

This is the arena in which conservation psychology has established itself and will continue to grow. As this fledgling field moves forward, I share the optimism of its founders. It has firm roots in psychology, and draws from all corners of that field's rich theoretical and research traditions. At the same time, it offers creative bridges throughout the social and natural sciences, as well as in combination with the arts, humanities and applied fields. Like its older cousin conservation biology, conservation psychology — by its title — tells you exactly what it is. This clarity of purpose is an invaluable asset for communicating its research and applied potentials, not only within academia but in all sectors. I truly believe that the combined contributions of conservation psychology and conservation biology are at the forefront of a growing family of interdisciplinary, solution-oriented approaches to complex environmental issues. *Human Ecology Review* has always welcomed this dialog. To now have an entire issue of the journal dedicated to the theme of conservation psychology is especially fitting.

It is unlikely that a sustainable and beautiful future will come from any single plan. Instead, it will result from debates between diverse interests, from compromises, unforeseen collaborations — and well-informed advocates. The education of this process is at the heart of conservation psychology. I have seen many students over the years combine studies in psychology and ecology with courses in planning, communications, management and policy studies. They have become educators, researchers, directors of non-profit organizations, and environmental leaders. Many of them might be considered — or consider themselves — conservation psychologists. But most have built their careers on their own, without clear institutional support or established academic programs. It is important for this situation to change. The time is ripe for farsighted institutions interested in bona fide interdisciplinary programs, at all levels, to seize this opportunity.

There is great beauty in mixing academic knowledge and human compassion — what Alfred North Whitehead called “the art of the utilization of knowledge.” Medicine is not the dispassionate study of human disease. It is and always has been a harmonizing of biological science and human sympathy. Environmental conservation is essentially an extension of this healing tradition. Instead of focusing on a human individual or group, its subject matter enlarges to include other species, critical habitats, significant landscapes, or even the sustainable potential for all future beings.

The history of environmental changes shows us that the motivation to protect threatened species or ways of life seldom comes from mere awareness of these situations. It also requires an element of caring. For known facts and established behaviors to change, they must be transmuted by new

values and insights. The psychological dimensions, in other words, are every bit as crucial as the scientific knowledge. Rachel Carson was a respected and careful biologist. She also loved nature.

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People to People: A Vital Component of People-Nature Relationships

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A long debate preceded the choice of the name “conservation psychology.” It was clear that this emerging field needed to be interdisciplinary. So why should it be classified as “psychology”? There were already fields focused on human-environment relationships, such as environmental psychology, ecopsychology, and human ecology. Should work be integrated into one of these existing fields rather than appearing to subdivide efforts further? No one had easy answers, but in her article on “The Emerging Field of Conservation Psychology,” Carol Saunders lays out the rationale for this new term. Fundamentally, the field of conservation psychology is intended to consolidate initiatives to understand human interactions with the natural environment.

Saunders acknowledges the complexity of this effort. She observes that:

Achieving more sustainable relationships with nature will basically require that large numbers of people change their reproductive and consumptive behaviors. In the grandest sense, such behavior change is the ultimate outcome for a science of conservation psychology.

She cites Paul Stern (2000) and Stephen Gough (2002) to the effect that there are a number of different dimensions to pro-environmental behavior, each requiring different sorts of analysis, explanation and intervention. Stern notes that there are meaningful and reliable distinctions between private-

sphere environmentalism in the form of people's purchase, use and disposal of products that have an environmental impact, committed activism such as active membership in an environmental organization, more passive but still important support for public policies intended to protect the environment, and people's efforts to influence the places where they work. There is some overlap between these different categories of behavior and Stephen Gough's argument that people operate with different rationalities — which may involve the same person acting according to competing rationalities, depending on the context he or she is in.

The consequence is that conservation psychology not only needs to draw together a constellation of disciplines and subdisciplines within a unifying "superfield" of study, but equally importantly, it needs to distinguish the different spheres of action that it encompasses. When we are interested in all actions that affect "more sustainable relationships with nature," this is a tall order. The ambitiousness of this goal does not mean that it should not be pursued; but it does mean that a significant commitment of people, funding and institutions will be required in order to demonstrate how different spheres of rationality and action function, in individuals and in groups, and how they interact. It is also critical not to forget the sphere of irrationality, where psychology has a history of particular experience.

This said, the major argument that I want to make in response to Saunders' article is that it is necessary to complicate the picture further. She notes that one reason why psychology has historically ignored environmental topics is that it has been preoccupied with people-people relationships. Very true. More than twenty years ago, I chose environmental psychology for graduate study because psychologists as a rule showed no more awareness of their physical surroundings than fish show awareness of the water that supports them until they are pulled up gasping on the beach (or so it seemed to me, according to my imagination of the inner lives of fish). Today, as humanity discerns the looming outline of its own potential beach landing, the situation has changed enough for conservation psychology to appear a viable, even dynamic, endeavor.

Acknowledging that conservation psychology has many topics to tackle, Saunders reasonably suggests that collaborative research should be organized around the outcomes that it seeks to promote, and she proposes two broad categories of outcomes that are likely to cover many of the questions that the field will raise: conservation behaviors and care for the natural world. The first involves behavior change toward more sustainable relationships with the earth and the second involves emotions, values and ethics.

All of this makes good sense. My concern is not what Saunders puts into her suggestions but what she leaves out.

She repeatedly describes the goal of conservation psychology as environmental sustainability, but she never mentions the second dimension of sustainability, in addition to nature protection, which has been integral to its definition since the publication of *Our Common Future* in 1987 — poverty reduction. Immediately following the much cited definition of sustainable development ("development that meets the needs of the present without compromising the ability of future generations to meet their needs"), this report notes that the idea rests on two key concepts: that there are limits to the environment's ability to meet present and future needs, and that the overriding priority should be given to the essential needs of the world's poor (WCED, 1987, 43). These two sides of sustainability were spotlighted at the Earth Summit in Rio de Janeiro in 1992 and again at the World Summit for Social Development in Johannesburg in 2002. Can conservation psychology be viable and leave one side of this equation out? In my view, it cannot.

There are two possible ways of looking at these two sides of sustainability. One way is to see them as two separate, disconnected paths: ecological sustainability that focuses on the protection of the natural world on one side, and social sustainability that focuses on the creation of a more just world on the other side. Saunders' failure to mention poverty reduction in her article implies this view. In this case, it is adequate for conservation psychology to focus exclusively on nature protection while poverty reduction, it can be assumed, will be left to the disciplines of sociology, political science and economics.

If, however, nature protection and poverty reduction turn out to be two sides of one issue, so that one goal cannot be achieved without attention to the other, then this bifurcated view is seriously limited. A growing body of research, as well as my own experience as I travel, suggest that the weight of the evidence falls here. As *The Jo'burg Memo*, a report of the Heinrich Boll Foundation in preparation for the World Summit for Sustainable Development, has summarized this conclusion, just as there can be no ecology without equity, there can be no equity without ecology (Sachs 2002). Ecosystems cannot be successfully protected without empowered local communities who understand how their well-being depends on a flourishing natural environment, and the poor cannot enjoy healthy and productive lives without safe and secure environments and access to sustainably managed natural resources. Given the current huge disparities between the levels of wealth and consumption between rich and poor nations and between rich and poor populations within nations, addressing both sides of the issue of sustainability will require a major commitment to the just and compassionate treatment of other people as well as the conserving and caring treatment of nature.

Attention to both sides of sustainability undeniably complicates the picture. But if these sides are inseparably linked, then pursuing one side alone will put the new field of conservation psychology in the condition of trying to run toward its goals on one leg. There are already good examples of how the two sides can be combined. Saunders mentions the research that has been conducted to understand the conditions under which people are likely to cooperate to collectively manage a commons (a natural resource system used by many individuals) (Ostrom et al. 2002). Because much of this work has been carried out in low-income communities where people's livelihoods depend on sustainable levels of local resources, many of the examples that this work describes are successful in so far as they address conservation and poverty reduction simultaneously. Related to this work are other efforts to put environmental protection and poverty reduction together, such as community-based wildlife management, the trade in non-timber forest products, and the fair trade movement. Psychology's experience related to individual motivation and behavior and social relationships has much to offer in all of these areas of study.

These areas of study can be potentially included within the fields of Human Dimensions and Human Ecology which Saunders mentions, but I am concerned that unless these components of sustainable behavior receive more articulated and focused attention, they risk being treated as tangential rather than central to the work of conservation psychology. Engaging with these areas is likely to draw in at least three other useful disciplinary allies — anthropology, political science, and ecological economics.

Attention to connections between poverty reduction and environmental protection will also require conservation psychology to broaden its focus on people-nature relationships by including people-people dynamics as well. Psychology's long history of studying social relationships is not at all irrelevant to environmental issues, even though the discipline's historical blindness to the physical environment has slowed the application of this heritage to efforts to address environmental problems. These people to people relationships have two facets. If one accepts the insight of the Frankfurt School of Social Research (and I do) that the exploitation of nature is part of a larger system that involves the exploitation of some people by other people through the means of nature (Held 1980), then one critical set of relationships that must be looked at are these people-environment-people systems. The dynamics of people-people relationships in dyads and groups may also have major environmental impacts further down the line.

I can illustrate some ways in which these components fit into the larger picture of conservation psychology through the example of three recent experiences. I spent part of the

summer of 2003 in Honduras with my daughter, who works with Friends of the Earth International and its partner organizations in Central America. Newspaper headlines and talk featured the recent killing of three environmentalists who were protesting the illegal but relentless logging of old growth trees in the Olancho forest reserve, one of the most important ecological reserves in the country. The government had declined to investigate their murder, rumor had it, because members of the army and legislature had investments in the timber companies that were benefiting. Unfortunately, this is not new news. A major cause of the devastation of natural resources worldwide is conflict between the motives of financial gain for the nation's elite, including members of government, and the mission of environmental protection. The people who sell off resources are thinking of the natural world, but only in the abstract terms of how many dollars it can bring in board feet or in barrels of petroleum, and how its extraction and sale are likely to buy the allegiance of powerful political allies. In countries like Honduras which have poor human rights records, people who protest these abuses face life-threatening repression, and the poor who live in the exploited region are also likely to suffer immediate impacts. The networks of people-people and people-environment-people relationships that these situations involve are more critical to their perpetuation than any direct people-nature interactions.

As my daughter and I traveled together, she talked at length about the human relationships that empowered or handicapped the operations of the different environmental groups with which she worked and their efforts to function together in a coordinated way. Although these groups' ultimate goals were social justice and environmental protection, their success depended to a large degree on the quality of these people to people connections, quite apart from the people-environment interactions to which activities were ultimately directed. As Steve Zavestoski (in press) has shown, the quality of these human relationships, in and of itself, has a major influence on people's membership and commitment to environmental organizations.

My final example originates only a stone's throw away from Saunders' office, from the Hamill Family Play Zoo that Saunders and her colleagues at the Brookfield Zoo labored tirelessly and creatively to bring into existence, which won the 2002 American Zoo and Aquarium Association Exhibit Award. A graduate student and I interviewed the "play partners" at this exhibit one year after its opening to the public. Their mission was to foster care for the natural world among children and their families — but they found themselves faced with this charge in the midst of the high pressure of crowds whose numbers sometimes climbed as high as 4000 visitors a day. Under these conditions, several of the veteran

staff had concluded that one of the most effective things that they could do was to push family dynamics in the direction of greater respect for children's interests and views. Children, they found, naturally showed fascination with animals and a readiness to observe and imitate animals' behavior in sympathetic ways. Unless parents and other adults respected their children's perspectives, however, this interest was likely to be ignored, in time crushed. I came to these interviews with the assumption that here I was going to focus on the children and nature side of my research, temporarily setting aside the work on children's rights and international development that I also pursue (e.g., Chawla 2002). Instead, what the play partners showed me was that children's rights — an adult-child/people-people relationship — was a central dimension of the child-nature relationship, as one of the key principles of children's rights is respect for children's views.

Having urged that the vision for conservation psychology should be widened beyond the focus on environmental protection and people-nature relationships that Saunders describes, I want to express my appreciation for what is present in the proposal she has developed. In seeking to add, I do not in any way want to appear to detract from what she has done. Those of us who have been with the emerging field of conservation psychology since its beginning know that Carol, along with George Rabb, director emeritus of the Brookfield Zoo, have been driving forces inspiring the rest of us and giving us a sense of common direction. If the field of conservation psychology flourishes, it will be to a large measure because of the foundation that they have constructed. Let us all — from the fields of nature protection, poverty reduction, and human rights — add our contributions.

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Creative Disciplinary Transformation and Forging a Planetary Psychology

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It is difficult to imagine a more important and timely document addressed to psychologists than Carol D. Saunders' manifesto for Conservation Psychology. I will not try to deal with the substantive reasons for why such a call-to-arms is needed, because those are well expressed in Saunders' chapter. Let me only focus on a few points where my own expertise might help achieve the goals she proposes.

On How to Establish Conservation Psychology

First of all, I applaud the two-pronged approach Saunders outlines. A conclusion I have drawn from my own studies of creative changes in history — what Thomas Kuhn (1970) has called "paradigm shifts" — is that such changes occur when three of the sub-systems on which disciplines are based are well aligned. The first is what I have called the *domain*, which includes the knowledge specific to a discipline. The second is the *field*, which includes the gatekeepers of the domain. And finally the third component consists of the *practitioners* of the discipline who introduce novelty into the domain, which is then either accepted or rejected by the field (Csikszentmihalyi 1996, 1999). If these three sub-systems are in a favorable synchrony, the change will be adopted by the culture.

Saunders' strategy is to enrich the knowledge base of the social sciences with new content (thus transforming the domain), and at the same time to develop a network of scholars and practitioners bound together by a common concern for sustainability (thereby transforming the field). If these two components of the system are in place, then we might expect the third component to come on line — young scholars who are attracted by the emerging domain, eager to contribute to it and become part of the field. There is no question that this will happen, if the first two steps are well planned and followed with persistence.

But how to build a new domain, and a new field? There are several historical models one could follow. A recent example I have first-hand knowledge of has been the launching of the *superfield* (to follow Saunders' usage) of Positive Psychology. When Marty Seligman and I decided to try tweaking the discipline of psychology away from its almost exclusive focus on pathology, we made a few strategic decisions that, at least in these few years since their application, have been quite successful (Seligman and Csikszentmihalyi