Toward An Ecological Psychology

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I have been working as an environmental scientist for ten years. Given my formal training in physics and mathematics, I fell naturally into the field of energy policy: analyzing prospects for a sustainable energy future based on the efficient use of clean renewable energy sources. Over the past decade, I have come to recognize that quite beyond the material dimensions of the environmental crisis, there is a whole realm of non-material aspects to this dilemma that receives little mainstream attention. These non-material factors, which operate at the level of human consciousness, are intertwined with the physical factors, giving rise to a complex relational interdependence of physical and psycho-social causes that together create what we call the "environmental" crisis. To achieve realistic, lasting solutions to the ecological dilemma, we must confront not only its physical aspects, but also these non-physical dimensions. This article is a plea for environmental science to take up this task.

There is one important caveat: What follows below is an initial exploration. My purpose here is to be provocative rather than definitive, and the ideas and arguments given below are preliminary. Moreover, no one aspect is treated in depth.

Like nuclear war, the global environmental crisis threatens the whole of humanity and countless other species as well. Also like nuclear war, this latest threat to our existence is of human creation. In fact, every major threat to life on Earth—from nuclear annihilation to the destruction of genetic diversity to catastrophic ecological collapse—is of human origin. Thus it is clear that if we wish to understand these crises and eventually uproot them, we must inquire into the nature of human beings. What is it about human beings in Western culture that permits us to pursue activities that threaten our very survival? What is it that is so important to us that we are apparently willing to destroy the planet—and ultimately ourselves—to get it? Why do we persist in these practices even after we realize their self-defeating futility? What does this tell us about our society and our own nature? What *is* our true nature? What matters most deeply to us? Is our society in accord with our true nature and deepest values?

Such questions have a crucial bearing on the major problems that we face today, yet they are rarely asked. As ecological degradation grows to staggering proportions that threaten the extinction of innumerable species including our own, we respond with a wide range of efforts aimed primarily at reducing the manifest symptoms, while assuming or hoping that our major cultural values and institutions will somehow weather the storm and escape unscathed. Our principal epistemological framework for ecological diagnosis and remedy is Western science; for better or worse, we look to environmental science to save us. Today's environmental research and activism focus almost exclusively on the material and technological aspects of the ecological crisis. Their major emphasis is on the physical symptoms: acidity of lakes, stratospheric ozone depletion, toxicity of drinking water, smog, widespread damage to forests, etcetera. Environmental science aims to relieve these symptoms by such measures as reducing dependence on fossil fuels, cutting toxic emissions, developing alternative technologies, and implementing environmental legislation. While this work is vital, and indeed should be expanded greatly, it nevertheless leaves a whole spectrum of underlying social and cultural driving forces unexamined and relatively intact. If we are to achieve lasting, genuine solutions to the ecological crisis, we must treat not only the physical and technological symptoms, but also the underlying causes of environmental destruction. Hence, we must explore in earnest beyond technical, economic, and legislative fixes—important as they are—and look into the human and cultural roots of environmental destruction.

This exploration lead us into a vast realm of fundamental questions about our cultural values, psychology, ethics, spirituality, philosophy, and history. Although such questions are normally considered quite beyond the scope of mainstream environmental science, sustained

must begin to address the deeper origins of the environmental dilemma. Given our predeliction for Western science, which is dominant even among today's mainstream environmentalists, one possible avenue for exploring the human roots of ecological destruction might be through our own science of human nature, namely, the field of psychology.

To date, mainstream academic psychology has contributed little to the understanding of our relationship with the natural environment, which is itself a telling fact. Metzner has observed that none of the major schools of psychology contains any theory or research on the relationship between humans and our natural world, an omission that he finds "glaring, scandalous, and . . . embarrassing."[1] Moreover, the range of relevant factors goes considerably beyond those normally falling within the purview of psychology. Anthropology, philosophy, ethics, mythology, and authentic spiritual or consciousness disciplines all have important contributions to make. Thus, there appears to be a strong case for a new branch of environmental science that might be called ecological psychology or *ecopsychology*, a term coined by Theodore Roszak in his new book, *The Voice of the Earth* (New York: Simon and Schuster, 1992). Whatever its name, this field must move beyond the bounds of traditional psychology to embrace a wide range of theoretical/philosophical issues and practical methods for exploring the Western psyche in its relationship to the Earth—at both individual and collective levels.

ogy or environmental psychology. Warwick Fox coins the term *transpersonal ecology* to emphasize the need to "ecologize" transpersonal psychology (meaning, in particular, to make it less anthropocentric), as well as to "psychologize" eco-philosophy.[2] Another name might be eco-anthropology, to underscore the importance of going beyond the individual psyche to examine the powerful effects of cultural conditioning, as well as exploring the relationships in other cultures between humanity and the natural world. In this paper, the term ecopsychology should be understood to include all of these meanings. Whatever name might ultimately stick, the purpose of this new field would be to focus on the non-physical dimensions of the ecological crisis: those factors that function at the level of mind or consciousness—be they psychological, philosophical, spiritual, or cultural.

The following example may illustrate the importance of such factors. Only a few years ago, nuclear war loomed as the major threat to modern civilization. Today, the major threat appears to be environmental degradation. This raises the question: Are there common roots to these dilemmas? Might they both result from a more fundamental systemic problem? Consider the parallels. Both nuclear war and ecological destruction threaten all human beings on Earth, plus many other life forms. Both threats are created by our modern technological society in the name of improving it to make us safer, richer, whatever. Yet in the case of nuclear arms, the more weapons that we acquire in the attempt to achieve security, the less secure we feel. In the case of environmental destruction, the more material affluence that we produce, the more degraded our natural environment becomes. In both cases, the means to achieve a valued social goal actually undermines that goal and ultimately threatens the very existence of our civilization. In the social psychology of both nuclear weapons and material consumption, a similar pathological dynamic seems to be at work: in each case, the more we have, the more we feel we need. Yet the more we acquire, the more threatened we become as a result. If we don't somehow stop this cycle, we may destroy ourselves altogether.

This pattern is reminiscent of the psychological process of addiction. Are we addicted to our weapons and riches? Some observers, such as Morris Berman think so:

> Addiction, in one form or another, characterizes every aspect of industrial society, down to the lives of individual members. Dependence on alcohol (food, drugs, tobacco . . .) is not formally different from dependence on prestige, career achievement, world influence, wealth, the need to build more ingenious bombs, or the need to exercise conscious control over everything. Any system that maximizes certain variables, violating the natural steady-state conditions that would *optimize* these variables, is by definition in runaway, and ultimately, it has no more chance of survival than an alcoholic or a steam engine without a governor. Unless such as system abandons its epistemology, it will hit bottom or burn out—a realization that is now dawning on many individuals in Western society. There is no escaping self-corrective feedback, even if it takes the form of the total disintegration of the entire culture.[3]

Even the editor of *Science* magazine recently described the nation's dependence on

was a central driving force in the rise of industrial culture as we know it today.

Otto Rank has suggested that Darwin's theory of natural selection and survival-of-the-fittest was just the bourgeois Englishman looking into the mirror of nature and seeing his own behavior reflected there.[9] Might this same statement also be made about much of modern psychology? For example, the subject/object distinction appears to have been adopted uncritically by psychology, and this distinction certainly supported the social and philosophical trends of the time when it was adopted. Similarly, many Western personality theories posit that human beings are by nature self-interested and competitive, a view that had been assumed earlier in Darwin's theory of natural selection and even earlier in Adam Smith's economic theory (in fact, it is no accident that Darwin was quite heavily influenced by Smith's work). Psychology at its worst takes up fashionable social or cultural norms, organizes them into a "theory" for which there are inevitably plenty of supporting "data" all around, and presents this as indubitable scientific fact about human nature. Rather than developing its own comprehensive understanding of the human psyche from scratch, Western psychology seems to have adopted the psychological assumptions implicit in Darwin, Smith, Descartes, Locke, and others—more or less intact, and without critical review. A rationalist, individualist psychology arose, one that served to cement Smith and Darwin in place as the mainstays of the Western bio-economic psyche. Thus in Western psychology, human beings are often regarded as fundamentally self-interested and competitive, and the Earth is seen as fundamentally alien. From this perspective, the quest for autonomous human existence—divorced from the natural world—appears to be an innate drive in human nature.

Yet from cross-cultural psychology and anthropology, we are now learning that other human cultures are structured on very different premises. Some human societies live in harmony with the Earth and with other life forms, and they regard the human being as an integral part of the natural world. At the risk of over-quoting, here is a beautiful passage expressing this idea, attributed to Chief Seattle in 1854

> and man—all belong to the same family. . . . We know that the white man does not understand our ways. One portion of land is the same to him as the next, for he is a stranger who comes in the night and takes from the land whatever he needs. The earth is not his brother, but his enemy, and when he has conquered it, he moves on. . . . His appetite will devour the earth and leave behind only a desert. . . .
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> The air is precious to the red man, for all things share the same breath—the beast, the tree, the man, they all share the same breath. The white man does not seem to notice the air he breathes. Like a man dying for many days, he is numb to the stench. . . . What is man without the beasts? If all the beasts were gone, men would die from loneliness of spirit. For whatever happens to the beasts, soon happens to man. . . . If men spit upon the ground, they spit upon themselves. This we know. The earth does not belong to man; man belongs to the earth. . . . Man did not weave the web of life, he is merely a strand in it.[10]

These words strike a deep chord of truth, and they implore us to reexamine our relationship to the earth and the presumed superiority of our paradigms. In particular, the philosophical foundations of psychology (and Western science generally) need serious examination. From its inception, modern psychology was shaped by founding assumptions and epistemological methods prescribed by the philosophy of science. Thus, the discipline of psychology was effectively told what to believe and how to proceed; it was born with an inappropriate presupposition that physics is sovereign. It therefore did not treat its own subject matter on its own terms. Since that time, the quantum/relativistic revolution in physics, and the crucial philosophical contributions of Kuhn, Popper, Feyerabend, Keller, and others have eroded the "orthodox" scientific tenets of materialism, reductionism, rationalism, objectivism, positivism, and determinism. Notwithstanding the promising developments in humanistic and especially transpersonal psychology, the fact remains that much of today's mainstream psychology was built upon paradigms and theories borrowed from physics that have now been largely discredited in the field of physics itself, yet the derivative psychological theories still remain dominant today.

This is not to deny the many important advances that have been made in mainstream psychology. But today's urgent cultural crisis—as evidenced by the environmental and nuclear threats in particular—provides powerful impetus for a comprehensive review of

creasing scrutiny and attack. As pollution reaches alarming levels, governments complain that environmental protection will stunt economic growth, and corporations insist that they cannot turn a profit if they are required to adopt sound environmental practices. A new field called ecological economics promotes "steady-state economics," which challenges the prevailing assumption that perpetual economic growth is possible or even desirable.[17] A vital aspect of this work that has received little attention is examination of the assumptions about human nature that underlie economic theory. What model of human psychology and consciousness is implicit in neoclassical economics? Is the competitive race for acquisition of material wealth the most fundamental driving force of human beings, as orthodox economic theory seems to presume? What alternative psychological perspectives would be consistent with ecological economics or a steady-state economic theory?

What is our psychological relationship to technology? Modern technologies are supposed to make our lives more livable and "convenient," yet case after case of ordinary citizens injured by ostensibly innocuous technologies has been poignantly documented by Chellis Glendinning.[18] How is it that technological means sometimes become ends in themselves, even when they are shown to be detrimental to society as a whole? For example, in the face of overwhelming evidence that continued fossil fuel combustion imperils the entire planet, fossil fuel vendors continue to lobby governments heavily, while suppressing developments in clean renewable energy alternatives—as if fossil fuels and related profits were more valuable than our own children. This is but one example of a more general pattern, whereby otherwise sane people become fanatically committed to a particular means to an end, even when that means begins to threaten the end. What is the psychology behind this triumph of means over ends? What is the psychological origin, nature, and structure of human ideologies and belief systems? What is the psychology of cathexis to technological implements? How is it that people become so identified with a particular technology that criticisms of that technology are perceived as personal threats?

Transformation of Values

It is becoming increasingly clear that industrialized societies will not be able to maintain their current level of material consumption in the future. This is particularly true in the United States, which accounts for only five percent of the global population yet consumes more than one-quarter of the world's resources. What are the implications of this? Oscar Wilde has said that there are two great misfortunes in life: *not* getting what you want, and *getting* it. This points to the fact that profligate consumption of material resources does not bring peace or happiness. Countless observers and studies have noted that people in many developing countries seem happier and more content with their lives than those living in richer countries, despite the large discrepancies in material standard of living. How can a shift in personal and cultural values be accomplished in our industrialized society? What might those new values be? Can material riches be supplanted with some form of "experiential" riches that do not severely tax the Earth's natural resources? This last question seems especially important, as it points to the notion that the deepest fulfillment of human beings comes from realms far beyond the material dimensions of existence. Indeed, there is much evidence to support this notion, and a major task for ecopsychology might be to analyze and explicate authentic human needs, aspirations, and fulfillment—showing that a relatively minor portion of these has to do with material affluence. Some promising initial contributions along these lines are discussed in the next section.

PROMISING DIRECTIONS FOR ECOPSYCHOLOGY

It seems inevitable that continued devasta
tion will force Western society either to de
stroy itself or mature beyond its current pre
occupation with material consumption an
technological gadgetry. Assuming that th
latter scenario of cultural maturation take
place, an important question arises: Wha
new social practices and cultural values wi
develop to replace those that are currentl
harmful to the Earth? There are innumera
ble approaches to this question; a few ar
considered below that may be relevant t
ecopsychology. Transpersonal psychology i
examined briefly in the next section as
possible means for displacing the pursuit o
material wealth and awakening ecologica
consciousness. This is followed by a brie
mention of possible contributions to ecopsy

chology from anthropology, feminism, and philosophy.

Transpersonal Psychology and Transpersonal Ecology

Insights from transpersonal psychology, experiential psychotherapy, transpersonal ecology, shamanism, and various spiritual disciplines suggest that there are treasures available to anyone at the level of consciousness that are of greater value than any material possession could be. These treasures emerge naturally in an authentic process of inner inquiry or self-discovery, which can be facilitated by a variety of psychospiritual practices. As a person develops inwardly, there is a natural tendency for her or his sense of self to extend outward to include other people, other life forms, and inanimate objects—communing with ever broader and deeper levels of existence. Thus a key question in ecopsychology is the issue of the boundary between self and non-self. Numerous spiritual philosophers, transpersonal psychologists, and deep ecologists emphasize the importance of a broadened sense of identification that occurs naturally in deep introspection. In this process, one's sense of being expands to include more and more of one's "environment," be it people, animals, plants, the Earth, or even the entire cosmos. Although this seems nonsensical in a literal sense, from an experiential point of view it is a very real phenomenon, and it has practical consequences. For example, as one grows into identification with the natural environment, instinctive motivations arise to nourish and protect the Earth, not unlike the normal protective instincts that one has toward one's own family members. Hence, assaults on the environment are experienced as assaults on oneself, even if one's physical body is not directly injured thereby. In this way, the "ecological self" is awakened, and it often brings a sense of outrage at the ravages of the earth and a heart-felt commitment to help stop these ravages. In his excellent review of deep ecology, Warwick Fox emphasizes the importance of this process of identification. Carried far enough, certain transpersonal forms of identification may be experienced, which Fox labels ontological and cosmological identification.[19] These forms of identification may entail experiences of unity with all of humanity, all life, or even all creation, wherein the very fact of existence itself becomes an amazing mystical truth (e.g., as Wittgenstein put it, "It is not how things are in the world that is mystical, but that it exists"[20]).

True identification is an experience of self, not a philosophical concept or an intellectual fancy. Given the vital importance of this process of widening identification, how can it be fostered in practice? Transpersonal psychology has made some crucial advances in this domain. Powerful experiential methods of introspection, psychotherapy, and meditation have been found to activate a wide range of identification experiences and also to impart a sense of compassion and associated personal responsibility. In meditative sessions and certain forms of experiential psychotherapy, subjects have reported identification with animals, plants, other humans (including all of humanity), and oneness with all life. These profound experiences often include a compelling awakening of ecological sensibility and commitment. The following example is an account by a woman who experienced herself as the entire Earth in a session of "holotropic breathwork," an experiential modality developed by Stanislav and Christina Grof that utilizes vigorous breathing.

> The experience . . . then changed into actually becoming the planet Earth. There was no question that I—the Earth—was a living organism, an intelligent being trying to understand myself, struggling to evolve to a higher level of awareness, and attempting to communicate with other cosmic beings.
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> The metals and minerals constituting the planet were my bones, my skeleton. The biosphere—the plant life, animals, and humans—were my flesh. I experienced within myself the circulation of water from the oceans to the clouds and from there into little creeks and large rivers and back into the sea. The water system was my blood and the meteorological changes—the evaporation, air currents, the rainfall, and the snow—insured its circulation, transport of nourishment, and cleansing. The communication between plants, animals, and humans, including modern technology—the press, telephone, radio, television, and the computer network—was my nervous system, my brain.
>
> I felt in my body the injury of the industrial insults of strip mining, urbanization, toxic and radioactive waste, and pollution of air and water. The strangest part of the session was that I was aware of rituals among various aboriginal peoples and experienced them as very healing and absolutely vital for myself. It seems somewhat weird and bizarre to me now, when I have returned to my everyday rational thinking, but during

terizes the planetary ecological crisis and the Western mind's psychospiritual crisis as reflecting a profound archetypal process in which the Western self has attempted to free itself from—and gain control over—the matrix out of which it has emerged. The evolution of the Western mind has been founded on "repression of the feminine . . . of the soul of the world, of the community of being, of the all-pervading, of mystery and ambiguity, of imagination, emotion, instinct, body, nature, woman."[27] Yet Tarnas does not dismiss the Western project as an imperialist chauvinist plot but rather views it as a necessary part of a grand dialectic, which is now culminating in its greatest challenge yet: reunion with the feminine. Tarnas suggests the possibility that

> [t]he West's restless inner development and incessantly innovative masculine ordering of reality has been gradually leading, in an immensely long dialectical movement, toward a reconciliation with the lost feminine unity, toward a profound and many-leveled marriage of the masculine and feminine, a triumphant and healing reunion.[28]

CONCLUDING OBSERVATIONS

Some preliminary conclusions seem to emerge from this initial exploration. Human consciousness is intimately involved in creating and sustaining the environmental crisis. Our psychological and spiritual relationship to the environment—both natural and human—is a fundamental yet invisible driving force contributing to this crisis. The external crisis in the physical environment reflects a parallel internal crisis in human consciousness: a case of mistaken identity. Merely eliminating the sources and symptoms of physical pollution will not be sufficient to achieve a lasting, healthy, sustainable society. We need to address the hidden psychological, cultural, and spiritual dimensions of the ecological crisis, all of which are intertwined with the physical dimensions.

Rather than seeking new visions of extraordinary realities, we need to develop new eyes with which to see ordinary reality. Given that we Westerners look to science for solutions to our problems, this new sight poses a significant challenge for environmental science. Without a comprehensive inquiry into the systemic roots of the environmental crisis, coupled with a self-reflective and self-corrective capability, environmental science is in danger of exacerbating the very problems that it set out to solve. If it is to fulfill its mission, environmental science will ultimately require a much broader, balanced definition of "science"—one that admits a wide range of worldviews, is cognizant of its own philosophical foundations and limited applicability, embodies key insights from feminist perspectives, recognizes its inevitable subjectivism, includes psychology, sociology, philosophy, and cultural anthropology as integral components, and ultimately affords equal epistemological legitimacy to empiricism and phenomenology. Practitioners of this science will ideally embody not only empirical and analytical knowledge but also considerable psychological and spiritual self-awareness, coupled with the skill of compassionate scrutiny that can be applied both inwardly and outwardly. Such persons could draw on intellectual and introspective faculties, integrating insights from brainstorming and "heartstorming" modalities to penetrate beyond surface appearances and tap the dynamic roots of the ecological crisis.

A key component of this broader mission for environmental science is a serious inquiry into the human roots of ecological destruction. This calls for a new branch of environmental science that might be called "ecopsychology." Although ecopsychology would naturally draw upon psychology, today's mainstream psychology embodies the very epistemologies and ontologies that have helped to bring about the ecological crisis in the first place. Only a significantly advanced psychology can make a genuine contribution to environmental science. In preparing itself for the task, the first step for ecopsychology might be to declare independence—once and for all—from "physics envy," and develop its own methods and data as guided by the nature of the human psyche. The next step would be to acknowledge and integrate the crucial initial contributions from those schools of psychology—humanistic, feminist, archetypal, transpersonal—that have already brought significant new insights to bear on this vital field.

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NOTES

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