in turn are profoundly influenced by technological innovation. For example, thousands of years ago the introduction of techniques for large-scale agriculture gave rise to urban life, which made possible a

host of social roles unavailable to horticultural and gatherer-hunter societies. Just as the invention of steam power paved the way for industrialization and its attendant social upheaval, so too the digital revolution will redefine human possibilities in ways that cannot even be foreseen. Individual behavior may vary, but only within the perimeters laid down by overriding social, political, and economic structures. Just so, many ecosystem biologists maintain that individual organisms are primarily functions of their species, which in turn are shaped in part by the prevailing environmental circumstances. Hence, habitat protection—not protection of individual organisms—is high on the list of many environmental activists, whose views are largely shaped by ecosystem biology. Despite the power of social structural analysis, an integral ecologist insists that such analysis in and of itself cannot provide a complete description of or resolution to environmental problems.

Finally, the natural sciences use powerful third-person methods to generate objective truth claims about a vast array of phenomena, ranging from sub-atomic particles and molecules, to cells and organisms. Although ideally providing the "facts of the matter" to which all parties will agree, the findings of even the "hard" sciences have become subject to contestation by critics who point out the growing dependence of researchers on corporate funding. Moreover, the ideal of investigative objectivity is challenged by factors such as gender, race, class, and social structure, which inevitably influence the process of knowledge formation. The ideal of objectivity without presuppositions is unrealizable for finite beings that must examine things from a particular perspective, using a particular method.

Nevertheless, *some* degree of valid knowledge can be achieved. By examining environmental problems from a host of different perspectives, and by taking seriously the disagreements that arise among people operating from within the same perspective, integral ecologists envision nothing more than attaining the most comprehensive understanding of those problems that finite knowers can achieve at present. They assume that more powerful paradigms will emerge for understanding and acting upon phenomena.

Aldo Leopold's Land Ethic Anticipates Integral Ecology

Only recently did I realize that Leopold anticipated two of the major features of integral ecology in his famous land ethic, published in 1949.[13] First, he affirmed that in addition to natural and social science perspectives, people need to bring to bear ethical, cultural, and aesthetic perspectives on land use (environmental) issues. Using terms drawn from inte-

gral ecology, we could say that Leopold distinguished between exterior, third-person perspectives, and interior, first- and second-person perspectives. Second, he argued that only an evolutionary development in human morality would make it possible for those perspectives to be taken seriously at the negotiating table.

> The extension of ethics to this third element [the land] in human environment is, if I read the evidence correctly, an evolutionary possibility and an ecological necessity.... Individual thinkers since the days of Ezekiel and Isaiah have asserted that the despoliation of land is not only inexpedient but also wrong. Society, however, has not yet affirmed their belief. I regard the present conservation movement as the embryo of such an affirmation.[14]

Despite the fact that Leopold's account of ethics and ethical evolution is relatively simplistic, he understood that ethical and aesthetic perspectives would not be included in land issue debate until significant ethical evolution took place.

> The 'key-log' which must be moved to release the evolutionary process for an [environmental or land] 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 esthetically 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.[15]

The land is a complex community comprised of the earth's many different habitats and their associated life forms. Leopold knew that the third-person methods used by natural science provide important insights into the land and land-use. Such methods allowed him to develop the idea of the land pyramid, according to which solar energy is first captured by plants, after which it slowly works its way up the food chain to top predators. All the way up the chain, dying organisms return vital nutrients to the land. Leopold also knew how important economics and other social sciences were for informing decisions about land-use. However, he concluded that insights afforded by these third-person perspectives had proven insufficient to prevent short- and long-term damage to the

land. In 1949, most people were not prepared to take seriously his summons to consider not only material and economic aspects of the land, but also aesthetic and ethical aspects. Having spent years in the regulatory trenches, having trained in the natural sciences influenced by positivism and behaviorism, he did not underestimate the difficulty of introducing aesthetic and ethical considerations—that is, *interior*, first- and second-person considerations—into decisions that would affect habitat and species. In fact, he postulated that an evolutionary advance is required to move beyond the instrumentalist view, according to which the land is merely raw material for human ends. Given the obstacles facing such an advance, and the time required to achieve it, Leopold knew, too, that he was offering an ecology for the future. Likewise, the conditions for what I am calling integral ecology are not yet in place, although we are moving in the right direction.

A thing is right, Leopold proposed, if it tends to preserve the beauty, integrity, and stability of the land. By "beauty," Leopold evidently had in mind an objective feature of the natural world; by "integrity" he meant the wholeness of the complex fabric of the land, and by "stability" he meant the predictably recurring patterns of the interrelated constituents of the land. Leopold wrote prior to theoretical trends that emphasize intersubjectivity and perspectivalism, and that are skeptical about unchanging foundations. Nevertheless, surely he knew that beauty, integrity, and stability included other and more complex meanings than the ones indicated above. Perhaps he would agree with the following free interpretation of his important claims. Beauty is an assessment of the land, an assessment made by an observer from the first-person perspective, influenced by cultural, socioeconomic, linguistic, and developmental factors. Integrity refers not only to the integrated land-tapestry, but also to the moral rectitude of members of the land community—human beings—who are capable of taking the position of the Other, the second-person perspective. People of integrity can respect the land as Other, and whenever possible can resolve to work with other people to preserve the land's integrity, in the sense of its well-being and wholeness. Finally, for Leopold, stability is an aspect of the land as studied from the third-person perspective of natural science. Stability means not stasis, permanence, or solidity, but instead resilience, the capacity of the dynamic land-community consistently to re-establish its imbricated patterns in the face of perturbations.

As noted earlier, Leopold's land ethic anticipates important features of integral ecology, which is an example of an *ethos*, the Greek root for our term "ethics." *Ethos* means the character, disposition, or fundamental

values of particular individuals or communities. Members of the future community of integral ecologists will ideally exhibit respect for and take into account as many perspectives as possible; appreciate and promote the beauty, integrity, and stability of the land; and recognize that the community's truth claims are limited, as well as dependent on the achievements and shortcomings of others.

Leopold reports that his own third-person, objectifying, instrumentalist attitude toward nonhuman life began to change as a young man, when he and some friends were hunting deer. Spotting a pack of wolves, he shot a wolf and one of her cubs, members of a species that was then regarded as a worthless and dangerous predator. As he approached the dying mother wolf, he observed "a fierce green fire dying in her eyes."[16] At that moment, Leopold encountered the wolf as Other, that is, he acknowledged that the wolf had a wolfish kind of first-person sentience and a second-person relation to him. Far from being merely a behavioral mechanism, the wolf exhibited something akin to the yearning, desiring, and fearing that Leopold himself experienced from his own first-person perspective. The wolf had a life of its own, as well as a very important role to play as a member of its ecosystem. To understand the wolf required more than weighing and measuring it, analyzing the working of its organs, studying its behavior, and comprehending its function as a top predator in desert mountain country. Instead, an additional effort was needed to appreciate what it must be like to be a wolf, an otter, a beaver, or a squirrel. Many of the chapters in Leopold's classic, *A Sand County Almanac*, are sympathetic sketches of what it must be like to be an animal trying to make a living in a challenging environment. If behaviorists in the 1940s refused to countenance terms such as subjectivity, consciousness, and awareness in studying human beings, they were even more adamant about denying interiority, inwardness, awareness, subjectivity, and first-hand experience to nonhuman beings.

Leopold's obvious perceptiveness about the lives of animals did not prevent him from being an avid hunter. Like many environmentalists, he assumed that what counts is preserving species of plants and animals, rather than protecting individual tokens, except if those individuals are among the last of an endangered species. Indeed, if humans have eliminated top predators such as wolves and coyote, humans must take on the predator role in order to prevent prey—such as deer—from overshooting their resource base and causing much havoc and suffering in the process. Animal rights activists have challenged environmentalists for emphasizing species well-being, while ignoring the plight of individual organisms,

which are sentient and possess a significant mode of interiority. Holmes Rolston III, who acknowledges the relative interior richness of wild animals, nevertheless sides with environmentalists who say that it makes no sense for humans to protect animals in the wild, especially when it comes to predation. Over thousands of years, the predator-prey relationship between, say, cougar and deer is responsible for making the deer more fleet of foot and the cougar more cunning.[17] Still, the experience of individual wild animals and the values of their communities are certainly worth taking into account when assessing how a proposed human intervention—whether constructing a new highway or clear cutting a forest—would impinge on wild animals. Given recent findings about the interiority of plants, environmentalists ought also to take the first-person perspective of individual plants and plant communities into account when studying a situation in which plants are harmed or threatened with destruction.[18] As an ecology for the future, integral ecology cannot expect that such considerations will be brought to the table any time soon, but holds open the possibility that further human ethical development will change this situation.

Just as it is presumptuous for anthropocentrists to treat nonhuman life as if it had value solely as raw material for human purposes, so it is misguided for anti-anthropocentrists to ignore that human beings represent a remarkable development in terrestrial evolution. Humans are special, in part because of their richly developed interiority made possible by their language-capacity, but interiority is not restricted to humans. Indeed, every holon has both an exterior and a corresponding interior.[19] Leopold inferred such interiority on the basis of what he saw in the eyes of the dying wolf. Humankind's linguistically enriched interiority makes possible not only the technological power needed to exploit nonhuman beings, but also the evaluative capacity to limit human actions out of respect for nonhuman Others. As Leopold remarks:

> For one species to mourn the death of another is a new thing under the sun. . . . But we, who have lost our [passenger] pigeons, mourn the loss. Had the funeral been ours, the pigeons would hardly have mourned us.[20]

The Slow Motion Inclusion of Values and Interiority

Recognition of the multifaceted character of environmental problems led the Ecological Society of America (ESA) to organize a plenary session at its August 2004 annual meeting to hear the chiefs of three major science-based federal agencies: the U.S. Department of Agriculture

Forest Service, the U.S. Geological Survey, and the National Oceanic and Atmospheric Administration. Indicating that he had been "humbled" by the daunting intricacy of environmental problems, Forest Service Chief Dale Bosworth in effect called for an integral ecology: "We need more than technical solutions to problems. We need to focus on the problem in its full dimension-its social and its regulatory and its political and its economic and its ecological dimensions."[21] Note that there are no references to the ethical, cultural, interpersonal, or aesthetic dimensions of such problems.

ESA's recent publication, *Ecological Science and Sustainability for a Crowded Planet* (ESSCP), offers important elements of an integral framework for ecology:

> Ecology is by its very nature an interdisciplinary science, making it impossible for any single ecologist to be well versed in the details of every relevant discipline, method, or instrument. Yet, it is increasingly obvious that ecologists must come together to help understand, solve, and anticipate the environmental issues facing our world. To do so, ecologists may need to think of themselves as entrepreneurs in a shifting and pressure-driven marketplace, where strategic collaborations and rapid responses are keys to scientific success. Our best chance to succeed in those efforts is to have a broadly inclusive approach to ecological research. This approach must include actively recruiting expertise beyond our discipline, as well as changing our culture to best foster the innovations we need.
>
> [. . . .] If successfully implemented, this new depth and breadth of ecological understanding, including its improved communication beyond the discipline, would allow ecologists to play an influential and eminently helpful role in decisions made at all levels that affect the sustainability of the biosphere.[22]

Although the document's title page encircles a drawing of the planet Earth with three phrases: "Anticipatory Research, Informed Decisions, Cultural Change," ESSCP accords a negligible role to culture and values. Discussion of culture is limited to changing the culture of natural science, currently characterized by method hegemony, in order to foster greater collaboration with other natural scientists, social scientists, businesspeople, and government officials. "Ethics" appears only once, in connection with moral rules that apply in using the data generated by others. The term "values" occurs in a paragraph encouraging scientists to provide "rigorous ecological knowledge" to religious groups that "have responded to emerging environmental concerns by linking values to an ethos of environmental stewardship."[23] To bring to fruition ESSCP's important vision of sustainability, greater attention must be given to studying personal and cultural factors—including values, worldviews, and religious beliefs—that play a role both in generating and resolving environmental issues, at all levels, from local to global.

A growing number of environmental scientists recognize that to be effective players in the hotly contested environmental arena, they must take into account perspectives other than those of natural science. Tainter, Allen, and Hoekstra call this "post-normal science."

> In post-normal science [. . .] data are insufficient, time is short, and because the stakes are high there is keen public interest and *conflicting values*. The findings of post-normal sciences are embedded in *a larger social framework*, in which the audiences consist of contending interest groups, and in which issues have more than one plausible solution. [My emphases.][24]

Post-normal environmental science, which emphasizes the importance of including stakeholders and alternative points of view, has much in common with integral ecology's attempt to incorporate findings from the domains of culture, society, and nature.

Another step toward integrating these three domains is taken by the editors of *Panarchy: Understanding Transformations in Human and Natural Systems*, the well-known ecologists, Lance H. Gunderson and C. S. Hollings. *Panarchy* calls on the rich conceptual model of resilience in complex adaptive systems to show how natural and social sciences can and must cooperate to address environmental problems.[25] In one essay, Frances Westley et al. argue that failure to understand the difference between ecological and social systems "helps to explain the fundamental lack of responsiveness or adaptability to environmental signals that characterize much of natural resource management."[26] Whereas space and time are key categories for understanding ecosystemic structures and patterns, "For social systems, we need to add a third dimension, which is symbolic construction of meaning."[27] This symbolic dimension makes possible capacities available only to humans: "the creation of a hierarchy

of abstraction"; reflexivity in meaning; envisioning alternative futures; and externalizing "symbolic constructions in technology...."[28]

In another essay in *Panarchy*, "A Future of Surprises," Marco A. Jannsen not only discusses the interrelation of cultural domains, socioeconomic systems, and ecosystems, but also outlines a developmental model of culture (as worldviews) that has much in common with an integral ecology approach. According to Jannsen, the most prevalent U.S. worldviews are: *hierarchalism* (or conservatism), held by those who defer to authority in defining and solving environmental problems; *individualism*, affirmed by those who put faith in the power of unhindered markets to solve those problems; and *egalitarianism*, adhered to by those (including Greens) who claim that environmental problems can be solved primarily by reducing inequity across the board. Hierarchalism, individualism, and egalitarianism correspond in most important respects to traditional, modern, and postmodern developmental perspectives.[29]

Failure to differentiate among these three worldviews—traditional, modern, and postmodern—and to address adherents to each of them in rhetorically effective ways, is one reason that environmentalism is now widely viewed merely as an interest group, despite the fact that large percentages of Americans from all three worldviews uphold environmental values.[30] Indeed, these days we hear much about "the death of environmentalism."[31] In his *New York Times* column, "Geo-Greening by Example" (March 27, 2005), Thomas L. Friedman argues that environmentalism can be shaken from its current malaise by political leaders who present solutions to major eco-problems in terms consistent with the three major U.S. cultural worldviews: religious (conservative), neoconservatives, and Greens (corresponding to our categories of traditional, modern, and postmodern). Urging President George W. Bush to adopt major ecofriendly energy initiatives, Friedman says that doing so is

> . . . smart geopolitics. It's smart fiscal policy. It is smart climate policy. Most of all—it's smart politics. Even evangelicals are speaking out about our need to protect God's green earth. "The Republican Party is much greener than George Bush or Dick Cheney," remarked [Peter Schwartz, chairman of Global Business Network]. . . . Imagine if George Bush declared that he was getting rid of his limousine for an armor-plated Ford Escape hybrid, adopting a geo-green strategy and building *an alliance of neocons, evangelicals and greens to sustain it.* His popularity at home—and abroad—would soar. The country is dying to be led on this. [My emphasis.]

Integral ecology maintains that ascribing a depth-dimension to the cosmos is justifiable in terms of current research into the sentience of animals and even plants, not to mention humans. Moreover, restoring such a depth dimension—in a way that can win the attention and consideration, if not yet the assent of moderns—is particularly important at this moment in human history, where traditional people are understandably suspicious of and resentful toward a modernity that holds their beliefs in contempt, but itself adheres to a cosmology that seems to invite despair.[32]

NOTES

1. On the issue of outstripping environmental resources, see William R. Catton, Jr., *Overshoot: The Ecological Basis of Revolutionary Change* (Urbana: University of Illinois Press, 1980). See the website *Die Off* for an extensive discussion and links to other discussions about short and long term problems associated with limits to the carrying capacity of the planet: http://dieoff.org/index.html. See also Jared Diamond, *Collapse: How Societies Choose to Fail or Succeed* (New York: Viking Press, 2004).
2. See Sean Esbjörn-Hargens and Michael E. Zimmerman, *Integral Ecology: Uniting Multiple Perspectives on the Natural World* (Boston: Integral Books, 2009).
3. See Kalevi Kull, "Biosemiotics in the Twentieth Century," *Semiotica*, 127, no. 1 (1999): 385–414. For an integrative view of semiotics, see Claus Emmeche, "The Biosemiotics of Emergent Properties in a Pluralist Ontology," in *Semiosis. Evolution. Energy: Towards a Reconceptualization of the Sign.*, ed. Edwina Taborsky, (Aachen, Germany: Shaker Verlag, 1999), 89–108.
4. Ken Wilber, *A Brief History of Everything*, 2nd ed. (Boston: Shambhala, 2001), 277.
5. *Ibid.*, 123.
6. *Ibid.*, quotations from 128 and 129 respectively.
7. *Ibid.*, 284.
8. *Ibid.*, all quotations from 263.
9. *Ibid.*, quotations from 288, 288, and 311 respectively.
10. Hans Jonas, *The Imperative of Responsibility: In Search of an Ethics for the Technological Age* (Chicago: University of Chicago Press, 1984).
11. Ken Wilber, foreword to *Integral Medicine: A Noetic Reader*, found at *Ken Wilber Online, http://wilber.shambhala.com/html/misc/integral-med-1.cfm*. Accessed February 16, 2006.
12. For an important account of how scientific truth claims are being challenged by alternative perspectives, see Joseph A. Tainter, T. F. H. Allen, and T. W. Hoekstra, "Energy Transformations and Post-Normal Science," *Energy* 31 (2006): 44–58.
13. Aldo Leopold, *A Sand County Almanac* (New York: Oxford University Press, 1949) is Leopold's best-known work. The ecophilosopher J. Baird Callicott has done much to promote Leopold's insights and value for contemporary environmental studies, especially Leopold's notion of the Land Ethic. See Callicott's *Beyond the Land Ethic: More Essays in Environmental Philosophy* (Albany: State University of New York Press, 1999) and his *In Defense of the Land Ethic: Essays in Environmental Philosophy* (Albany: State University of New York Press, 1989). He has also helped make many of Leopold's writings more available. See Aldo Leopold, *For the Health of the Land: Previously Unpublished Essays and Other Writings*, ed. J. Baird Callicott and Eric T. Freyfogle (Washington D.C.: Island Press, 1999); Aldo Leopold, *The River of the Mother of God And Other Essays*, ed. Susan L. Flader and J. Baird Callicott (Madison: University of Wisconsin Press, 1991); and J. Baird Callicott, ed. *Companion to a Sand County Almanac: Interpretive and Critical Essays* (Madison: University of Wisconsin Press, 1987). Two worthwhile biographies of Leopold include Curt Meine, *Aldo Leopold: His Life and Work* (Madison: University of Wisconsin Press, 1991) and Marybeth Lorbiecki, *Aldo Leopold: A Fierce Green Fire* (Guilford, Conn.: Falcon, 2005).
14. Leopold, *Sand County Almanac*, 203.
15. *Ibid.*, 224–225.
16. *Ibid.*, 129–130.
17. See Holmes Rolston III, *Environmental Ethics* (Philadelphia: Temple University Press, 1998).
18. Alexandra Nagel, "Are Plants Conscious?" *Journal of Consciousness Studies*, 4, no. 3: 197, 215–230.
19. Panpsychism is the name given to the idea that the capacity for experience, however meager, is a basic feature of the universe. In recent times, Alfred North Whitehead was one of the most important exponents of this concept. Charles Birch and John B. Cobb, Jr., drew upon Whitehead's process philosophy in their book, *The Liberation of Life: From the Cell to the Community* (New York: Cambridge University Press, 1981). For a sophisticated defense of a version of panpsychism, see David Chalmers, *The Conscious Mind: In Search of a Theory* (New York: Oxford University Press, 1996).
20. Leopold, *Sand County Almanac*, 110. Thanks to Gus DiZerega for reminding us of this passage.
21. "Complexity 'Humbles' Environmental Chiefs," *The Oregonian*, Thursday, August 5, 2004, section C, 11.
22. Ecological Visions Committee Report to the Governing Board of the Ecological Society of America, *Ecological Science and Sustainability for a Crowded Planet* (Washington, D.C.: Ecological Society of America, April 2004) available online at: http://www.nau.edu/~envsci/sisklab/Lab%20Group%20Readings/EcologicalVisionsReport.pdf. Quotation is from 29.
23. *Ibid.*, 15.
24. Tainter, Allen, Hoekstra, "Energy Transformations," 45.
25. Lance H. Gunderson and C. S. Hollings, ed., *Panarchy: Understanding Transformations in Human and Natural Systems* (Washington, D.C.: Island Press, 2001).
26. Frances Westley, Steven R. Carpenter, William A. Brock, C. S. Holling, and Lance H. Gunderson, "Why Systems of People and Nature are not just Social and Ecological Systems," in *Panarchy*, 103-119. Quotation is from 119.
27. *Ibid.*, 119.
28. *Ibid.*, 105.
29. Marco A. Janssen, "A Future of Surprises," in *Panarchy*, 241–260. Other studies also come to the same conclusions, namely, that North American attitudes toward nature can be understood in part in terms of the threefold developmental levels, roughly premodern, modern, and postmodern or Green. See William M. Kempton, James S. Boster, and Jennifer A. Hartley, *Environmental Values in American Culture* (Cambridge: MIT Press, 1996), and Paul H. Ray

and Sherry Ruth Anderson, *The Cultural Creatives* (New York: Three Rivers Press, 2001).

30. See Kempton, Boster, and Hartley, *Environmental Values*.
31. See Ted Nordhaus and Michael Shellenberger, *Break Through: From the Death of Environmentalism to the Politics of Possibility* (New York: Houghton Mifflin, 2007). See also the symposium articles on Nordhaus and Shellenberger's original essay, "The Death of Environmentalism" in *Organization and Environment*, 19, no. 1 (March, 2006).
32. Recently, however, there has been a flood of books, authored by leading scientists, which attempt to reconcile science and religion. See for example Owen Gingrich, *God's Universe* (Cambridge: Belknap Press of Harvard University, 2006); Francis S. Collins, *The Language of God: A Scientist Presents Evidence for Belief* (New York: The Free Press, 2006); Stuart A. Kauffman, *Reinventing the Sacred: A New View of Science, Reason, and Religion* (New York: Basic Books, 2008).

From the Ground Up: Dark Green Religion and the Environmental Future[1]

Bron Taylor

Green and Dark Green Religion

Green religion as I use the term is a broad umbrella for every type of religious environmentalism, both those with deep roots in Western and Asian cultures, and more recent innovations that are emerging in the age of ecology. The types of religious environmentalism where practitioners and scholars affiliated with the world's most prevalent religious traditions seek to reveal and promote their putatively environmentally friendly dimensions, or develop such dimensions where they are believed to be missing or anemic, is not my present focus. This contemporary impulse to foster environmentally friendly religious ethics provides a backdrop for the exploration of the emergence, diffusion, characteristics, and types of a subset of green religion that I call *dark green religion*.

By dark green religion, I mean religion that considers nature to be sacred, imbued with intrinsic value, and worthy of reverent care. Dark green religion considers nonhuman species to have worth, regardless of their usefulness to human beings. Such religion expresses and promotes an ethics of kinship between human beings and other life forms. I use the title, "From the Ground Up," to focus on the intellectual roots of such spirituality by examining dark green religion within what I call *the environmentalist milieu*, namely, the contexts wherein environmentally concerned officials, movements, and individuals connect with and reciprocally influence one another.[2]