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HUMANISTIC PSYCHOLOGY AND ECOLOGY

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The whole universe together participates in the divine goodness more perfectly and represents it better than any single creature whatever. I)

IN THE DEEP RECESSES of our minds, we are aware that the threats to our environment are serious. The rays of the sun passing through gaps in the ozone layer are dangerous. The food chain is contaminated with pesticides, additives, and wastes. Water sufficiently pure to safely drink often is not available. Climate change has begun to wreak havoc with weather patterns as a small warning of what is in store for a planet overheated by greenhouse gases. The air we breathe, both indoors and outdoors, is saturated with harmful chemicals (Lappe, 1991). Even as these chemicals affect individual fertility, we continue to overproduce humans by offering no security and no hope for poor women other than the allegiance of their offspring. In the 12 years since the first publication of this *Handbook of Humanistic Psychology* we have witnessed changes of a magnitude that threaten the human potential for its most fundamental promise, ie, the right to continue life in the natural world we have known. The genetic engineering of food and the patenting of

seeds are removing accessibility of natural foods while obliterating the means of subsitence for much of the worlds population (Hauter, 2012). Moreover the speed in which global warming has accelerated has brought the world to a point from which predictable flooding, food and fresh water shortages, more rapic dislocation of people and violent struggles for resources will all become irreversible (Parenti, 2011).

We continue to kill 9 billion animals per year for domestic consumption in the United States and to diminish and extinguish countless rare species in wild habitats. We do this while conveniently ignoring that the practice probably is our single greatest cause of water pollution, waste accumulation, deforestation, and ozone depletion (Stepaniak, 1998). Rainforests and coral reefs, the remaining sources of protection for the diverse species that have made complex forms of life possible, are rapidly being contaminated and destroyed. We know that we have too many people for the resources of this planet to support in a way deemed the model for a successful style of life. We know that our inability to manage the wastes of our appetites and our greed are being borne disproportionately by people of color and people who are poor (Bullard, 1995). Yet, the cancer prevalence rates tell us that even wealth cannot protect us. We also know that the settings of beauty that are a source of our spiritual renewal are being lost. We are able to move mountains and change the course of rivers, to venture into space, to turn the genetic blueprints of living things into salable commodities, and to unleash the power of the nuclear genie in ways that can end all of civilization and all of life. We can incarcerate millions and control the behavior of large segments of our population. However, none of these products of our ingenuity and our avarice has made us feel safe or made us accepting and appreciative of our place in the universe (Gottlieb, 1999).

That place is offered by Gaia theory, a model of how the planet works. Lovelock (1979) hypothesized that the earth's highly reactive mix of carbon dioxide, nitrogen, and oxygen could be retained only through the continuing activity of living organisms. Life, in fundamental ways, influences its own environment. With this hypothesis, we may examine the "vital signs" of the planet, note the imbalances, and act as stewards in its restitution. That role of steward is honored more in the breach than in the observance.

Deep down, we are aware that the social constructions we have created to tell us what is real and what is of worth describe a world that holds little promise to nurture either human or nonhuman well-being. This is so precisely because the constructed patterns of thought permit abuse of the settings that should be cherished if they are to remain a source of renewal.

PERSON AS PRIORITY OR AS INSEPARABLE

Humanistic psychology has had an unclear relation to ecological psychology. On the one hand, humanistic psychology places a predominant value on the potential for individual development. It values the diverse human experience and the ability of the human mind to transcend its mundane surroundings in creative and profound ways. So deep is the regard in humanistic psychology for human experience and development that it has sounded the call for new methods of study distinct from those considered acceptable to study all nonhuman forms. So constraining has the earlier scientific effort been on the study of human behavior that the humanists have called for distinct methods (i.e., human sciences) to capture experience in all of its subjective splendor. This has led to an emphasis on a variety of phenomenological methods aimed at getting, as closely as possible, inside the shoes of other humans. Humanistic psychology has, by default, left the study of all nonhuman forms under the rubric of objective science.

Ecological psychology, on the other hand, looks on the separation of humans from other plants, animals, and the material world as artificial, misleading, and not prudent. From the ecological view, the most universal and highly valued symbols and images of the human mind derive from our capacity to glean, in small measure, the marvels and beauty of a sustaining universe and of our own particular niche within it. If these symbolic representations are an essential aspect of human fulfillment, then it is useful to consider an "ecological self" that embraces all forms of life and the feelings of unity that accompany such a self (Naess, 1986, 1989). Currently, psychologists' offices are flooded with anxious, depressed, confused, and lonely individuals who are seeking some explanation for their sense of isolation and despondency. The contemporary workplace, with its emphasis on incessant technological development, fierce competition, and individualism, has created countless victims. Such victims present a loss of existential meaning as well as physical health concerns due to the dramatic increase in toxic occupational environments (Edelstein, 1988). Traditionally, these people have been treated by well-intentioned yet uninformed psychotherapists. Therapists often exacerbate client suffering by addressing only individual and personal concerns. They fail to focus on ways in which clients may be reconnected to the broader human community and the natural environment so as to effect more sustaining and fulfilling ways of life. A few therapists have found the reintegration of clients into natural settings to be a powerful force, diminishing the emptiness provided by

the popular culture and rediscovering an abundant resource for health (Kanner & Gomes, 1995).

To the ecopsychologist, there is a hubris or arrogance to the assumption that humans stand on a separate and raised pedestal. The posture of being separate and superior presents, at best, an incomplete picture, concealing the interdependence of humans with the environment. Such separation also continues to help individuals relate to their environment as if the problems we bring to it do not require a dramatically different way of conducting our transactions with the natural order. If we will have to learn to live with significantly less consumption of meat, plastics, or fossil fuels; if we will have to be accountable for toxic radioactive or chemical wastes before we are permitted to produce them; and if we are to ensure that every person and community has the means to sustain itself before others are allowed to accumulate great wealth by exploiting matter and labor from distant sources, then we are envisioning more than a passive change in beliefs. We are envisioning a recovery from our addiction to modern society. Chellis Glendinning noted this well in her book, *My Name is Chellis and I'm in Recovery From Western Civilization* (Glendinning, 1994). Humanistic psychology needs a significant greening if it is to carry its weight in this transformation.

ECOLOGICAL SEEDS IN THE HUMANISTIC PSYCHOLOGY TRADITIONS

The seeds of this shift have been present in the vision of founding figures of humanistic psychology. Buber identified the "I-thou" relationship in which the recognition of the genuine value of the other contributes to the authenticity of the self (Friedman, 1983). For Buber, such encounters extended beyond human interaction. Buber's animism held that, ideally, one would relate to all of nature as though it were animated in a personal and sacred manner (Anderson, 1973).

The link between involvement with the outside world and optimal development of the self was hinted at in Maslow's (1971) description of the self-actualizing person: "Self-actualizing people are, without one single exception, involved in a cause outside of their own skin, in something outside of themselves" (p. 43). Deep respect for what is natural also was noted in Maslow's (1976) work:

> One finds what is right for oneself by listening. Similarly, one finds out what is right to do

> with the world by the same kind of listening to its nature and voices; by being sensitive to its requiredness and suggestions; by hushing so that its voices may be heard; by being receptive, noninterfering, nondemanding, and letting be. (p. 119)

Moustakas (1985) carried this theme by describing his meaning of *humanistic* to include "an authentic relationship to myself, to other human beings, to nature and the universe" (p. 5). The direction is carried further still in ecological psychology. Metzner (1999) described an ecopsychological worldview that values sustainability "of all forms of life and habitats, not just those of humans or one group of humans" (p. 3).

One stream of humanistic psychology has focused less on the separateness of human thoughts and feelings and more on the artificiality of the link between mind and body. Bodily functions now are clearly understood to be inextricably linked to mental ones. The healing power of potions, postures, and rituals now contribute to holistic health in the practices of even the more traditional deliverers of medical services. The popularity of such beliefs about healing also may contribute, in some collective way, to undermine the concerns of ecological psychology. Poverty, chemical carcinogens in the air and water, and patterns of work that induce excessive stress and preclude renewing experience with the natural environment all are matters that are not curable solely by the mental powers of the individual. Such phenomena are products of our collective activity and may be addressed only by our collective efforts.

THE SHARED CRITIQUE OF OBJECTIFICATION

There are, however, important places in which humanistic and ecological psychologies have formed common ground. One is in the critique of the ways in which science and technology have evolved. Whatever marvels they have created, science and technology have been used primarily to extend our mastery of an objectified nature. Every atom, cell, molecule, neuron, person, life form, acre of ground, and portion of the infinite universe is, for science, an object to be isolated, named, and harnessed for the purposes of those who sponsor the scientific enterprise. The enterprise has done well to establish the veracity of specific and invariant relationships among specific bounded things. It has done less well with the intricate interdependencies by which all things are interrelated to each other across time and space. Appreciation of such complexities more commonly lies in the world of the spirit. Such intricate systems still are matters for

reverence more than for immediate dissection, cataloguing, and control. The reverence is more readily recognized in cultures other than our own.

When Chief Seattle reluctantly accepted the Port Elliot treaty moving the Duwamish of Puget Sound to a reservation, he affirmed a spiritual conviction:

Every part of this soil is sacred in the estimation of my people. Every hillside, every valley, every plain and grove has been hallowed by some sad or happy event in days

> long vanished. Even the rocks, which seem dumb and dead as they swelter in the sun along the silent shore, thrill with memory of stirring events connected with the lives of my people. (quoted in Vanderworth, 1971, p. 21)

Contemporary psychology has made little room to accommodate sacred experience. But Metzner's (1999) *Green Psychology* takes all of the license afforded by humanistic and transpersonal inquiry to reweave a psychology that is consonant with the human relationship to the earth. Winter (1996) took on the more daunting task of rewriting the existing field of psychology to embed it in an environmental context. But these are exceptions. Psychology has, for the most part, reflected and contributed to a self-centered and objectified view of people that exists in the dominant culture.

THE PURPOSE OF LIFE

For the mainstream of contemporary culture, the purpose of life is development, growth, and mastery. The contribution of such attainments to individual fulfillment is not frequently questioned but surely is questionable. Those who have acquired great affluence do, in general, enjoy an advantage in better health and control of their lives compared to others (Adler et al., 1994; Marmot et al., 1991). However, the advantage is not ensured and, in fact, comes with a cost of denying how one's advantages contribute to the devastation of other persons and the planet. The advantage of well-being also requires a continued

dedication to maintaining the dominant goals. They must be persistently pursued because no degree of attainment or acquisition is sufficient to ensure one's position among potential competitors. The goals are maintained not only for oneself but also for all others who cannot attain these goals and feel only the intense pressure to strive for them and the dissatisfaction with their own attainments. For the poor, this often is accompanied by the scorn of others and the internalized scorn of oneself for failure to achieve the goals of consumption promoted constantly within the larger culture (Pilisuk, McAllister, & Rothman, 1996).

A competing worldview has persisted, not only in indigenous regions but also among dissidents who find the dominant course to estrange them from their communities (both human and natural). Those special connections have, throughout history, been considered more a part of the sacred world than of the secular world, for outside of the dominating addictive pressures to consume and compete, humans find a need to contemplate what is magnificent in the universe and in the miracle of life. For many, the purpose of human life has less to do with achieving higher productivity and consumption than with the contemplative wonder, love, and joy in the presence of what feels sacred (Cummings, 1991; see also the chapter by Elkins [Chapter 16] in this volume).

THE DEPTH OF OUR CONNECTIONS

We have evolved from living and nonliving materials. We know that our bodies bear the imprints of a material universe older and more dispersed than we are able to experience directly. This understanding has grown to include the minute components of the atom; the workings of the cell; and the effects of microbes, neurotransmitters, background radiation, geologic formations, and beyond our solar system to the understanding of quasars, pulsars, and the recent discoveries of stars in other galaxies with planets surrounding them. Although our comprehension of this universe is increasing, our understanding remains modest. Cognitive comprehension is a rather recent arrival in the scheme of an evolving universe. Our more sensory, more affective, and more instinctual attributes, however, contribute to a capacity for the appreciation of the grandeur of the natural design. Seasons bring rains and harvests, and sunlight brings warmth and nurturance. Members of living species reproduce themselves, consume resources, and provide resources for other forms of life. Injuries heal. The sounds of the oceans and wild rivers, of wolves and

songbirds, touch us deeply. Clouds, flowers, and the setting sun, in all their beauty, are recognized as gifts that rejuvenate the human spirit. It is perhaps paradoxical that the increasing complexities of modern life call on ever greater development of our capacities to categorize and to use our rational capacities to understand, master, and control our environment. At the same time, major segments of our life experience are further removed from their primordial roots. Freud (1962) noted this clearly:

> Originally, the ego includes everything, [and] later it separates off an external world from itself. Our present ego-feeling is, therefore, a shrunken residue of a more inclusive, indeed all-embracing, feeling which corresponded to a once intimate bond between the ego and the world about it. (pp. 15-16)

Whereas Freud saw this limitation as the necessary price for sanity in a civilized world, Jung (1971) observed this same phenomenon more positively:

> The more civilized, the more unconscious and complicated a man is, the less he is able to follow his instincts. His complicated living conditions and the influence of his environment are so strong that they drown out the quiet voice of nature. (cited in Campbell, 1971, p. 160)

HARMONY AND DESTRUCTIVENESS

Whereas our symbolic and often unconscious images provide an avenue toward appreciation of our connection to nature, Jung made another important contribution to our understanding of what the psyche brings to the environmental problem. What was and is natural in human nature is not entirely benign. The psyche includes attributes other than those that might cause us to live more harmoniously with our fellow humans or our environs. The concept of the shadow that Jung described represents a potential for destructive or selfish activity that is as fundamental a part of the human condition as is the capacity to care (Jung, 1969). The theme is elaborated in May's concept of the "daimonic," which is seen to underlie human potential both for creativity and for evil. We are indeed better able to deal with our knowing destruction of our ecology if

we recognize that the roots of our destructiveness lie not only in our ignorance of what is required to survive but also in our penchants to thwart what we understand to be moral constraints.

In his dialogue with Rogers, May (1984) confronted the Rogerian image of a better world. For Rogers (1984), the increasing unfolding of self-awareness went hand in hand with progress in building a more life-enhancing world. For May (1984), awareness included acknowledgment of our daimonic selves and the necessity to deal with such potentials rather than to hope for a utopian world in which only the potential for goodwill flourishes. The implication for ecopsychology is that survival of our species will take more than a realization, even more than an appreciation, of our great interconnection with our ecology. Surely, more of us will have to develop ecological selves in which the pain of the contaminated world is our own pain and the preservation of life in general gives meaning to our own lives. Even if we were able to reconnect to the joys and wonders of the natural world, the daimonic potential still would be part of us. Hence, we still are likely to always need institutions that hold us accountable for the damage we do to our world and to each other, just as we always will need institutional practices to heal and forgive those who have contributed so strongly to the devastation of the planet.

TRANSFORMATION OF CONSCIOUSNESS AND SOCIETY

The issue of what social changes are necessary for survival needs integration into the mainstream of humanistic psychology. It is too easy to join in the belief that we—our selves and our communities—are part of nature in the most profound way. It is immediately rewarding to touch the natural world and be touched by it. It is satisfying to engage in the effort to preserve one species of bear or one shoreline or to recycle one's newspapers and believe that our awareness is saving the environment. Such awareness may be necessary but not sufficient to avoid the horrors we would hope to avoid. Marien (1984) likened much of New Age awareness to a sandbox for adults, serving to remove them effectively from the need to engage in a political process. The lure of the sandbox is particularly great when the systems that perpetuate the destruction of our environment are entrenched, ubiquitous, and powerful. They include not only a global corporate decision-making process but also individual decisions to follow the daimonic and do less than we might do as actualized individuals.

The transition in consciousness and action to be bridged is at a point where humanistic and ecological psychologies converge. It is in the challenge to the basic assumptions about the world order that we have created. We still live in the shadow of the 17th-century philosopher Francis Bacon, who asserted, “The world is made for man, not man for the world” (quoted in Dumanoski, 1999, p. 7).

Our counterforce has derived from the romantic tradition, preserved by poets and artists who loved the redemptive power of nature but disdained the struggle to plan for the future. But the bomb, the domination of synthetic chemicals, and the degraded global environment are signs of an accelerating treadmill leading to dire consequences. Something more is required. The nature we have left to preserve is something different from the pristine world of the romantics. It is a nature that must find a way in which to survive with an already gross overpopulation. The debates between anthropocentrism and biocentrism do not engage the full social and political reality. We lack a coherent and compelling vision of a sustainable world order. We surely are in need of a vision of what science, technology, and business would look like. We also are in need of an ethic to replace rampant individualism. The pursuit of happiness needs to be replaced by the pursuit of compassion. Surely, the protection of individual freedoms has been wrongly applied to the protection of massive corporations to engage in free trade even as it prevents cultural preservation and environmental protection. We face the impact of globaI forces that curtail diversity and produce a “monoculture of the mind” (Shiva, 1994). If the machinery designed for the accumulation of wealth and subjugation of nature also is the fiscal monitor of political succession and public information, then the task of creating a new vision is large. If the self, wonderful and imperfect as we know it to be, is to have an actualized future, then it will have to be found in the effort to bring about this new vision.

The efforts of contemporary civilization have modified the face of this planet more during the past 200 years than all forces of nature have done during the past 2 million years. Indigenous peoples have lived in barely changing environments, and their lifestyles both required and reflected a more harmonious accommodation to forces of nature. The Miwok clan along the northern California coast lived with primitive tools to grind acorns into flour and to catch the abundant shellfish. They shared their temperate region with the giant redwoods, the salmon, the shorebirds, the gray fox, the grizzly bear, and the field mouse. Like these other residents with whom they shared the hospitality of the earth, they used it sparingly and peaceably with neither a word nor a concept of what later civilization has called *warfare.* And like the stunted pygmy

forests just north of them, their successive generations came and went with a measured stability.

> Civilizations came into being in Sumer, Babylon, and all other ancient places of the earth, only to recede into dust and forgotten decay. Troy, Mycenea, Athens, and Rome rose, flourished, and collapsed. Still the people along the shores of California lived out the measured, undisturbed course of their days. (Crouch, 1973, p. 16)

This extended stability reflected the inability to accumulate surplus and, thereby, to permit differences in wealth. It likely owed much to the benefits of cooperation in a hunting-and-gathering society, to the ritual reaffirmations of the bonds of people to their kin, and to their special niche in the ecology. Whatever its advantages or lessons for the rest of us, the arrangements proved fragile when the Spaniards arrived and corralled the Indians into large missions. The zealous effort to save their souls ensured the obliteration of the Indian way of life. Within a hundred years, it was gone.

POWER AS A FACTOR IN THE HUMAN POTENTIAL

Rogers (1986), May (1981), and (to a lesser degree) Maslow (1971) all were critics of the effort to aggrandize power and of zealotry. During his later years, Rogers saw with increasing clarity the need to prevent concentrations of power from precluding the opportunities for an unfolding of the human potential. After taking part in the Rust Conference—an international workshop created to extend the person-centered approach to political powers—Rogers suggested that the person-centered approach might be used to work against disempowering conditions. The person-centered approach, in his view, should be a catalyst with applications toward long-lasting solutions to problems of the political world (Rogers, 1986). During the present era of globalization, the concentration of power and its reach over every aspect of personal and community life have reached unprecedented extremes.

Life moves with a stressful speed. More and more time is spent in accommodation to the technologies we have created (Berry, 1983). We depend on technical experts for our food, transportation, and communication. The ideas we hold reflect the filtered flow of massive quantities of information released by powerful corporate sources. We are driven to be competitive so as to be part of an expanding economy that

uses the earth in wasteful and hazardous ways. In valuing people only for what they produce and consume, we exploit both people and regions mercilessly. The example of the rainforests is helpful.

The great forests of Europe and North America have been destroyed. Remaining rainforests are the lungs of our planet that, along with the dwindling coral reefs, provide home to the diverse life forms that are part of the miracle of continuing evolution. Although our scientists can—and some do—tell us of the rainforests' importance (and of their jeopardy), our ability to comprehend the urgency appears to require a willingness to hear the voices of others who live with a different cosmology.

For thousands of years, indigenous communities of Borneo have cared for their homes in the world's oldest rainforest. The forest has, in turn, provided them with the resources needed to survive. The complex relationships of this fragile ecosystem are endangered. Logging and oil palm plantations, ignoring traditional land claims of native peoples, are clear-cutting the forest at an unprecedented rate. The costs in depletion of the earth's oxygen and extinction of medicinal plant species are impossible to estimate. The costs to the inhabitants are apparent. Contaminated river systems and degraded forests have eroded the abundant resource base on which a resourceful people have depended for the past millennium. The local people of Uma Bawang have combined forces with an organization in Berkeley, California, to form the all-volunteer Borneo Project. It is using citizen diplomacy, outreach, direct assistance, and cultural exchange to monitor violations of human rights and land rights by networking with other international associations (Pilisuk, 1998). Mutang Urad, a leader of the Kelabit tribe in Sarawak, explained the importance of the approach:

> In our race to modernize, we must respect the ancient cultures and traditions of our peoples. We must not blindly follow the model of progress invented by European wealth; we must not forget that this wealth was bought at a very high price. The rich world suffers from so much stress, pollution, violence, poverty, and spiritual emptiness. The wealth of the indigenous communities lies not in money or commodities but [rather] in community, tradition, and a sense of belonging to a special place.
>
> (Earth Island Institute, 1997)

The model provided by this and other projects focuses on the preservation and rediscovery of what is sacred in the relation between the person and the planet. It should be seen as a current and appropriate model for meaningful self and community actualization. It provides an opportunity both for saving our planet and for finding our souls through a reconnection to the vast unfolding world in which our special gifts of understanding and compassion are needed (see also the chapter by Lyons [Chapter 46] in this volume). Interestingly, community , tradition and belonging to a special place offer opportunites for humanistic psychology to highlight an inherent link to the personal fulfillment experienced in the myriad of communities focused upon transforming into locally viable entities ,some growing abroad though microfinance and eco-tourism, many providing better food than supermarkets and some experimenting with alternative currencies (Hawken, 2011).

CANCER: THE CASE OF GREENING THE HUMANISTIC APPROACH

The case of breast cancer offers a metaphor for understanding the overlapping terrain of humanistic and ecological psychology. Breast cancer will affect 175,000 women in the United States in 1999 and will kill 43,000. The rates have been rising rapidly. Women born between 1947 and 1958 are three times more likely to get breast cancer than were their great-grandmothers at the same age (Batt & Gross, 1999). Humanistic

psychology has provided a freedom to look at the nature of lived experiences that affects the maintenance or the breakdown of human health. It has contributed to a type of treatment that makes some women better able to confront this awful disease and retain a decent quality of life while pursuing treatment. The images we hold apparently affect the workings of our bodies and our capacities to cope. They can be directed to healing and humanistically oriented programs, and they have become critical parts of cancer treatment (Robbins, 1998). Humanistic psychology has contributed the compassion. But something is missing. This missing element is a subject of ecopsychology that is less present in humanistic psychology. The rates continue to increase.

The reasons clearly are linked to the presence of pollution, estrogenic medications, toxins in consumer products, and carcinogens in the workplace. Breast cancer mortality in New Jersey was associated with closeness of residence to one of the state's 111 superfund sites. Breast cancer mortality rates in Israel increased every year for 25 years until 1978, when the government banned DDT, benzene hexachloride, and lindane. By 1986, the rate had dropped by a third for women in the 25-to 34-year age range. The first warnings of the current environmental disaster appeared in Rachel Carson's *Silent Spring* during the early 1960s (Carson, 1962). Carson died of breast cancer 18 months after its publication, and others are carrying her message.

General Electric, which manufactures X-ray machinery, supports early detection and mammography. The company also has been a major polluter. When it administered the Hanford nuclear weapons facility, General Electric released large amounts of radioactive wastes into the atmosphere and into the Columbia River. The company also was responsible for the massive release of PCBs into the Hudson River. The paradox of a company profiting both from activities that cause cancer and from the treatment of cancer is a repeated pattern. Breast Cancer Awareness Month was created by Astra-Zeneca in 1985. AstraZeneca is the world's third-largest drug corporation. Its message is "Get a mammogram." The British-owned multinational corporation is the producer of Tomaxafin, widely used in breast cancer treatment, and is the owner of the Salick chain of cancer treatment centers. Astra-Zeneca also produces herbicides and fungicides including the carcinogen acetechlor. Its subsidiary chemical plant in Ohio is the third-largest source of potential carcinogenic pollution in the United States. At the time when Breast Cancer Awareness Month was created, AstraZeneca was owned by Imperial Chemical Industries, a multi-billion-dollar producer of

pesticides and plastics that was charged by state and federal authorities with the dumping of DDT and PCBs into California harbors long after both substances had been banned.

Samuel Epstein, of the University of Illinois School of Public Health, noted the conflict of interest when a company that is a spin-off of one of the largest manufacturers of cancer-causing chemicals is in control of the treatment centers and the funding of cancer research (Epstein, 1979, 1998). Ranking officials of the National Cancer Institute often accept lucrative posts from the cancer drug industry. The American Cancer Society has, among its trustees, the president of a major drug company. It also has, on its board of directors, the vice president of American Cyanamid, and others on the board have ties to Dupont, CBS, Disney, and Boeing. In 1990, Armand Hammer served as chair of a presidential cancer advisory committee that advocated a drive to add $1 billion to the National Cancer Institute budget to help find a cure for cancer within 10 years. At the time, he also was the chair of Occidental Petroleum, which would have to pay millions of dollars to the federal government and to New York State for its culpability in the environmental disaster at Love Canal (Epstein, 1979, 1998; Proctor, 1996). The highly respected *New England Journal of Medicine* ran a position paper by toxicologist Stephan Safe belittling the evidence linking chemical residues to cancer without noting that Safe recently had received research funds from the Chemical Manufacturers Association (Safe, 1997). The journal subsequently reviewed Sandra Steingraber's book, *Living Downstream* (Berke, 1997; Steingraber, 1997). This book by a cancer survivor and scientist was labeled "an obsessive concern with environmental causes of cancer." The article did not note that the reviewer was a senior official of the chemical giant W. R. Grace, which was forced by the Environmental Protection Agency to pay millions of dollars for the cleanup of contaminated wells in Woburn, Massachusetts. The attention to Woburn, as to Love Canal, came only after the cries and organizing efforts in the local communities were sufficient to overcome the denials of both authorities and the corporate polluters (Brown, 1989). The struggle has been, as it has been for much of humanist psychology, how to contest a prevailing standard of scientific, technical, and corporate reality and expand it to include one reflecting the human experience. Kanner and Gomes (1995) took this issue one step further to challenge the role of psychologists in an increasingly consumerist society:

> When psychologists offer their services to corporations, their statistical skills and

> therapeutic insights are used to manipulate people for economic gain rather than to foster well-being. Yet, consumerism is so ingrained in American society that this outright abuse of psychological expertise receives no mention in the ethical code of the American Psychological Association. (pp. 82-83)

For ecopsychology, the reflection of human experience includes the fears for our children, the observations of bad air, the ability to see links between the odor of our water and the ailing pets and children, and the willingness to decide that assurances of acceptable risk should come with the question, "Acceptable to whom?" Steingraber, now a mother as well as a biologist and cancer survivor, advises women to breast-feed their infants. Nonetheless, she notes that this magical holy water filled with antibodies has more PCBs and more DDT and fat-soluble pesticides than would be allowed in other foods (Gross, 1999).

Terry Tempest Williams is a "downwinder," that is, a person who lived downwind from the site of nuclear weapons tests and, therefore, was subject to radiation exposure. She is a cancer survivor in Utah, where nuclear weapons tests at the Nevada site have left a trail of illness and deformity. Her writing on the clan of the one-breasted women confronted the official assurances with the reality of the experience of people who have been affected (Williams, 1998). She described the inner reality of her own surgery to remove a cancer of the breast. Her dreams compare the clear-cut forests with the breasts removed by the knives of surgeons:

> Where do the trees go? Where do the clear-cut breasts of women go?... Frozen sections are placed under a microscope while frightened humans await the word—malignant or benign. We emerge from close calls with mortality with an acute awareness of how much we want to live, to love, and to have more time on earth. But what disappears or dies, whether trees or breasts, is part of our story.... What do I do now with the open space in front of my heart? (Williams, 1999, p. 43)

The breast, a symbol across cultures of fertility and nurturance, provides the infant's starting relationship with its environs. That we have contaminated this fountain should provide a symbolic warning of what we

must do to reaffirm our place in the larger ecology. There is no way in which to protect this milk, or our air, water, and food chain, by individual changes of diet or by placing filters on our water taps and heat ducts. There is no way in which to prevent the environmental harm we cause to ourselves and other species by individual actions alone. However, it is not from fear alone that we must take part in a cooperative transformation of the destructive institutions of society. It also is to find joy in the actualization of our potential to survive and thrive for generations to come. The mission taps our spiritual needs (Warner, 19881989). Ecological psychology reminds us that our participation in this effort can provide the experience of awe, reverence, and connection to the surroundings of which we are a part.

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