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CONSERVATION PSYCHOLOGY / APA CONVENTION ABSTRACTS

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NEWSLETTER NEWS:

PEPB is an unrefereed forum for the sharing of news, ideas, and opinions in population and environmental psychology. Opinions are those of the authors, and do not reflect the official policy of Division 34 unless explicitly stated.

From the Editor: When I took this position three years ago, I set myself the goal of providing a focal point for Division activity, one that everyone could access without travel and that would archive our interests and opinions. I hope you've enjoyed reading it as much as I have putting it together: The opportunity to encounter so many people, such varied interests and ideas, has been ample reward for minimal effort (about 6-7 days a year). Valedictory thanks to all who've contributed to this issue and others during my term: Robert Gifford, Robert Sommer, and Marie Harvey (Div 34 Presidents), Greg Wilmoth and Margaret Topf (Secretaries), Peter Walker (Treasurer), Barbara Sommer (Webmaster), and Stevie Wilson (APA Printing Services). It's been fun, but now it's time for another point of view to guide our journal of interests and issues. I'll take a break from Division 34 volunteering, but I'll still be around at jennifer.veitch@nrc.ca.

FEATURE ARTICLES

What is "Conservation Psychology?"

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What is "conservation psychology?" How is it similar to or different from environmental psychology, ecopsychology, and other subfields of psychology?

These questions have been discussed extensively over the past year. At the International Symposium on Society and Resource Management (ISSRM) in June 2000, Gene Myers and Carol Saunders organized a series of sessions under the general theme of "conservation psychology". Over 35 papers were submitted, and they addressed a variety of topics related to understanding how and why people care for the natural world. Participants also discussed how to build a professional identity for psychological research about conservation issues. Conversations about "conservation psychology" continued at the American Psychological Association (APA) meeting in August 2000, and on the Conservation Psychology listserv, formed in September 2000 (directions for joining the listserv are given at the end of this article). The general feeling from all of these discussions was that a growing number of people are studying the connections between psychology and conservation issues, and more specifically how to influence human behavior to protect the environment, but we have not had a cohesive community, nor a clear professional conservation-oriented identity. Many people expressed the desire to have a clear identity for this sort of value-driven research.

While most people agreed that some term was needed to encompass research aimed at encouraging conserving behavior, there was a lively debate over whether a new field was needed, how broad this new field should be and what this new field should be called. Some people felt that research aiming to encourage conservation was already encompassed by environmental psychology, and some felt that ecopsychology encompassed this type of research. However, other people felt that these existing fields carry "baggage" that would interfere with creating a new, scientifically credible identity for conservation-promoting psychology. Some people felt that "environmental psychology" has too much of a connection to built environments, focuses mostly on the impact of

environments on people and not the other way around, limits the interdisciplinarity (at least within psychology) that many people felt conservation-promoting psychology should include, and does not necessarily imply promotion of conservation. Since environmental psychology is already a theoretical sub-field of psychology, some people felt that it was not an inclusive enough label for research from all areas of psychology aimed toward promoting conservation. "Ecopsychology" encountered criticism that it is not perceived as scientifically rigorous, and thus would not be a positive affiliation for many psychologists. Similarly, ecological psychology faced the problem that "ecology" in the psychology world already implies connections between people, not anything pertaining to nature (actually, "nature" in the psychological world faces the same problem).

One key aspect of the debate was how broad the new identity should be. Some felt that it should be broad enough to include anyone interested in the relationship between humans and nature, even people not doing research. Some broad labels were suggested, including "mind-earth connection", "conservation and society" and "human-environment relations studies". Everyone recognized that broad multidisciplinary efforts are needed to solve conservation problems.

However, other people felt that to be a meaningful professional identity for psychologists, the new identity should be more exclusive. Specifically, the field should employ research methods recognized as rigorous by most psychologists, and should be based on psychological theory. Some specific labels suggested included "pro-environmental psychology", "psychology of sustainability", "conservation behavior", "ecological psychology", "nature psychology", and of course, "conservation psychology".

In the end, there was not consensus on exactly what the name should be. However, most people agreed that the name should at the minimum clearly convey the message that it refers to psychology about promoting conservation. Also, many people agreed that the name should not carry "baggage" because it already is used to describe something else. The names that seemed to receive the most consensus were "psychology of sustainability" and "conservation psychology". "Environmental psychology" and "ecopsychology" had some strong proponents, but also equally vocal opponents, who felt that they already carry pre-existing connotations that would be misleading. Some people felt that "conservation" carries a "wise use" connotation, but many others argued that it is equally, if not more, associated with things such as "conservation biology", the "International Union for the Conservation of Nature", and so on.

Another suggestion was raised to work from successful models of other value-driven fields. For example, conservation biology was formed by biologists wanting to apply their work to promoting conservation, and its title clearly specifies that goal. Similarly, health psychology aims to promote healthy behaviors, and that goal is similarly clear. Given that "conservation biology" is already a well-known applied field, and the naming convention in psychology is "[specific field] psychology", we suggest that conservation psychology is a very clear descriptor for a new field.

Beyond the naming issue, people seemed to disagree about exactly what is needed in terms of a professional identity. Some

people felt that this would include a new organization, sub-field of APA, etc, while others felt that simply agreeing upon a name and staying in touch with colleagues through email and conferences is adequate. Forums such as the listserv, this newsletter and conferences are facilitating dialog among researchers and practitioners about a new identity for conservation-promoting psychology. I look forward to the continuing discussion and to a future in which all areas of psychology take an active role in contributing to solving pressing environmental problems.

To join the Conservation Psychology listserv send a blank message to conservation-psychology-request@umich.edu with the word SUBSCRIBE as the subject of the message. Alternatively, you can join the listserv at the following website: <http://listserver.itd.umich.edu/cgi-bin/lyris.pl?enter=conservation-psychology>

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Some Issues to Consider in the Role of Psychology in Conservation

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What is needed to maximize psychology's contribution to problems of conservation and sustainability? Underlying discussions of the idea of a "Conservation Psychology" are some deeper issues. While the resolution of some of them might point toward a new area of interest, in other cases, the conclusion is more ambiguous. Selectively incorporating comments from the Conservation Psychology listserv, and some literature, below are three matters (among others) to consider, with possible contrasting positions outlined. In concluding, I will offer my perception of what Conservation Psychology might be with reference to these issues.

1) Is what is needed the "greening" of psychology - the application of existing knowledge and theory from all areas of psychology to problems of sustainability?

Yes - Apply all areas of psychology to promoting conservation: Environmental problems pertain to human behavior, and all areas of psychology enlighten us on this. To gain the most practical applied value, psychologists should collaborate as the situation demands, just as have biologists in conservation biology, or cancer biology. Research from not obviously 'environmental' areas of psychology have made contributions--for example, work on social trust, media effectiveness, community processes, risk, and attitude-behavior research. Our minds must be open to whatever psychological processes are relevant in a given problem. To expand participation by all psychologists, it is not useful to have an exclusive conception of whose contributions are valued. We should not seek to be a new subfield of environmental psychology, but to indicate a broad focus to which all psychologists could contribute. Possibly very many might then be motivated to change the image and contribution of their field.

No - Expand environmental psychology to include all applications promoting conservation: Reser observes that the "greening" of psychology has more to do with a "professional value stance and societal commitment, not an identifiable corpus of theory, research and application." At stake, he points out, is that "it then it need not be taught as a separate subject, nor is any particular expertise needed." A grounding in environmental psychology (EP) is one possibility for such particular expertise. Promoting EP is critical especially in legitimating this interest within psychology itself, since EP is already established and has an institutional presence. This might also bolster the somewhat marginal status of EP. Of relevance to the question at hand, Reser notes that "EP... has consistently and very successfully sought to integrate and synthesize the approaches and findings of other areas of psychology in addressing transactions between people and settings." It should further endeavor to disseminate its findings to all relevant audiences. One comment on the CP listserv was that perhaps EP has now grown to the point of needing subfields. Another argument might be that greening psychology is inadequate because practitioners need to be at least literate in intersecting areas of natural sciences, beyond psychology per se.

2) Should psychologists attempt to maintain a clearly psychological character to their contributions to solving environmental problems?

Yes - Psychology is central in contribution and identity: The question must seem moot to psychologists (to the extent they feel clear on the definition of psychological content). Psychological theory and methods are what we have to contribute. Reser (under review; 1995) observed that as social scientists move into the environmental arena, "much of the social presentation and representation of environmental psychology is being promulgated by non-psychologists." The same is even more true of the vague and wide-ranging concepts in environmental discourse more broadly. Psychologists should use their talents to do better, and be sure to be heard. A definite academic identity is marketable, and offers individuals career tracks in present institutions. EP has enduring associations with many areas of great relevance to resource and people managers. Such association is enough; we needn't try to become like our other-disciplined collaborators. If something really broad and interdisciplinary is wanted, it should not be called psychology of any kind, but psychologists could be free to participate. If it is defined broadly to begin with, psychologists who want to communicate with psychologists will soon feel swamped with very wide-ranging discussions.

No - Psychology is useful, but we should avoid "disciplinolatry": Disciplines encourage fixation on abstractions as opposed to reality, and disbelief in anything not amenable to the recognized methodology of the discipline. In any applied situation, it will not always be clear what is 'psychological' and what is not. The individual level of analysis is not characteristic of all psychology, and certainly organizational-level processes determine important environmental impacts in reality. Conservation biologists rely on multi-disciplinary networks of partners to solve on-the-ground problems; in such contexts, maintaining purity of disciplinary heritage is less important than knowing and exploiting intersections with "adjoining" social

sciences. Cutting-edge research may take place in new problem-spaces such as work integrating human and natural sciences in tracing patterns of landscape modification. The existing applications of psychology have not gone far enough to bridge the gap with resource practitioners, and this adds to the marginalization of these contributions. Psychologists need to be ready to blend their subject matter with economics, management, etc.: use their knowledge, but forget "who they are" in disciplinary terms. One commenter suggested we "might follow the lead of Conservation Biology, which appears to have embraced groups quite far afield from its departure point." As another listserv comment put it, "environmental problems transcend disciplinary boundaries and understandings." Others went even further in their characterizations of the needed interdisciplinary field.

3) Should research in this area be driven (at least in part) by "values," "mission," or "agenda"?

Yes - Research is value-relevant, and research agendas should be value-directed: If we wait for all the basic science to be done (and then by some inscrutable calculus, for it to be synthesized and made available at every relevant practical choice), it will be far too late. The alternative is to focus research programs and money at areas of pressing social need. The statement of the Task Force On Psychology and Environmental Problems (Cvetkovich and Wener, 1994) represents an excellent step in the right direction. More broadly, as Meffe and Carroll, in their Conservation Biology text note, science for conservation must become "post-paradigmatic." Research must be less driven by predominant disciplinary theories and critical questions, and more by integrative assessments. The intersections of values and research are varied. Many would be uncomfortable with the implication of partisanship, but this is not essential. The health field is value-driven, but this doesn't affect the objectivity of studies determining the effects of alternate treatments of an illness. In the environmental arena, the key may be defining analogous areas of social value consensus. Even without consensus, however, values may simply guide the choice of research foci, after which they do not enter the equation. On the other hand, some researchers are critical of what they see as an artificial and distorting fact-value split in scientific ideology. This applies especially in certain areas where the nature of the subject matter requires that researchers must make some preliminary value commitment. This acknowledgment has been strongly made moral development theory (Kohlberg; Haan). Arguably, work on the development of non-anthropocentric morality may of necessity make such commitments also.

No - Research must be value-neutral: There is a slippery slope here. Even with "consensus" values, such commitments may strongly bias the selection of models and variables. The environmental field is not like the health field; even anthropocentric values are not widely shared, and their enactment is open to interpretation. As scientists, psychologists are committed to objectivity in their work, and the best way to ensure this is to work from existing bodies of knowledge, even in the selection of problems. Psychologists may be invited to make their contributions to applied problems, but must be scrupulous about maintaining their objectivity. The objectivity

of environmental scientists receives unusual scrutiny precisely because of issues of social trust and fairness. Legitimacy depends on this; otherwise we might as well become political advocates.

4) Is a new field, with a new name, needed to foster the changes (or lack of changes) implied in any of the positions above?

Yes - A new name (Conservation Psychology) is needed: One listserv contributor suggested, "A field that has a name has an existence, and is more likely to prompt both new research and the integration of relevant studies by a disparate group of researchers." Another noted, "Whatever it is called, I am delighted that this vehicle now connects me with others with similar interests." Indeed, sometimes a new start is needed to catalyze action, and EP, for whatever reasons, is not perceived as a place to gather by people not already identified as EP'ists. Admittedly, a new field has to be careful about the "baggage" of possible new names, but old names (including EP) are not without their ambiguities and misperceptions. The first contributor summed up the feelings of several when she later stated, "I certainly recognize that existing journals, societies (such as Society for Human Ecology), and divisions (such as 34) serve me and my interests. But it would be nice to be able to tell people, "I do research in X" or "I teach a course in X" and have the term be understood; to perhaps see publishers listing books in the field of X... even to have a search term that could be used in PsycInfo (ever try to look for "nature" on the database? Don't.). To be effective, such a term has to have some consensus behind it."

No - An existing name (Environmental Psychology) should be employed: The change should be not in the form of a new discipline or field, because of the "institutional necessity of being recognized by an established discipline rather than existing at the margins of several disciplines," but some kind of alternative way of coming together is needed. EP could, and should, undertake a new effort to advertise itself as friendly to these efforts. It has indeed already served as the banner for many researchers and their contributions to promoting conservation and understanding the relations of humans to both natural and artificial settings. (See the responses to Robert Gifford's Jan. 1 challenge to Div. 34 members to show that green psychologists (by any name) can make a "significant difference in solving large-scale or global green environmental problems," or any number of other EP sources.) If one looks at the struggles and extended effort by those in EP to gain greater recognition of the problems it carves out, one might hesitate at starting anew with a related topic. Instead it makes more sense to join and strengthen it. New entities may become just the 'turf' of yet another group; better for existing groups to overcome territoriality and be broadly open to others, ending that cycle. A new name means a new identity and entity, and will only persist if there is enthusiasm and endurance.

Conservation psychology: My sense of what CP is about can be located within these alternatives fairly clearly. On question 1), CP takes the greening psychology position, seeking expanded participation and greater synthesis. Though not conceptually a subfield of EP, it would naturally find great affinity with EP, and would draw on its knowledge base. It

would draw in other varieties of psychologists, including researchers who stress other aspects of sustainability that EP traditionally emphasizes, and incorporating more focus on natural environments.

On question 2), CP is strongly allied with the first position, though in specific projects psychologists would need to work closely with other disciplines. CP is application oriented, but also embraces foundational questions that are psychological in character (much as has EP). It arises from a desire by psychologists for a way to use their training, tools and perspectives to contribute to 'greening' psychology, and to making more of a difference in society.

On question 3), CP follows the first position, though those drawn to it feel a strong need to maintain high standards in research. Ethical inspiration is not antithetical to good research; indeed, some studies find it is integral. On question 4), CP does wish for another name, if nothing else, as a channel for new energy. After some debate on the listserv, "Conservation Psychology" seemed to emerge as the name of choice; or perhaps one could say a definite community was crystallizing around that term. (In my reading, the best alternate to arise was "Psychology of Sustainability.") Although most involved would not want to conceptualize CP as a subfield but rather a problem focus or area of study, there is clear openness to considering natural and strategic alliances and resource sharing. Gestures along these latter lines were offered in the on-line discussion by Robert Gifford and Carol Saunders, respectively from Div. 34 and the group promoting "CP."

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Situating and Representing Psychology, Environmental Psychology, and Conservation vis-à-vis the Natural Environment and Other Perspectives and Disciplines

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A number of events and initiatives have lead to the emergence of 'conservation psychology' as a topic of particular interest and salience. These have included the special issue focus of the May 2000 *American Psychologist* on 'environmental sustainability' (Oskamp, 2000), the program of forum, workshop, and paper sessions relating to 'conservation

psychology', which took place during the Eighth International Symposium on Society and Resource Management (ISSRM) held in Bellingham, Washington, in June of last year (2000), and the multiple consequent listserv discussions that have taken place over the past 12 months. Perhaps the most notable of these have been that concerning the nature and name of a mooted 'conservation psychology' interest group and area (conservation-psychology@listserver.itd.umich.edu) and the 'making a difference' challenge to environmental psychology communicated by Robert Gifford over the APA Division 34 listserv (DIV34@LISTS.APA.ORG).

It was heartening to see the coverage of psychology initiatives addressing environmental sustainability in the *American Psychologist*. As the flagship journal for the profession and discipline of psychology, it is critical that a journal such as this profile and convey the concern, involvements, and achievements of psychologists working on the environmental front. In the environmental arena this has important implications for professional credibility and responsibility as well as social relevance, with respect to what are some of the most critical quality of environment and quality of life issues facing contemporary societies. Far too many psychologists, let alone the public, are unaware of the nature, breadth and depth of psychological work relating to the natural environment and conservation initiatives, or the commitment and involvements of many 'environmental' psychologists addressing myriad and interlaced, local and global, environmental problems and issues.

The special issue was of particular importance in that it not only profiled the contribution psychologists are making, but by providing a window on ongoing work addressing sustainable environments, such coverage represents, communicates and explains what psychology has to offer to many nonpsychologists, particularly other professionals, practitioners, and social scientists. Indeed such an issue focus in a journal such as the *American Psychologist* or the *Journal of Social Issues* is often incorporated in course material, and re-cycled in multiple other information distribution and circulation ways, such that it has many lives and impacts. Similarly, the profiling of psychology and conservation at an international conference such as ISSRM is a very powerful vehicle for 'giving psychology away' as well as initiating much-needed cross-disciplinary communication and collaboration.

It is with respect to the issue of the representation of 'psychology and the environment' both within and outside of the profession that I write. While the articles and discussion and exchange has been enlightening, at points gratifying and validating, and no doubt helpful overall, I would like to make reference to several important and intertwined matters that have not really been addressed. These are:

1. That there is a need for psychologists to be particularly mindful of fragmented and inadequate understandings of psychology by other social scientists, professionals, and the public at large;
2. That these 'lay' understandings of the discipline and practice can reflect particularly problematic representations of psychology, and by association, psychology and the environment, and conservation psychology;

3. That public and other-profession understandings of *environmental* psychology are particularly fuzzy and flawed;
4. That problematic lay understandings, differing assumptive and paradigmatic disciplinary worlds, and very confusing 'environmental' discourses and domains may well frustrate the proposed cross-disciplinary initiative which has been mooted.

These matters are of critical importance in that effective conservation initiatives must be more multidisciplinary and indeed interdisciplinary (e.g., Salter & Hearn, 1996) in conception, language, undertaking, and understanding if any substantive gains are to be realized, as Stern (2000) and other authors and commentators point out. Few, however, have spelled out the prerequisite and mediating role of more accurate and adequate representations and understandings of psychology and environmental psychology to achieving genuine communication, collaboration, support, and convergence across disciplines and with respect to public understandings of science.

Psychologists must also be more aware of the credibility problem of social scientists working in the broad environmental domain, where psychology's scientific credentials and practical know how are deemed suspect and often irrelevant, despite the self-evident psychological nature and character of the people management and psychosocial impact character of most 'environmental' problems and issues, and the particular relevance of psychological measures and methodologies (e.g., Reser & Bentruppäumer, 2001). Here is not the place to deconstruct the natural-social science divide or the interpretive chasms which often lie between research findings and political and planning decisions, but we do need to realize that our effectiveness as professionals working on environmental issues and problems, and the potential for collaborative partnerships, is greatly eroded by widespread misunderstandings of our discipline and our practice, particularly as they relate to the nature, quality and sustainability of people-environment transactions.

This matter of accurate representations, and scientific and professional credibility, raises the issue of those many 'environmental' arenas often loosely confounded with 'environmental' psychology. These include 'ecopsychology' (Roszak et al., 1995; Roszak, 1993; Winter, 1996). Notwithstanding the considerable and counterbalancing strengths and commitment of ecopsychology, as a broad and multidisciplinary arena in which to undertake 'good work' (Reser, 1995), 'ecopsychology' does not travel well in natural science and resource management contexts, and further erodes a clearer understanding of environmental psychology generally and that area of environmental psychology particularly focused on the nature and quality of human transactions with natural environments, and the mutually reciprocal impacts which accompany such encounters. This somewhat specialized area of environmental psychology is itself quite diverse, ranging from many aspects of natural resource management, to human-other species interactions, to restorative environment orientations and emphases, to natural environment interpretation and education, to leisure studies and outdoor recreation, to environmental impact assessment and indicator development. Almost all of these areas of research and application are reasonably distinct and different from popular culture understandings of

'psychology and the environment' and they are considerably removed from the constellation of largely non-discipline-based perspectives popularly known as 'ecopsychology'.

It is important to appreciate that the adjective 'conservation' in front of 'psychology' conjures up very different understandings for differing disciplines and interest groups. Unlike conservation biology, conservation psychology suggests that human attitudes, concerns and behaviors are center-stage, and that part of the conservation problem and challenge has to do with how people think, feel, and act. The term 'psychology', however, unlike biology, encompasses lay psychology and popular culture notions, understandings and representations. It is also undeniably the case that everyone is 'a psychologist', with the ubiquitous consequence that the critical contribution of a science of human behaviour is somehow marginalized and undervalued in this context. Perspectives and labels like ecopsychology appear to comfortably and congruently bridge and integrate the discipline and practice of psychology, natural science, and everyone's psychology. As well, the very sense of 'conservation psychology' is very congenial to these sentiments and syntheses, and the behavior change platform of the environmental movement generally. All of this can lead to considerable confusion and an arguably counterproductive and exhausting circus of misconstrued interests, expertise and agendas. From personal observation and participation at a number of recent 'conservation psychology' sessions at multidisciplinary conferences over the past 18 months, it was clear that the 'conservation psychology' tag drew many interested participants, ranging from comparative psychologists, to foresters, to conservation biologists, to landscape architects, to natural resource managers, to those seeking a more spiritual path and connection. In almost every instance those individuals with a more biological or ecological background who had come to learn about the human side of protected area management or endangered species recovery programs became visibly uncomfortable and often left before the session was over. In many instances their perception and understanding of 'psychology' was appreciably and negatively impacted.

One of the underlying problems and tensions in this discussion about a name and common reference point is that this is much more than a taxonomic, descriptive exercise. It relates to the 'paradox' of environmental psychology, the challenge of interdisciplinarity, professional and group identity, and the intertwined issues of managing the discourse of environmental management on the one hand and representing and communicating what this group and focus is about on the other. The name 'conservation psychology' adequately addresses most of these concerns and it comes with little baggage. It is up to us to ensure that the name both allows for a meaningful professional identity and reference within psychology and environmental psychology, while fostering transdisciplinarity and interdisciplinarity. The reality is that the name, like 'environmental psychology', will always be used in two senses, as an inclusive descriptor of an interdisciplinary space occupied by many players interested in individual and societal transactions and reciprocal impacts with the natural environment, and as an important and coherent domain within psychology and particularly environmental psychology. This

latter emphasis is not about disciplinary preciousness. It is critical to training programs, textbooks, recognized expertise, accreditation, research funding and the political and professional realities of universities and real environments. It is also critical to a more effective and accurate representation and communication of environmental psychological work relating to natural resource management and conservation issues across the board.

It would be of particular value, in continuing discussions and explorations of 'conservation psychology', to situate and characterize the nature and contribution of psychology and environmental psychology in an encompassing multidisciplinary context. There must also be a genuine acknowledgement and addressing of the nature of societal constructions, representations and understandings of 'conservation', 'sustainability', 'natural', 'environment', 'values' and perceived threatening processes and how the discourses of scientists and the public can best be managed and reconciled (e.g., Grauman & Kruse, 1990; Harre, Brockmeier & Mulhauser, 1999; Reser & Bentrupperbäumer, 2001). 'Psychology' is of course a prime candidate for deconstruction. Clarification of what disciplinary areas cover, what terms mean, what work is being undertaken, and a canvassing of possible new fronts and multidisciplinary initiatives and exchange would be of particular value.

Each of us works in very different contexts, often with reasonably impaired vision, and a mapping exercise of what is happening where in the broader context of psychology and the environment, and with what effect, would be of enormous value. The papers and discussions to date, collectively, provide something of a vantage point, but interested and attentive readers might still find themselves a bit lost with respect to where their own and others' professions are at, what has been done and/or is ongoing, and what can realistically be accomplished. The exchange which is taking place, is, of course, fruitful and promising, and deserves strong commendation. What could happen and what must happen may well require, however, a more reflective appraisal of how others see us as well as how we view ourselves and our discipline.

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Using Conservation Biology as a Model for Thinking about Conservation Psychology

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Thoughts about conservation psychology could benefit from a historical look at the origins of environmental psychology and conservation biology. Both of these fields were created to be holistic, synthetic, eclectic, and multidisciplinary. We invite the readers of this newsletter to offer insights from environmental psychology. For the purpose of this article, we would like to focus on lessons to be learned from conservation biology.

Conservation biology was originally conceptualized as a crisis-oriented discipline, with the goal of providing principles and tools for preserving biodiversity (Soule, 1987). An interesting parallel was made to the crisis discipline of cancer biology in a diagram published in *BioScience* (Soule, 1985). Both cancer biology and conservation biology were described as being oriented to a mission, and their research questions and methods were derived from a broad range of fields, including both pure and applied disciplines. For example, some of the things contributing to cancer biology were cell biology, molecular biology, immunology, oncology, medical ethics, clinical practices, pharmacology, epidemiology, and virology. Meanwhile, the following areas contributed to conservation biology: natural resources fields, genetics, population biology, physiology, island biogeography, historical biogeography, hazard evaluation, veterinary medicine, environmental monitoring, ecophilosophy and the social sciences.

Within conservation biology circles, there has been a consistent awareness that biological knowledge alone is not sufficient to solve the problems this discipline has set for itself - nor those faced by conservationists generally. As a result, conservation biologists have pondered how best to provide training for professionals in their field. Among the more recent commentators on this issue have been Cannon, Dietz and Dietz (1996), Noss (1997), Meffe (1998), and Jacobsen and McDuff (1998). Lidicker (1998) points out that conservation biologists cannot easily be schooled as interdisciplinarians in the standard

periods of schooling. They do need to be ready to face the recurrent human dimension challenges, but can they realistically be expected to know all the methods needed to understand and influence the human relation to other species? No; rather they clearly need to be prepared to interact with other specialists who know these territories in more depth. Lidicker concludes that "conservation needs conservation biologists for sure, but it also needs conservation sociologists, conservation political scientists, conservation chemists, conservation economists, conservation psychologists, and conservation humanitarians."

We have been suggesting the possibility that one such discipline - psychology - could produce (but has not yet produced) an effective applied focus that draws all of the resources within psychology to the service of a conservation mission. In much the same way that conservation biology recognized that a variety of fields within biology could contribute to issues of scarcity and diversity, a variety of fields within psychology can contribute to issues underlying the human aspects of conservation. Many contributions have already been made by social and environmental psychologists about environmental attitudes, values, and how to encourage environmentally-responsible behavior. It's not hard to imagine how developmental psychologists could focus on more research questions about how relationships with the natural world develop. Organizational psychologists could offer insights about how to promote pro-environmental values and inspire conserving practices within organizations. Clinical, health, and ecopsychologists could all contribute more to understanding the restorative and healing aspects of nature. Newer subfields of community psychology, gestalt psychology and transpersonal psychology all might provide promising ways of conceptualizing the relationship between people and the natural world. There are many other possibilities.

Environmental psychology could claim to already be doing all of the above, but is it? If it is, is there anything it could be doing better? Or should the part of environmental psychology that addresses the natural environment be enlisted more strongly in this applied effort? It is worth noting that as conservation biology was forming, there were arguments that a new field was not necessarily needed. Instead, the need arose because natural resources management failed to grow quickly enough to reflect the values espoused by Leopold and others (Aplet et al., 1992).

We believe psychology needs a way to organize an applied focus centered on conservation, and that conservation needs it to produce one. In our view, this focus should be defined around a more limited set of problems than any and all environmental. This 'conservation psychology' would complement conservation biology specifically. It would be driven by problem situations where humans are challenged to live in greater harmony with land and other species. One reason for the restricted set of problems is that these psychologists will have to be at least minimally conversant with the natural scientists with whom they work. Psychologists already in natural resource management, and some human dimensions researchers would be natural recruits.

Conservation psychologists would be conversant with sociologists, educators and communications specialists, economists, policy thinkers, and others. With each of these other

disciplines, it would have boundaries, albeit fuzzy ones. As psychologists, conservation psychologists would be concerned not so much with the distribution of responses in sociological survey data, but with the underlying values and beliefs, and how they may change or not change in individuals' lives. They might provide insight into the emotional charge latent in a policy proposal or in a network of cultural symbols deployed by various stakeholders.

Interestingly, conservation psychology might also spin-off some fundamental challenges to psychology itself. One reason psychology has been rather absent from the field of conservation is that the usual focus is on relationships between people, rather than relationships between people and the natural world. Yet we all know people are part of nature. As experts in human experience and behavior, psychologists should be leading the way in helping society develop more harmonious and sustainable relationships with the living environment. Part of the problem may be that the researchers interested in the interfaces between the social and natural sciences, and between the theoretical and applied worlds are too dispersed. Perhaps an umbrella term like conservation psychology can help facilitate some much-needed connections.

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Upcoming Conference on Conservation Psychology

Carol D. Saunders, Brookfield Zoo

There are many viewpoints about the fledgling concept of conservation psychology. There will be an opportunity to continue the discussions at a conference to be held at Brookfield Zoo, entitled "The Psychology behind Conservation: What inspires people to care about the natural world and act to save it?"

Why a zoo, you might ask. Over the past four years, Brookfield Zoo has been trying to better understand how people develop caring relationships with animals and nature, and the role that zoos might play in the process. We have invited environmental psychologists, educational researchers, developmental psychologists, human ecologists, and other social scientists to a series of Workshops and Think Tanks to assist us. Participants and advisors have included Louise Chawla, Ray DeYoung, Jane Elder, Jon Haidt, Roger Hart, Peter Kahn, Stephen Kellert, Robin Moore, Gene Myers, Nel Noddings, Judith Ryan, Herbert Schroeder, David Sobel, Michael Spock, and Cindy Thomashow.

The zoo would now like to host a conference with keynote speakers who could represent various potential areas of Conservation Psychology. Topics might include how humans value nature, the biophilia concept, the development of empathy with animals, identity and natural environment, significant life experiences and sources of environmental sensitivity, restoration ecology and community involvement, how to measure sense of place, the development of environmental moral reasoning and functioning, motives for environmentally-responsible behavior, the application of persuasion theory in environmental communications, community-based social marketing, and many others.

Funding for the conference has been secured, but the date, speakers, and details of the event are yet to be determined. If members of Division 34 have suggestions for how to approach such a conference, please contact Carol Saunders at casaunde@brookfieldzoo.org. We will post developments on the Division 34 listserv.

DIVERSITAS: What is Psychology's Role?

Kay Deaux, Ph.D.
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(This article first appeared in the March, 2001 *Observer*, the monthly news publication of the American Psychological Society, and is reprinted with permission.)

For most readers of the *Observer*, biodiversity (defined below) is not a subject of daily professional discourse and DIVERSITAS is an unfamiliar string of letters. Such was my state when I was invited to join a group called the U.S. National Committee for DIVERSITAS. In writing this column, I want to provide some information about the purpose and activities of this committee, and to ask APS members to give me information and suggestions that I can contribute to the committee's operations.

BIODIVERSITY: The variability among living organisms on several levels, including genetic variability within and among species, the variety of species within a region, and the distribution of species within ecosystems.

DIVERSITAS: An international program of scientific research established to promote and catalyze knowledge about biodiversity.

PSYCHOLOGY: A discipline that can contribute to the understanding of the human dimension of biodiversity, including the ways in which human behavior affects the natural environment in both destructive and constructive ways.

Bear with me while I describe some organizational background. There are several layers involved, as befits the global nature of issues relating to biodiversity and the range of participants.

DIVERSITAS, created in 1991, is international in its inception. The major goal of this program is "to promote and catalyze knowledge about biodiversity" around the world. (For more details on the background of this program, you can check out their website: www.icsu.org/DIVERSITAS.) Initial sponsors included the International Council for Science, the International Union for Biological Sciences, and the United Nations Educational, Scientific, and Cultural Organization (UNESCO).

In the United States, the National Academy of Science (NAS) is the representative body for the International Council for Science, and is responsible for developing the U.S. interests and representation in the global biodiversity program. Under the auspices of NAS, a number of national committees (or USNCs, as they are known) represent and advance the interests of the U.S. scientific community on the world stage. Typically, each scientific discipline has such a committee. Within the social and behavioral sciences, for example, anthropology, geography, and psychology each have their own national committee. For psychology, there is a 10-person USNC, currently co-chaired by APS Fellow Anne Treisman and Charles Spielberger. (As of July 1, 2001, Deaux and former APS Secretary and Treasurer Milton D. Hakel will co-chair the committee.) As with other disciplines, the function of psychology's national committee is to represent U.S. science on the world stage, build links to other national scientific communities, and develop projects that can benefit the larger scientific community.

In forming a DIVERSITAS committee, the National Academy turned first to the national committees in obvious core constituencies such as biology, microbiology, and ecology. More recently, the need to have behavioral and social scientists contribute to these efforts was recognized and new members were added to the original committee: one each from the national committees in psychology, anthropology, and geography.

That's where I came in. As a member of psychology's USNC, and as a social psychologist who might be able to link to some of the human concerns that underlie human choices related to biodiversity, I was asked to serve on the USNC/DIVERSITAS committee for the next three years.

The assignment is a challenging one: My background does not include much training in biology, and the activities of this program were unknown to me before I attended my first meeting. Further, as latecomers to the process, all of us who represent the social sciences are faced with the task of catching up to the train that has already been chugging along, developing its own momentum, agenda, and set of assumptions about what the goals and language of the program will be.

Beliefs about Environment

Given this background, what is the potential role for social and behavioral scientists? As in other areas such as health, we begin with the recognition that many biological outcomes need to be recognized as the outcome of human choice.

As Stuart Oskamp, an APS Fellow and Charter Member [and Fellow of APA Division 34], stated in a recent analysis, environmental problems "are all caused by human behavior, and they can all be reversed by human behavior" (2000, p. 375). In some respects, this statement may be too optimistic when applied to biodiversity. Many, many species and subspecies have already disappeared from the earth, due to the destruction of tropical rain forests, for example, and these species are unlikely to re-emerge.

At the same time, there is no question that the analysis of human choice and action and the design of appropriate interventions can change trends that promise further destruction. We need to know more about the beliefs and values that people hold with respect to their environment. We need to know more about the carrots and sticks, the incentives and fears, that affect decision making and that can be used to alter non-productive behaviors. And we need to know more about the role that group norms, superordinate goals, and commitment to the larger community can play in this domain.

In many cases, psychologists already know a great deal about the basic processes that undoubtedly are relevant to the concerns of biodiversity. However, relatively few people in our disciplines have directed their efforts toward linking these basic understandings to the specific problem at hand. It is my hope that in the work of the USNC, some of these links can be encouraged; that the knowledge we already have can be brought to bear and that new projects can be developed that will advance our understanding and our contributions to the program of DIVERSITAS.

A Call for Expertise

For me to contribute to this effort in my service on the committee, it would be very helpful if I could learn more from those who are already working on related problems. Many areas of research, such as the perception of risk, the identification of environmentally relevant values, and the development of commitment to community goals, could be relevant to the work of the committee in the future.

If you have already been working in these areas, or have been thinking about the connections between psychology and biodiversity, I would like to hear from you, so that I could call on your expertise in the future as programs develop. Please feel free to contact me, either by e-mail at kdeaux@gc.cuny.edu, or by regular mail (Kay Deaux, CUNY Graduate Center, 365 Fifth Ave., New York, NY 10016). Psychology's voice needs to be heard in these discussions, and I will be relying on our broad community to provide me with the script.

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Kay Deaux is Past President of APS. She is Distinguished Professor at the Graduate Center of the City University of New York and currently is a Visiting Fellow at Princeton University. Her research interests include gender stereotypes, social identification, and, most recently, social psychological aspects of the immigration experience.

Global Warming and Public Policy

Robert Gifford
University of Victoria

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In a recent "Voices" article (February 8), Dr. Andrew Weaver wondered why there is still a debate on global warming when a clear conclusion has been reached by an august panel of about 120 eminent climate scientists who recently met in China. As someone who is close to the data-gathering and model-building processes, Dr. Weaver's wonderment is understandable. His frustration with the acceptance in some quarters of the global warming deniers is understandable. Yet, at the same time, that resistance to scientific conclusions is not surprising to a psychologist. I will try to explain why. I will also comment on Dr. Weaver's exhortation to policy-makers: "We've done our job. Now do yours." Dr. Weaver seems to imply that policy-makers are dragging their feet in the face of irrefutable facts, and this is difficult and puzzling to him. Modern scientific psychology can help with these feelings, too. Environmental psychologists have spent the last 30 years learning how to increase the level of responsibility in human behaviour, and one clear conclusion from the research is that merely waving a policy wand will not do the trick.

Before proceeding, I had better state my views on the global warming issue itself. Without access to the data, I choose to believe the great majority of climate-change experts, and accept that global warming is in progress, and that human activities play an important role in the temperature increase. My purpose is not to dispute the conclusions of the panel; it is to offer some observations on why denial exists and why exhortations to policy-makers to "get on with it" may not reflect a recognition of the complexity and frequent impotence of policy measures.

So, why won't some people accept the panel's results? For one thing, the history of scientific discoveries shows that it takes time, sometimes much time, for ordinary citizens (and sometimes even other scientists) to accept discoveries. Galileo's ideas about the sun being the center of the solar system were not accepted during his lifetime. More recently, Einstein's 1905 paper on special relativity was not even understood by most physicists when it was written, and he had to wait for 14 years for the famous light-bending experiment that showed his theory had merit. Global warming data have appeared gradually, and it has only been a few years since the majority of scientists have agreed that the phenomenon is real. Climate scientists also would be forced to grant, I think, that there have been some valid complexities and apparent contradictions that have had to be explained. When the results are even a little fuzzier than those in the light-bending experiments, acceptance will be delayed.

Why else won't the public accept global warming or policymakers leap into action? They read material not only on amateur websites but even in reasonably reputable (if not professional) sources like *Discover* magazine, which this month profiles an apparently reputable climate scientist (John Christy,

Ph.D., member of the same International Panel on Climate Change panel to which Dr. Weaver belongs, described as "one of the world's pre-eminent experts on atmospheric conditions") who is a doubter, and apparently does not take energy industry money for his grants (this charge is often used by the majority in this debate to undermine the credibility of the minority). We know from psychological research that a single credible doubter can create a serious reduction in the public credibility of a majority. Acceptance of new findings is influenced much less by a majority vote than by a unanimous vote. Thus, it is understandable that ordinary citizens might be slow to accept new findings in any case, but especially when a few inconsistencies in the data must be accounted for and when even a few reputable climate scientists doubt the findings.

Another reason for slow general acceptance of scientific discoveries is that some "discoveries" simply weren't. I am thinking of phlogiston theory, which was held in high esteem through most of the 18th century and which even the great chemist Joseph Priestley defended until his dying day, not to mention cold fusion and Piltdown Man, among others. At some level, the public remembers these failures, even if they aren't given much space in modern science textbooks because they were embarrassing detours on the road to better understanding. Public skepticism and slow acceptance of new discoveries may be misplaced, but it is understandable.

This brings me to my second point: the apparent assumption that policy-makers are, or can be, automatic translators of science into effective policy. First, policy-makers usually are not leading-edge scientists; they naturally share the tentativeness of the average person, and they do not wish to formulate and enforce policies that might later make them look foolish (say, in the event of a latter-day phlogiston theory). Second, and more importantly, effective policy-making involves complexities in human thinking and behaviour that perhaps climate scientists do not appreciate.

A fundamental assumption underlying Dr. Weaver's exhortation is that policies can control human behaviour. Unfortunately, there are many examples that demonstrate this is neither easily nor quickly accomplished; in some cases the very best and most expensive policies have failed spectacularly. Recent examples might include the folly of the war on drugs or failed attempts to stop the illegal flow of CFCs into North America. When people are addicted, policies have very limited impact-and sometimes they even worsen the situation. A very plausible case can be made that many people are addicted to their cars and other fossil-fuel-burning comfort-and-convenience machines, including planes, powerboats, and gas-powered lawn and garden machines. (I do not rule myself out here, although I do not drive to work or own a powerboat!)

Then what are we to do? First, we must grant that policy sometimes can be successful, even if it takes a long time. A combination of anti-smoking policies has slowly-the key word here is slowly, over three decades-reduced the rate of smoking in North America. At the same time, it must be noted that all that effort has not eradicated smoking, and that smoking is even increasing in some demographic groups.

Second, we must recognize that to be successful, policy must be informed by modern theory and research in human

behaviour. Heavy-handed policies tend to evoke what psychologists call reactance, a strong resistance to feeling controlled by others. In part, for example, teens smoke precisely because they are told not to.

Third, we must recognize that the human contribution to global warming largely occurs one person (or organization) at a time, and therefore efforts to reduce harmful activities must be examined at this level of analysis. Individuals vary in their reasons (or rationales) for using fossil fuels; no simple and sovereign policy can be effective for everyone.

Finally, we have read the passionate defenses of SUVs in letters to this newspaper, defenses that sometimes resemble the rationalizations of car addicts. But even the very climate scientists who reached consensus on global warming contribute to the problem. A very considerable amount of jet fuel must have been used to assemble the 120 scientists who formed the recent global warming panel in China. According to the UK's Royal Commission on Environmental Pollution, aircraft currently account for about 3 percent of the global emissions of carbon dioxide, and the Commission predicts that aircraft-based emissions of carbon dioxide—a key human-produced greenhouse gas—will triple over the next 50 years, despite existing and planned improvements in aircraft fuel efficiency. My point is that each of us believes that our own use of energy is justified; it is *les autres* who cause the problem. A policy ban on jet travel to conferences, or a ban (or even a further tax) on SUVs would create a storm of protest and rationalization. This was the main theme the biologist Garrett Hardin made 21 years ago in a famous article in *Science*: we are rushing toward self destruction while each of us believes that he or she is doing the right thing.

There is much scientific evidence to support this view. As just one example, in a study that simulated ocean fishing, I found that participants would cut back their fishing when they were informed that the fish stocks were depleting. This sounds good: people seemed to be cooperating, and most believed they were helping the environment. Unfortunately, the cutbacks they made were too little, over the long run, to save the fish population, given its rate of spawning, even though the fishers knew the precise spawning rate of the fish. The great irony of these results is that people were destroying a resource at the same time they believed they were helping it. This is not unlike the ecotourist with pro-environment attitudes who jets down to Costa Rica to see the vanishing rain forest, thereby adding carbon dioxide to the atmosphere.

Almost everyone claims to be an environmentalist today, but psychologists are very aware of a large gap between stated attitudes and actual behaviour. Studies show that many people will engage in the relatively easy environmentally friendly behaviours, such as recycling or drinking from re-usable cups instead of disposable cups. These are commendable actions, but they are not the most important ones, according to a new book by the Union of Concerned Scientists called *The Consumer's Guide to Effective Environmental Choices*. When it comes to the important climate-affecting behaviours, such as significantly reducing car use, most people begin to rationalize or to change their minds, rather than change their behaviours that harm the environment or contribute to global warming.

Dare I ask how many of the 120 climate researchers on the panel who jetted to China also drive their cars to work? How many of their seatmates on the plane or fellow drivers will steadfastly maintain that their own travel is "essential"? Will simple policies change this? No, or not quickly: policies have limited impact on addictive behaviours. Europeans, for example, have smaller cars and fuel prices several times higher than ours, and some countries now even have official government policies that discourage the use of cars, yet many Europeans remain addicted to their cars. A recent study in the Netherlands concluded that the average citizen there uses 25 percent more energy than she or he did only 14 years ago—and environmental awareness was already quite high in the Netherlands by the mid-1980s.

Yet, clearly, some people have changed their ways. People who choose voluntary simplicity in their lives, who bicycle whenever possible, have fewer children, eat less or no meat, or choose not to jet off to exotic locations for their business, conferences, and holidays, may be found with some frequency. This means that all is not lost, that something must have influenced their actions; it implies that Garrett Hardin's doom-saying may have been premature.

But did direct scientist-to-regulator policy that accomplish this? For the most part, no. It was a gradual process that involves understanding how individuals think and the tricky relations between thinking (or the lack of it) and action. This process certainly includes the provision of information, as Dr. Weaver has admirably done in his article. It will also include rearranging environments to make environmentally responsible behaviour easier. It includes the modeling of improved behaviour by significant others within a family or circle of friends. And it will include policy, too, but policy that is informed by research and theory in environmental psychology and related disciplines which shows there are at least 20 different influences on environmentally responsible behavior that do not directly involve policy. Global warming largely is the result of dozens of choices by millions of individuals in their daily lives. Understanding how and why these decisions are made is the crucial key to reducing global warming caused by humans.

Comment: Human Nature and Conservation Behavior

Stephen Kaplan
University of Michigan

A recent survey indicates that the resistance people often have to practicing conservation behavior, and to following environmental issues in general, is due to a feeling that nothing can be done rather than to disinterest or lack of caring. My article, "Human nature and environmentally responsible behavior" (*Journal of Social Issues*, 2000, 56, 3, 491-508) offers an analysis of this painfully unsatisfactory situation and suggests some concrete ways to deal with its challenges. While the altruism-centered approach is currently popular in the academic literature, I see it as contributing to helplessness and

emphasizing sacrifice rather than quality-of-life enhancing solutions. As an alternative to this approach, I explore the Reasonable Person Model. This approach draws on evolutionary, cognitive, and motivational factors to interpret human nature. The article looks at the way behavior is influenced by people's efforts to explore and understand their world, and to act meaningfully within that understanding. It suggests ways to identify sources of motivations, to reduce the corrosive sense of helplessness, and to generate solutions to environmental problems that do not undermine the quality of life of the people who are affected.

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FROM THE PRESIDENT...

S. Marie Harvey, Ph.D.
University of Oregon

The Division program for the 109th APA Annual Convention is completed and a brief description of the program is included in this issue of the newsletter. An undertaking of this magnitude must rely on the assistance and good will of many. Without the support and collaborative efforts of numerous individuals, the Division's Program for the annual convention would not have come to fruition. Thanks to everyone who submitted abstracts to our Division and volunteered to preside over and organize sessions. Your contributions have been influential in shaping this year's program. Special thanks to President-Elect Joseph Juhasz for helping to organize and plan the program and to Meredith Branch, my Research Assistant, for her diligence in entering all information into the internet data base.

The APA Annual Convention will convene in San Francisco, CA, August 24 - 28, 2001. To provide a forum in which members can present their scholarly and scientific work, the division program includes symposia, addresses, a tour, and paper and poster sessions. As you can see in the "Program-At-A-Glance," the program represents the substantive interests of the two distinct disciplines within our Division. In addition, the presentations underscore the importance of our Division in building bridges between research and public policy, advocacy and practice and across academic disciplines and professions.

We have three invited addresses by prominent scholars: Dr. Michele Stephens from La Trobe University, Melbourne Australia, on *Listening for the Voice of Gods: Balinese Trance and Architecture*; Dr. Nancy Padian from the University of California, San Francisco CA on *The Association Between Acceptability of Contraceptive Method and Actual Use*; and Dr. Lynne Paxton from Iowa State University, Ames IA on *The Role of Contestation in the Definition of Public Space*. On Sunday morning, Joseph Juhasz will take us outside the confines of the hotel conference rooms to lead a tour and discuss the *Architecture of San Francisco*. We also have poster and paper sessions scheduled for Monday morning that present *Current Research in Population and Environmental Psychology*.

Toni Falbo has organized and will chair a symposium titled *Ethnic Identity: Population and Environmental Variations* that

intersects the two distinct disciplines within our Division. Other scheduled symposia focusing on Environmental Psychology include *Person-Environment Psychology and Mental Health*; *Science that Matters: Building Research-Action Partnerships*; *Greening APA - 2001*; *Practical Revisioning: Humans in the Web of Life*; and *Global and Local: Where can Ecopsychologists find Leverage*. The panels submitted by Population Psychologists form a cohesive whole and examine an emerging public health priority - strengthening women's ability to negotiate safer sex behaviors. These symposia are scheduled for Monday and include: *Assessing Outcomes of Couples Based HIV/STD Prevention Interventions*; *Social Psychological Processes Influencing Risky and Safer Sex Behavior*; and *Sexual Negotiations: Gender and Sexual Assertiveness in Youth*.

I am predicting a successful annual conference with exciting and diverse presentations. Come ride the cable cars halfway to the stars and participate in these exciting symposia, invited presentations and sessions sponsored by Division 34. In addition, be sure to attend our Business Meeting and Social Hour scheduled for Saturday afternoon. The changing of the guard will peacefully occur at the Business Meeting as I pass on the symbolic presidential gavel to Joseph Juhasz and move into my new position as Past-President. I feel privileged to have served our Division as your President and look forward to seeing you all in San Francisco! Cheers, Marie

You can contact Marie Harvey at mharvey@oregon.uoregon.edu.

APA CONVENTION ABSTRACTS

SYMPOSIUM:

PERSON-ENVIRONMENT PSYCHOLOGY AND MENTAL HEALTH

Moderator: Bruce Walsh, Ohio State University

The rationale of this symposium is that mental health tends to be influenced by many determinants both in the person and the environment. Lewin suggested some time ago that the setting is as important as the person, and both must be analyzed in order to understand behavior. This theme suggests the primary objective of the symposium and that is to discuss significant person-environment research which has implications for fostering mental health within a framework of relevant models. The approaches included in this symposium were selected because they are able to make some sensible predictions concerning mental health using the person-environment relationship. The first paper, by Richard Price, describes a fifteen-year program of epidemiological and preventive intervention research conducted by the Michigan Prevention Research Center addressing the relationship between work transitions, stress, and mental health. In particular this paper discusses involuntary job loss, a stressful life event that has well-documented negative impacts on mental health. Evidence for the impact of involuntary job loss on mental health is reviewed and risk mechanisms through which this stressful life

event has its impact on mental health are described, focusing in particular on the role of economic stress and elevated depressive symptoms. Results of the intervention (Winning New Jobs) are discussed in the context of reducing the risk of depression, higher quality re-employment, and producing positive cost-benefit results. The second paper, by Brian Little, discusses the use of a social ecological model of human functioning to investigate the possible health consequences of different types of creative project pursuit. The central theoretical tenet is that health and well-being are enhanced when individuals are engaged in the sustainable pursuit of core projects and that in the absence of centrality and sustainability, health costs may be incurred. The research directs us into new lines of thinking about person-environment interaction, particularly aspects of project pursuit and its impact on health and well-being. A third paper, by Arnold Spokane, discusses methodological issues relevant in person-environment health research and mental health outcomes. This paper reviews methodological trends and includes a discussion of the advantages and disadvantages of various research designs and methods. Discussants (Christine Timko, Seymour Wapner, and Bruce Walsh) will formally react to and reflect on the papers before the symposium chair (Bruce Walsh) invites comments from the audience.

SYMPOSIUM: GREENING APA – 2001

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At its meetings in 1998, the APA Council of Representatives adopted a policy of environmental responsibility. The policy vows that APA will encourage convention hotels to facilitate environmentally responsible practices, and that APA head office will furnish an annual report on its progress toward responsible practices. This symposium reports on APA's progress, as well as on a survey of APA Monitor readers with regard to perceived individual, professional, and organizational (APA) responsibility to the environment. Three hundred and fifty-three surveys were received by mail and another 82 recorded online. Most respondents were APA members, fellows, or associates/affiliates. An overwhelming majority agreed that they had a personal responsibility to behave in ways not harmful to the natural environment, while fewer agreed they had a similar professional responsibility. The vast majority engaged in a variety of environmentally responsible behaviors. A slight majority do not address environmental issues in their work as psychologists, while others consult with businesses or organizations, conduct research on environmental issues, or teach courses with a specific focus on environmental problems. The majority agreed that APA has a corporate responsibility to conduct business in ways not harmful to the natural environment. Examples of this include choosing hotels that employ environmentally responsible practices for conventions,

sending electronic correspondence in lieu of mailings, and electronic submissions of program proposals. Most respondents were favorable towards each of these possibilities. Implications for further greening efforts within the organization will be highlighted and attendees will be invited to share ideas on further greening the APA.

SYMPOSIUM:

**ASSESSING OUTCOMES OF COUPLES BASED HIV/STD
PREVENTION INTERVENTIONS**

Infection with HIV and other sexually transmitted diseases (STDs) can be prevented with the consistent use of condoms. Unlike many other health related behaviors, condom use is dyadic, requiring the cooperation of both partners. Thus, interactions between partners (communication, perceptions of each other, etc) become a key component in effective prevention programs. The most effective way to understand these interactions is to assess both members of the couple. However, assessing HIV/STD prevention interventions outcome variables using data from both members of the couple greatly increases the complexity of the measurement and analysis.

The symposium will review the use of couples data to assess the outcomes of an intervention designed to prevent unintended pregnancies, HIV and infection with other STDs, the PARTNERS Project. The PARTNERS Project is an HIV/STD prevention program for young (18-25 years old), ethnically diverse couples who engage in high risk sexual behaviors. Both members of the couple participate in the intervention and both are individually assessed through interviews at baseline and 3 months following the intervention. Attitudinal and behavioral data gathered from both members of the couple are utilized to assess the effectiveness of the intervention. The symposium will cover the challenges presented in the use of couples data for developing an overall conceptual model to guide the assessment, creating scale scores, determining actual couples from pseudo-couples, developing measures of successful outcomes, and creating a couples level successful outcome variable. Presented papers will focus on both the opportunities and challenges presented by the collection of couples level data. Opportunities presented include the ability to directly assess both members of the couple and the creation of potentially more accurate outcomes. Discussed challenges will include the creation of couples level variables and the increased complexity presented by data from two individuals.

Developing and Testing Conceptual Models for Couples Based Prevention Interventions

Heather C. Huszti, PhD*, Linda Beckman, PhD**, S. Marie Harvey, DrPH†, and Steve West, PhD‡

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While safer sexual behaviors can protect individuals from infection with HIV and other sexually transmitted diseases (STDs) and unplanned pregnancies, these behaviors must be negotiated within the context of a relationship. Given this context, it is important to develop and test prevention interventions specifically for couples. However, evaluating couples based interventions brings with it unique challenges for analyses.

This presentation describes the development of a testable model for the PARTNERS Project, a couples based HIV/STD prevention intervention. The group intervention was developed for heterosexual, ethnically diverse, young couples (18 - 25 years old) who engage in high risk sexual behavior. Data was gathered from both members of the couple prior to the start of the group, immediately after the group, and three months later. The PARTNERS Project intervention model was adapted from the IMB model (Misovich, Fisher & Fisher, 1997). IMB model and adaptations made to it to accommodate the consideration of couples data will be described. Additions to the model and its analysis to consider the longitudinal data related to the outcome of the intervention will be described and discussed. The relative advantages and disadvantages of the use of individual data as well as constructed couple level variables for each of the model constructs will be discussed. In addition, the model was changed to accommodate varied safer sexual outcomes, such as consistent condom use and mutual testing and monogamy. These changes will also be described. Finally, specific techniques that will be used to construct and test the conceptual model will be discussed and illustrated.

While couples based interventions may be important to the further reduction of risky sexual behaviors in couples, the evaluation of these interventions can present difficult issues for analysis. The development of couples based conceptual models can assist with these outcomes analyses.

Distinguishing Couples from Pseudo Couples: Partner Verification

Stephen G. West, PhD*, Sheryl Thorburn Bird, PhD**, Roshan Thomas, MPH†, and Ernestine Duncan, PhD‡

*Arizona State University, **University of Oregon, †Centers for Disease Control and Prevention, ‡University of Oklahoma Health Sciences Center

In programs for couples, uninvolved pairs of individuals (“pseudo couples”) may occasionally participate for financial remuneration or because the program is inherently attractive and the individual does not have a current partner or the current

partner is unavailable for participation in parts of the program (e.g., measurement). Data from such “pseudo couples” can potentially bias estimates of effects in both psychosocial studies and evaluations of intervention programs.

The PARTNERS Project is an HIV/STD prevention program for young (18-25 years old), ethnically diverse couples who engage in high risk sexual behavior. In baseline interviews independently conducted with each member of the couple, 19 questions ask about information shared by both members of a couple. These include numerical scales such as “how long have you been having vaginal or anal sex with (current partner’s name)?” and binary items such as “have you ever used condoms with (current partner’s name), even one time?”

Each numerical scale was first standardized based on the mean (M) and standard deviation (SD) of the full sample. We computed the squared Euclidean distance as a measure of dissimilarity of responses:

Couples having an ED² measure >3 SDs above the mean (with a large gap between them and the other couples) were identified as suspicious. As a second check, we also formed “random couples” by randomly matching males and females of the same age and ethnicity as the target couples. The results of the numerical scales were corroborated with the set of binary items using the proportion of matches as a second index of similarity. Suspicious couples identified through these distance measures were compared to those identified by field staff and to “random couples.”

Scale Development in Research with Couples

Samuel F. Posner, PhD*, Katina Pappas-Deluca, MPH*, Linda Beckman, PhD**, Margaret Clawson, MPH*

*Centers for Disease Control and Prevention, **California School of Professional Psychology

Little work has been done to develop measurement tools specific to couples in behavioral science research. Although research has demonstrated that situation and context are important for attitudes toward sexual behavior and for sexual behavior, for instance, most scales developed for HIV/STD/unintended pregnancy research have been designed to collect information from only one member of a couple. This presentation will describe how the PARTNERS project refers to partners and focuses attention on the situation and context when measuring attitudes and behaviors.

Previously used scales were selected from the literature to measure the constructs included in the conceptual model. When acceptable measures of the constructs specified in the conceptual model could not be identified, scales were developed specifically for this project. All scales included in the measurement tool for this study were partner specific. That is, they were modified or developed to include the partner's name when asking their attitudes about the relationship and behaviors with their partner. A computer assisted interviewing system (QDS) is used to administer the survey. This system can automatically insert the correct names and pronouns so that the items are partner specific.

Measures for 33 different domains were developed for this project based on the conceptual model. They included descriptive information about the couple's reproductive intention, subjective norms, intentions, self-efficacy, communication regarding sexual behavior self-reported behavior related to safer sex including condom use, abstinence and planning for 'slips'. Examples of how items were modified and administered to the participants will be presented.

The majority of items and scales described in the literature that measure factors associated with safer sex are written to collect information from only one member of the couple. In this study data was collected from both members of the couple. Furthermore, the measurement tool for the PARTNERS project was developed to ask about the context and situations that occur within the relationship. Accurately measuring the situation and context of the couple's relationship is critical in understanding the determinants of sexual behavior.

Identifying Primary Outcomes for a Couples Based HIV/STD Intervention

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There has been an increasing amount of interest and focus on the dyadic nature of safer sexual behaviors, including condom use, HIV/STD testing, and contraceptive planning. In particular, much emphasis has been placed on the importance of including both members of a couple in prevention efforts in order to maximize behavioral change. However, when developing couples-based interventions, choosing and defining successful individual and couple-level outcomes requires careful consideration and planning.

This presentation will describe how the PARTNERS Project selected and defined successful individual-level outcomes for a couple's based intervention designed to decrease HIV, STDs and unintended pregnancies in young women (aged 18-25 years) and their primary male partners.

The process of selecting primary outcomes for the PARTNERS Project entailed careful consideration of the following variables: type of participant relationships (long-term, short-term, monogamous, non-monogamous, presence of children); cultural beliefs and values of participants regarding relationships and sexual activity; effectiveness of a particular outcome in preventing STDs, HIV, and unintended pregnancies, practicality of an outcome (ease of method, availability, expense); and, ability to quantify the outcome on an individual and couples-level for measurement purposes. In the PARTNERS Project, three primary outcomes were selected to accommodate the above criteria, including: abstinence, consistent and correct condom use, and STD/HIV testing and mutual monogamy. During this presentation, specific definitions of each primary outcome will be discussed, and the development of algorithms to measure each of the three outcomes for individual sexual partners will be examined.

As interest in the development of couples-based interventions continues, the PARTNERS Project provides one example of selecting and defining successful individual and couples-level outcomes that can be effective, acceptable to participants, and which can be quantified and evaluated.

The Complexity of Constructing Couple-level Outcomes

Joan M. Kraft, PhD*, Katina Pappas-DeLuca, MPH*, Samuel F. Posner, PhD*, and Sheryl Thorburn Bird, PhD**

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Although many safer sexual behaviors are "interdependent" (i.e., involve participation from both partners) partners in a couple may not report the same behavior patterns, complicating evaluation of the impact of sexual risk reduction interventions that use behavioral reports from both members of a couple. In a recent review, Becker (1996) documents discrepancies in reports of reproductive outcomes, behaviors, and intentions. These discrepancies present a challenge for evaluating the effectiveness of the PARTNERS Project, a couples intervention to reduce unplanned pregnancies and the sexual transmission of HIV and other STDs. This presentation will describe the construction of couple-level measures that account for discrepancies in reporting.

In baseline and 3-month follow-up interviews each member of the couple is asked to report on individual psychosocial characteristics (e.g., importance of condoms, self-efficacy for condom use), couple characteristics (e.g., sexual decision making) and sexual risk behavior within the relationship (e.g., unprotected vaginal or anal sex). Primary couple outcomes, identified by the PARTNERS Project, are increased safer sexual behaviors including abstinence, condom use, or mutual testing and monogamy. Secondary couple outcomes include agreement on psychosocial variables such as importance of using condoms. Because questions are asked of men and women separately, couple-level variables will be constructed using a variety of methods (e.g., average of partner responses, measures of variance, intra-couple correlation) and couple agreement will be assessed. In addition, the impact of couple break-up and partner change will be considered in the construction of variables and the analysis. The evaluation of the intervention will include individual-level and couple-level (e.g., sexual decision making) variables as mediating and moderating variables.

The PARTNERS Project will contribute to our understanding of how to assess couples' reproductive behaviors and of the role of individual characteristics and couple dynamics in reducing sexual behaviors that increase the risk of unplanned pregnancies, HIV, and other STDs.

INDIVIDUAL PAPER AND POSTER PRESENTATIONS

Earth-Charter-Oriented Strategies for Self-Developing Personal Environmental Values

Milton O. Meux
Berkeley, CA

Fundamental value changes are important, perhaps crucial, in meeting the current environmental crisis. One basic approach to bringing about such fundamental value changes is to incorporate a set of shared values. This approach is embodied in the recent Earth Charter (www.earthcharter.org), especially significant with its ethical vision, comprehensive yet coherent principles, multidisciplinary character, and the strong likelihood of endorsement by the United Nations in 2002.

This four-part presentation proposes some basic Earth-Charter-oriented strategies for self-developing personal environmental values, especially fundamental changes.

I. Personal Environmental Values (PEV). PEV include: Values, e.g. ideals, principles, standards, intrinsic value of nature, duties and obligations to our descendants. Kinds of Values, e.g. moral, aesthetic, political, spiritual, economic, anthropocentric, biocentric, humanity's utilitarian need for nature, spiritual value of nature, rights of nature in and of itself. Structure, e.g. transitive, weak, or partial orders; and several kinds of levels.

II. The Earth Charter (EC). The EC proposes a set of basic shared values that provide an inclusive ethical vision and a set of interrelated principles at three levels of generality: general principles that provide the ethical vision; midrange "supporting" principles; and more specific principles with modes of action.

III. The Self-Development of PEV. A person's values, including PEV, are a fundamental part of the self. An inadequacy in one's PEV constitutes a fundamental problem for the self, resolved by carrying out five basic tasks: Self-Objectifying PEV; Self-Clarifying the PEV from Task 1; Self-Evaluating the PEV from Tasks 1 or 2; Self-Changing the evaluated PEV from Task 3; and Self-Incorporating the changed PEV from Task 4.

IV. Basic Strategies for Self-Developing PEV. Using the entire EC to subsume all PEV. Integrating aspects of the EC with aspects of the PEV. Synthesizing much of the EC with much of the PEV. Transforming the PEV by evaluating general PEV, improving them, and making implied changes in more specific levels of PEV.

Accountability, Choice, and Commitment Effects on Responsibility for Tornado Preparedness

John-Paul Mulilis*, T. Shelley Duval**, & Iola Gwizdowski*
*Penn State University, Monaca
**University of Southern California

A review of the literature indicates that accountability appears to affect the choices one makes, and that both choice and commitment seem to affect the level of responsibility one assumes for their behavior (e.g., preparing for tornadoes). However, it appears that the effects of varying accountability,

choice, and commitment on attributions of responsibility within the context of a single experiment have not been investigated to date. This is the goal of the present study. It was hypothesized that greater personal responsibility for tornado preparedness would occur under conditions of high commitment, high choice, and low accountability. Results generally supported predictions with the exception that greater personal responsibility occurred under conditions of increased as opposed to decreased accountability. It was postulated that the accountability manipulation used resulted in increased self-focus, which in turn lead to greater assumed responsibility with respect to tornado preparedness behaviors.

The Ins and Outs of Temperature and Assault

James Rotton & Ellen G. Cohn
Florida International University

An integration of routine activity theory and the negative affect escape model led the authors to hypothesize that outdoor but not indoor violence is a curvilinear function of temperature. This hypothesis was tested by subjecting data on assaults reported received by police in Dallas, TX, to moderator variable time-series analyses. During a 3-year period, 15,185 assaults were recorded in 43 outdoor locations, and 12,464 assaults occurred in 71 inside structures. Controlling for holidays and temporal variables (time of day, days, seasons), indoor assaults were a linear function of temperature, whereas outdoor assaults peaked at moderately high temperatures.

Stately Pleasure Domes: Baseball Stadiums, Attendance, and Performance

James Rotton, Ellen G. Cohn, & Frank L. Paulson
Florida International University

Attendance figures and scores from 2211 baseball games played in domed and traditional (open-air) stadiums were compared in order to assess the effects of type of structure upon team performance. A program for hierarchical linear models disclosed that fans were no more likely to attend games in domed than open-air stadiums, and team members struck out more often and did more poorly on other performance measures in domed stadiums. The analyses also revealed that attendance figures were positively correlated with outdoor temperatures even though home teams lost more games when temperatures were high.

Privacy Preference and People-Environment Relationship View: An Indian Perspective

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In the present study an attempt is made to investigate 'what privacy means to Indians?' and to explore the possibility of its philosophical correlate, i.e., with people-environment relationship (PER) view. In the absence of both empirical information and tools for the measurement of above mentioned two variables (especially for the Indian settings), the first step in the study was to devise appropriate tools (inventories) for the measurement of both privacy preference and PER view, to see exactly what components of the two variables are found among Indian subjects, and then to examine the nature of relationship (if any) between the two. Data obtained from Eighty urban respondents (40 males and 40 females). The sample was taken from an industrial city in northern India. Factor analysis (varimax rotation) of the responses to the PER items resulted in four factors which were labeled as follows: Utilitarian Attitude, Interactiveness/Symbiosis, Negative Orientation, and Spiritualism. Factor analysis (varimax rotation) of privacy inventory yielded three major factors. These were labeled Solitude/Intimacy, Reserve, and Anonymity. The analysis of relationship between PER and privacy components (using stepwise regression) revealed that (1) three of the four PER view factors, namely, interactiveness/symbiosis, negative orientation, and spiritualism were significant predictors of all three privacy factors: PER factor 1, utilitarian attitude, did not significantly predict any of the privacy factors; (2) the maximum variance was explained by PER factor 4 (spiritualism) with respect to privacy factor 1 (solitude/intimacy); (3) spiritualism also explained anonymity factor; (4) interactiveness/symbiosis explained solitude/intimacy factor and reserve factor; (5) negative orientation explained anonymity factor and the relationship was negative.

Social Trust and the Management of Threatened and Endangered Species

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Social trust is the willingness to rely on those who have formal responsibility to develop policies and make decisions. There is considerable evidence for the importance of social trust in the effective management of environmental issues. Limited research specific to national forest management issues also points to the importance of social trust. The present study extends the exploration of social trust in national forest management to the issue of threatened and endangered species. Members of communities of interest and communities of place were selected to participate in one of 13 focus groups. One

hundred and twenty individuals participated in group discussions and 100 completed a pre-discussion survey. Findings suggest that levels of social trust were important in understanding responses to management of threatened and endangered species. Specifically, trust was a significant predictor of approval and judged effectiveness of providing information to forest users to help protect species. It was also a significant predictor of perceived effectiveness of placing restrictions on forest use. Patterns of trust and distrust emerged which further lent understanding to responses. Among those expressing trust, some concluded that the Forest Service shared their wildlife management goals/values and that these were salient to the agency's decisions and actions; and some concluded that the Forest Service shared their goals and values, although for legitimate reasons these were not always salient to agency decisions and actions. Among those expressing low trust or distrust were those who concluded that the Forest Service shared their wildlife management goals/values but for non-legitimate reasons these were not always salient to the Forest Service's decisions and actions; and those who believed that the agency's decisions and actions reflected priorities of forest management goals/values that they did not share. These patterns may be useful in understanding the dynamics of trust and distrust in other situations.

APF HONORS HENRY DAVID

Each year, the Gold Medal Award for Life Achievement in Psychology in the Public Interest of the American Psychological Foundation recognizes a distinguished and enduring record of accomplishment. Dr. Dorothy W. Cantor, President of the APF, will present the gold medal to Dr. Henry P. David, Director of the Transnational Family Research Institute, at a major awards ceremony to be held at the 109th annual convention of the American Psychological Association, on **August 25, 2001, at 5:00 p.m., in the San Francisco Marriott Hotel.**

The APF gold medal is widely recognized as among the most prestigious awards given in psychology in the United States. The citation that will accompany Dr. David's gold medal reads as follows:

"For his many leadership roles and international research contributions in the areas of population, women's issues, and mental health. Described as "a brilliant scholar with practical ideas," Henry P. David's pioneering research on reproductive behavior has had worldwide impact, helping to strengthen women's rights, improve access to modern methods of fertility regulation, and encourage responsible parenthood. In addition to prolific research contributions, he has facilitated interactions of psychology with mental health and population concerns in the United States and abroad. In doing so, he has bridged disciplines and geographical boundaries, creating lasting global networks of psychologists devoted to using their knowledge and skills in the service of the public interest."

ENVIRONMENTAL DESIGN RESEARCH ASSOCIATION CONFERENCE 2001

SYMPOSIUM:

ECOLOGICAL BEHAVIOR: ASSESSMENT, PREDICTION, AND CHANGE ACROSS CONTEXTS

Chairpersons: Florian G. Kaiser, Ph.D.* and
Terry Hartig, Ph.D.**

*Eindhoven University of Technology, the Netherlands,

**Uppsala University, Sweden

Landscapes become landfills, plant and animal species vanish, and people sicken in a world of noise, trash, bad air, and overconsumption. Crucial needs for preservation, conservation, and restoration demand broad involvement from environmental professionals. As psychologists, we can help by explaining behaviors such as recycling, energy conservation, consumerism, and commitment to environmental organizations. Unfortunately, the measurement and prediction of ecological behavior, not to mention the modification of unecological behaviors, are enterprises that have yet to produce striking solutions and conclusive results. For example, environmental attitudes still have a rather bad reputation as predictors of behavior; the environmental attitudes people express seem to have little relation to the behaviors they perform.

Yet there are some encouraging developments. Newly applied psychometric strategies allow better accounting for situational influences on ecological behavior and result in more valid measures. Findings concerning attitude-behavior relations have been more promising when researchers have attended to situational influences such as opportunities for behaving ecologically and dependence on others for support in that behavior. Differences in such situational influences should be accounted for in cross-cultural comparisons but often are not. Elaborations on possible evaluative bases of traditional attitude models also may boost predictive power. More precise strategies for measuring environmental knowledge and introducing informational feedback provide greater hope for effective behavioral interventions.

Representing new developments in this area of research, the contributors to this symposium will present papers on the measurement and prediction of ecological behavior, within and across particular contexts. The papers address a variety of conceptual and methodological issues, including the dimensionality of ecological behavior; contextual influences on attitude-behavior models; the extension of environmental attitude models; and the influence of knowledge and information on ecological behavior in general and energy conservation in particular.

People's Ecological Behavior: One or Several Dimensions?

Florian G. Kaiser

Eindhoven University of Technology, The Netherlands

Traditionally aggregated measures across different ecological behavior domains--based on correlations--commonly fail to establish unidimensional scales. Applying the Rasch model in the measurement of ecological behavior turns out to be a viable solution. Evidentially, behaviors as diverse as buying solar power panels and refraining from driving a car in the city can be collapsed into a single dimension. However, specific measures representing particular domains--and therefore, more distinct dimensions--such as energy conservation, consumerism, and recycling appear both practically relevant and theoretically reasonable. In a cross-sectional survey of 895 Swiss residents, and in a follow-up study of 823 (92.0%) of them, two versions of a 50-item ecological behavior measure were compared. The results indicate that the unidimensional Rasch model fits the data rather well, suggesting that ecological behavior can be meaningfully measured unidimensionally. Remarkably, the multidimensional solution fits the data even better and yields six highly oblique (i.e., correlated) dimensions (from $r = .41$ to $r = .77$).

Testing the Environmental Attitude-Ecological Behavior Relation Cross-Culturally

Hannah Scheuthle* & Florian G. Kaiser**

*Swiss Federal Institute of Technology, Zürich, **Eindhoven
University of Technology, The Netherlands

In spite of the considerable amount of the environmental psychology literature, the cultural invariance of the attitude-behavior relation remains an open question. Since contexts and attitudes jointly affect a person's performance, behavioral criteria that confound both influences cannot yield conclusive cross-cultural information. Based on the General Ecological Behavior scale (Kaiser, 1998), the present paper explores whether a cross-situationally generalizable version of Ajzen's (1991) theory of planned behavior (TPB) is a cross-culturally applicable and, thus, generalizable environmental attitude model. In three cross-sectional surveys of approximately 900 Swiss and German residents each, and 330 Spanish students, the cultural invariance hypothesis was tested by means of structural equation models. By aggregating across different behavioral domains and, thus, freeing the proposed relations within the TPB from arbitrary situational influences, individual behavior can be predicted with reasonable accuracy in the vicinity of 60% to 70%. Intention's variance, in turn, can be accounted for even more impressively by the three TPB components: attitude, subjective norms, and perceived behavioral control.

References

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50, 179-211.

Kaiser, F. G. (1998). A general measure of ecological behavior. *Journal of Applied Social Psychology, 28*, 395-422.

Psychological Restoration in Natural Environments is Associated with Ecological Behavior

Terry Hartig*, Einar Strumse**, & Florian G. Kaiser†

*Uppsala University, Sweden, **Lillehammer College, Norway, †Eindhoven University of Technology, The Netherlands

University undergraduates' perceptions of restorative quality in an unspectacular natural environment have been found to predict their ecological behavior. Perceived restorativeness was taken to represent both a respondent's history of restorative experiences in different environments and his or her recognition of a potential for restorative experiences in natural environments more generally. Thus, the restorativeness perceptions were not direct measures of the extent to which the respondents actually resorted to natural environments for psychological restoration. Two limitations of the study, then, were a student sample that was not representative of the larger adult population and the indirect representation of psychological restoration in nature as a predictor. The present study addresses these two limitations. First, it builds on data from a large Norwegian adult population sample (N = 1413). Second, to more directly represent restoration in nature as a predictor, it uses self-reports regarding strength of agreement concerning the value of nature experiences for mood repair and other aspects of restoration. Ecological behavior is, as in the initial study, represented with a general ecological behavior measure based on item response theory. The association between restoration in nature and ecological behavior will be reported in the presentation, as will results bearing on whether restoration augments or simply duplicates prediction of ecological behavior by environmental concern.

Values, Attitudes, and Implicit Connections with Nature

P. Wesley Schultz

California State University, San Marcos

Human survival is directly tied to our relationship with the natural environment. Achieving a sustainable lifestyle depends on establishing a balance between the consumption of individuals, and the capacity of the natural environment for renewal. Yet, we often act as if we are separate from nature—as if we can get along without nature. Indeed, built environments serve as barriers between individuals and the natural environments in which they live. Offices, schools, homes, cars, restaurants, shopping malls, and many other built environments segregate people from nature. Such built environments offer climate controlled, light controlled, artificial environments which are not found in nature. This paper examines the implicit connection that individuals make between self and nature, and the impact of built environments on these implicit cognitions. We report a modified version of the Implicit Associates Test

which can be used to assess the degree of connection between an individual's self concept and nature. Data are reported from a study using the modified IAT to examine correlations with values, attitudes of concern for environmental issues, and proenvironmental behavior. Implications for theory, design, and sustainability are discussed.

Perceived Environmental Threat and Environmental Locus of Responsibility as Predictors of Environmentally Responsible Behaviours

Einar Strumse

Lillehammer College, Norway

The data reported in the present paper stem from a Norwegian national survey (N = 1413) on environment and behaviour issues. The paper examines relations between ecological behaviour and a set of environmental concerns; perceived seriousness of local and global environmental problems, beliefs about environmental impact on health, and environmental locus of responsibility [i.e. whether one assumes personal responsibility or believes that others (government, corporations) are responsible for environmental problems]. Locus of responsibility for environmental problems is little researched, but is assumed to be an important predictor of environmental behaviours, as well as being related to perceived environmental threat. For example, it may be the case that high scorers on personal locus of responsibility for environmental problems tend to perceive environmental threats as more serious than subjects who are low on this dimension. The purpose of the paper is thus to examine how such perceptions are distributed in a representative sample of the population and their effectiveness in predicting ecological behaviours. In particular, environmental locus of responsibility will be examined as a moderator of the relationship between perceived environmental threat and environmentally responsible behaviours.

Predicting Ecological Behavior by Three Types of Environmental Knowledge

Jacqueline Frick

Swiss Federal Institute of Technology, Zürich

Knowledge about environmental issues is considered a rather poor predictor of individuals' ecological behavior, since empirical findings commonly yield a fairly low association between the two constructs. In contrast, environmental education relies almost exclusively on knowledge as a necessary precondition for both, attitude and behavior. To study this controversial issue in some more detail, a test was constructed based on three distinguishable types of environmental knowledge. All necessary items for the three subscales—ecosystems', action, and effectiveness knowledge—derive from interviews with members of the environmental sciences department at the Swiss Federal Institute of Technology. A cross-sectional pilot study was conducted with 899 students

from departments with varying degrees of environmental education in their curricula (i.e., electro-engineering, forestry, and environmental sciences). The students completed two versions of a questionnaire that consisted of the three knowledge scales and a well-established ecological behavior measure. The results indicate that the unidimensional partial credit model within item response theory fits the knowledge data better than a multidimensional solution does, suggesting that environmental knowledge can be reliably and validly measured on one single dimension. Furthermore, it was found that ecological behavior was at least moderately correlated with environmental knowledge ($r = .45$).

Goal-Directed Energy Feedback Using Computer Simulated User Interfaces

Teddy McCalley & Cees J. H. Midden
Eindhoven University of Technology, The Netherlands

Informational feedback has been researched as a measure to reduce energy consumption. In general, findings show weaker effects than one would expect. Product-integrated feedback is information presented during the product-user interaction. By focusing on the interaction between the product and its user, it may be possible to better encourage energy conservation. Our research explores different forms of product-integrated feedback.

The paper reports a series of experiments that we conducted to develop more effective feedback in household appliances. All experiments were performed in a laboratory setting using computer simulation of an advanced electronic washing machine's control panel (i.e., Miele Novotronic). While self- and experimenter-induced goals prior to washing decisions were highly successful in the conservation of energy, little differential response to various forms of feedback was found, except for an impressive load-weight information effect. Age, gender, cohort, personality type, and experience were all found to additionally modify the goal-feedback interaction.

In conclusion, our results suggest that product-integrated feedback can be successful if user interest (i.e., goals) and information (i.e., load weight) jointly promote a certain washing and energy conservation behavior. In other words, product-integrated feedback can be effective if an energy saving goal is already in place.

RELATED PUBLICATION

Kaiser, F. G., Fuhrer, U., Weber, O., Ofner, Th., & Bühler-Ilieva, E. (2001). Responsibility and ecological behaviour: A meta-analysis of the strength and the extent of a causal link. In A. E. Auhagen & H.-W. Bierhoff (Eds.), *Responsibility: The many faces of a social phenomenon* (pp. 109-126). London: Routledge.

Abstract: In a meta-analytical review of 33 original publications the strength and the extent of a causal relation

between responsibility and ecological behaviour was examined. Research in this domain builds mainly on two social psychological research genealogies: the 'helping others' and the 'attribution of responsibility' traditions. Surprisingly, both research traditions are distinguishable by publication language as well. While the strength of the relation varies from medium to, at best, large effects depending on the responsibility concept applied, an average based entirely on non-experimental studies methodological rigor indicates only weak support for a causal link to ecological behaviour in general.

CANADIAN PSYCHOLOGICAL ASSOCIATION CONVENTION 2001

Human Behaviour in Fires: Between Panic and Apathy

Guylène Proulx
National Research Council of Canada,
Institute for Research in Construction

Over the past years, major fires reported through the media have shocked the public with disturbing headlines, descriptions and pictures. It is generally considered that the evacuation of a large building or a large crowd is likely to turn into a stampede to the closest exit. To this day, the "panic scenario" is still alive in the public's imagination, although the scientific community disagrees with that assumption. The rejection of the concept of panic was a turning point in the fire research field. Indeed, if the behaviour of people in fire is considered rational, as opposed to panic, it becomes essential to explain why building occupants do not respond as expected in many fires. New concepts have emerged which are very promising in explaining human response to fire. Concepts such as commitment, affiliation, familiarity and role will be discussed during this presentation, as well as their implications for future research.

ANNOUNCEMENTS

New Books on Risk

Risk, Media and Stigma: Understanding Public Challenges to Modern Science and Technology, Edited by James Flynn, Paul Slovic and Howard Kunreuther. (2000). London: Earthscan. (ISBN 1 85383 700 8)

The benefits of modern technology often involve risks that produce public suspicion of, and aversion to, innovations. Amplified by the pervasive power of the media, public concern about health and ecological risks can develop into a new and very significant social phenomenon, 'technological stigma'. The resulting aversions can produce enormous economic impacts and social consequences, such as those experienced in recent years with British beef, nuclear power and genetically modified plants and cloning. This volume, edited by three world

authorities in the field, presents the current and most comprehensive examination of how and why stigmatization occurs, and what the appropriate responses to it should be. Stigma can attach to places, such as transport routes for nuclear waste or toxic waste incinerators; to products, such as foods or the blood supply; to industries, such as those dealing with radioactivity; or to applied sciences such as biotechnology.

The Perception of Risk, by Paul Slovic. (2000). London: Earthscan. (ISBN 1 85383 528 5)

The concept of risk is an outgrowth of our society's great concern about coping with the dangers of modern life. This book examines the gap between the expert view of risk and public perceptions of it. The work of Paul Slovic is presented in chronological order, which allows readers to see the evolution of such perceptions of risk over time, from highlighting public misconceptions of risk to recent work that recognizes the importance of equity, trust, power and other value-laden issues underlying public concern. In an excellent overview of the critical issues involved in risk perception, this volume examines issues such as: societal risk taking; decision making in mental health law; rating risks; facts versus fears; informing and educating the public about risk; perceived risks and the politics of nuclear waste; perceived risk, trust and democracy; technological stigma. This is an essential guide for everyone with an interest in the public perception of risk, including lawyers, policy makers, the business community, and academics from the fields of public health and environment, psychology, economics, sociology, and anthropology and political science.

For more information: www.earthscan.co.uk.

APA Seeking Urban Psychologists

APA's efforts to better understand both the challenges and strengths of urban communities are coordinated by its Committee on Urban Initiatives. Begun as a Task Force in 1993 and established as a continuing committee in 1997, the committee's focus is on four broad areas--family, schools, workplace and community--and seeks to integrate psychological research and practice with efforts to improve life for people who live in urban communities. Recent activities include the following:

- Urban Educational Reform (scaling up effective urban school reform; diversity as a strength in urban schools; examining the consequences of high stakes educational testing; incorporating socioemotional learning in models of academic achievement)
- Community Policing (using psychology to improve the relationship between law enforcement agencies and the communities they serve; understanding the psychological bases of racial profiling)
- Addressing the Impact of Poverty (considering welfare reform, TANF reauthorization, and the consequences of poverty for those living in urban areas, especially women and children)

Although there are many psychologists working on issues that are salient to urban communities, there is currently no

recognized specialty in "urban psychology." The Committee on Urban Initiatives is exploring the concept of "urban psychology" by documenting the range of activities in which psychologists are involved. The Committee is therefore seeking psychologists working on urban issues or using psychology to improve urban life. Anyone with relevant interest or experience is urged to contact: Marsha Jenakovich Urban Initiatives Officer Public Interest Directorate American Psychological Association 750 First Street, NE Washington, DC 20002-4242 (tel.) 202/336-6048 (fax) 202/336-6117 e-mail mjenakovich@apa.org. <http://www.apa.org>.

Envisioning Future Offices

What does the future hold? None of us knows, of course: but that has never stopped us from trying to imagine. Last year the American Society of Interior Designers invited three leading designers — Gary Wheeler, Bob Degenhardt, and Richard Pollack — to envision offices twenty years from now for a symposium called *Futurework 2020*. High-tech, wireless communication captured everyone's attention as a major influence in how and where we work. A consultant, Peter Miscovich, and a researcher, Jennifer Veitch, were discussants - they were more interested in workplaces that bring joy, meaning, and purpose to life. The presentations are over (they were held in Chicago, New York, and Atlanta), but you can read all about it, for free! Contact jennifer.veitch@nrc.ca to have a copy of the collected paper and reactions sent to you.

Encyclopedia of Environmental Science

Editors: David E. Alexander and Rhodes W. Fairbridge. (1999). Dordrecht, the Netherlands: Kluwer Academic Publishers. (ISBN 0-412-74050-8)

This is a multidisciplinary reference work compiled with 228 authors from 25 countries, including biologists, ecologists, geographers, geologists, political scientists, soil scientists, hydrologists, climatologists, and representatives of many other disciplines and academic specialties. Contents include:

- Conservation of Natural Resources — Robert M. Hughes, Northrop Services, Inc., Corvallis, USA
- Environmental Education — Bernard Stonehouse, Scott Polar Research Institute, University of Cambridge, UK
- Environmental Perception — Ervin H. Zube, School of Renewable Natural Resources, University of Arizona, USA
- Environmental Psychology — Raymond K. De Young, School of Natural Resources, University of Michigan, USA
- Sustainable Development, Global Sustainability — Richard Saunier, Santa Fe, USA
- Tragedy of the Commons — Raymond K. DeYoung, School of Natural Resources, University of Michigan, USA

For more information: <http://www.wkap.nl/>

DIVISION 34 - CONVENTION PROGRAM AT-A-GLANCE

Event	Date & Time	Location
Executive Committee Meeting	Saturday, August 25 th 8:00 - 8:50	San Francisco Hilton and Towers Union Square Room 5
<u>Symposium</u> : Ethnic Identity: Population and Environmental Variations	Saturday, August 25 th 10:00 - 11:50	San Francisco Hilton and Towers Union Square Room 22
<u>Symposium</u> : Person-Environment Psychology and Mental Health	Saturday, August 25 th 1:00 - 1:50	San Francisco Hilton and Towers Union Square Room 15
<u>Presidential Address</u> : S. Marie Harvey, <i>Preventing Unintended Pregnancies, HIV and STDs: A decade of challenges.</i>	Saturday, August 25 th 3:00 - 3:50	San Francisco Hilton and Towers Union Square Room 15
Business Meeting	Saturday, August 25 th 4:00 - 4:50	San Francisco Hilton and Towers Union Square Room 15
Social Hour	Saturday, August 25 th 5:00 - 5:50	San Francisco Hilton and Towers Union Square Room 16
<u>Conversation Hour</u> : Tour - Architecture of San Francisco	Sunday, August 26 th 9:00 - 9:50	San Francisco Hilton and Towers Union Square Room 17
<u>Symposium</u> : Science that Matters: Building Research-Action Partnerships	Sunday, August 26 th 10:00 - 11:50	San Francisco Hilton and Towers Union Square Room 22
<u>Symposium</u> : Assessing Outcomes of Couples Based HIV/STD Prevention Interventions	Sunday, August 26 th 1:00 - 2:50	San Francisco Hilton and Towers Yosemite Room A
<u>Invited Address</u> : Michele Stephen, <i>Listening for the Voice of Gods: Balinese Trance and Architecture</i>	Sunday, August 26 th 3:00 - 3:50	San Francisco Hilton and Towers Union Square Room 5 and 6
<u>Individual Paper Session</u> : Current Research in Population and Environmental Psychology	Monday, August 27 th 9:00 - 9:50	San Francisco Hilton and Towers Union Square Room 18
<u>Poster Session</u> : Current Research in Population and Environmental Psychology	Monday, August 27 th 10:00 - 11:50	Moscone Center - South Building Exhibit Hall C
<u>Symposium</u> : Greening APA - 2001	Monday, August 27 th 12:00 - 12:50	San Francisco Hilton and Towers Continental Parlor 9
<u>Symposium</u> : Social Psychological Processes Influencing Risky and Safer Sex Behavior	Monday, August 27 th 1:00 - 2:50	San Francisco Hilton and Towers Union Square Room 18
<u>Invited Address</u> : Nancy Padian, <i>The Association Between Acceptability of Contraceptive Method and Actual Use</i>	Monday, August 27 th 3:00 - 3:50	San Francisco Hilton and Towers Union Square Room 18
<u>Symposium</u> : Sexual Negotiations: Gender and Sexual Assertiveness in Youth	Monday, August 27 th 4:00 - 4:50	San Francisco Hilton and Towers Continental Parlor 7
<u>Invited Address</u> : Lynn Paxson, <i>The role of contestation in the definition of public space.</i>	Tuesday, August 28 th 9:00 - 9:50	San Francisco Hilton and Towers Continental Parlor 7
<u>Symposium</u> : Practical Revisioning: Humans in the Web of Life	Tuesday, August 28 th 10:00 - 11:50	San Francisco Hilton and Towers Continental Parlor 9
<u>Symposium</u> : Global and Local: Where can Ecopsychologists find Leverage?	Tuesday, August 28 th 12:00 - 1:50	San Francisco Hilton and Towers Continental Parlor 1

NRC-CNRC

The National Research Council of Canada (NRC) is a dynamic, nationwide R&D organization committed to helping Canada realize its potential as an innovative and competitive nation. Combining our strengths – outstanding people, core science expertise and information, research programs focused on key technologies and technology diffusion – with those of industrial and academic partners, we foster Canada's emerging national system of innovation. **You can make a difference at NRC!**

Assistant or Associate Research Officer in Environmental Psychology/Human Factors Institute for Research in Construction (IRC), Ottawa, Ontario

This is a continuing position, subject to a two-year probation period.

Your Challenge

You will contribute to the achievement of Indoor Environment program goals, to develop cost-effective technologies for the design and operation of indoor environments that maximize the comfort, productivity, health and safety of people in buildings. You will also join existing teams and develop new lines of investigation in areas related to human behavioural consequences of the physical indoor environment (including but not limited to acoustics, thermal comfort, lighting, and ventilation/indoor air quality). Part of the job requires working to put research findings into building practice through communicating to practitioners and other interested parties.

Your Credentials

You possess a Ph.D. in Psychology with specialization in Environmental Psychology, or Human Factors/Ergonomics, or in other related subfields of Psychology (e.g., social psychology, industrial/organisational psychology, or health psychology). You will have: experience in behavioural science research concerning the effects of the built environment on performance, health, mood, and comfort (some scholarly publication in this area is essential); experience with a variety of research designs and statistical techniques for both laboratory and field research is essential.

Knowledge of English is essential and an Enhanced Reliability Check will be required.

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To explore this opportunity, send your application by July 31, 2001, **indicating reference number 44-01-01** to: **Sylvie Brault, Human Resources Systems Coordinator, National Research Council Canada, Building M-20, Ottawa, Ontario, K1A 0R6, by fax at (613) 954-5984, or e-mail at sylvie.brault@nrc.ca. Please visit our web-site at www.nrc.ca/irc/.**

We thank all those who apply and advise that only those selected for further consideration will be contacted.



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UNIVERSITY OF UTAH

ASSISTANT PROFESSOR OF

CONSUMER AND COMMUNITY STUDIES

This is a nine-month tenure track position in the Department of Family and Consumer Studies. We seek a person who can apply social science to quality of life concerns in communities. Research and teaching should focus on community-level processes (e.g., citizen participation, community development, nonprofit organizations and community agencies, demographic change, policy development and evaluation). Areas of special interest are consumer issues in housing and transportation, aspects of livable communities, or disruptions to community systems and environments. Interdisciplinary perspectives are welcome. Faculty in the department examine the social, physical, and economic environments of families and the communities in which they live. Application receipt deadline is October 15, 2001, or until the position is filled. Submit vita, copies of recent publications, and three letters of reference to: Professor Jessie Fan, Search Committee Chair, 225 South 1400 East, Rm 228, Department of Family and Consumer Studies, University of Utah, Salt Lake City, Utah 84112-0080.

The University of Utah is an Equal Opportunity/Affirmative Action Employer and encourages applications from women and minorities and provides reasonable accommodation to the known disabilities of applicants and employees.

