Place and the Promise of Conservation Psychology

Suzanne Bott
Sonoran Institute
Tucson, AZ 85710
USA[1]

James G. Cantrill
Communication and Performance Studies
Northern Michigan University
Marquette, MI 49855
USA[2]

Olin Eugene Myers, Jr.
Huxley College of the Environment
Western Washington University
Bellingham, WA 98225
USA[3]

Abstract

The diverse literature related to "place" is discussed in the context of several psychological frameworks to highlight connections to conservation psychology research and practice. The study of the human relationship to place is first cross-cut by distinctions between built versus natural places, explanatory versus normative stances, and humanistic versus scientific approaches. Several typographies are then provided as ways to organize some of the psychological research related to place. Place perception and cognition provide insights into mental and collective representations of place. Affective or emotional constructs, such as place attachment and dependence, offer ways to consider the strong bonds people form with places, which can be significant factors in land management. Place identity research describes how a person may have a sense of belonging in a place, and how this may vary with background variables. Finally, development of a sense of place is examined for both children and adults. Lessons for mental health, education, and communication, and public involvement in adaptive ecosystem management are suggested, and illustrated by experiences in the Great Lakes region.

Keywords: *conservation psychology and place theory, place attachment, place identity, environmental management*

Introduction

> *If we get this bill through, I will feel that my life has not been in vain. Until I was thirty, I wanted to save the world. Between the ages of thirty and sixty, I wanted to save the country. But since . . . sixty, I've wanted to save the [Indiana] Dunes.* (Illinois Senator Paul Douglas, 1964, cited in Engel 1983, 6)

Relationship to place is a fundamental feature of human existence. This relationship, in broadest terms, is as various and extensive as are human interactions with their surroundings. But while some of these interactions can be described in strictly objective terms, such as the spatial-temporal flows of matter and energy studied in resource management, the term "place" denotes humans' subjective experiences and meanings of the locations they inhabit. Because of this, approaches to the study of place may draw on very wide vocabularies and concepts of human subjectivity. For example, Steele (1981) noted several types of place experiences (immediate feelings and thoughts, views of the world, intimate knowledge of one spot, memories or fantasies, personal identification) and several major characteristics of place (identity, history, fantasy, mystery, joy, surprise, security, vitality, memory). Place may be influenced by human perception, cognition, affective propensities, self-concept, social dynamics, economies, cultures, and histories. Further, place may be fil-

tered through various human values systems, ranging from materialistic and utilitarian to spiritual. Finally, the study of place has been pursued in several different disciplines or broader schools of thought. Thus, fault-lines of basic assumptions, methods, and purposes have characterized the unstable intellectual terrain of place.

Unfortunately, as interest in place has increased in synchrony with recent wider environmental concerns in society, the volume of research and theory has been met with few comparable attempts to survey and synthesize various intellectual traditions. Nonetheless, conservation psychologists approaching this topic have much to gain by studying and employing its insights. Indeed, every approach to the study of place necessarily includes psychological elements, so conservation psychologists can likely feel at home and offer critical contributions.

In exploring place and its cognate concepts here, we will not survey the field discipline-by-discipline, nor seek to be comprehensive. Rather, we will first note some broad ways that the terrain is cross-cut. Next, we will discuss conceptions of place according to the key psychological variables embodied in them, noting practical examples. While this may overlook what some may view as important differences in schools of thought, or the integration of different factors, we hope it offers clearer links to psychology. Then we will focus on applications and promising synergies for conservation psychology research and practice.

Locating the Study of Place

In an attempt to gain our bearings, we begin by recognizing three major axes by which the terrain of place may be organized. First, some scholars have chosen to emphasize the human relation to certain kinds of place over others, or the distinction between built versus natural areas. Second, researchers differ on whether those studying place should attempt to objectively describe and explain people's relation to place, or whether they should engage their own values to advocate certain positions. Finally, alternative epistemologies — scientific, humanistic, or phenomenological — have been applied to place.

Built Versus Natural Places

Although some concrete setting seems implied, the concept of place does not inherently apply to only built or only natural environments (as if that distinction was absolute). Simply, the subject matter draws its definition from the human experience of place, which harbors no such boundary. Other terms denoting "place" used throughout this article are all similar notions of place, differentiated by their perceived scale. Norberg-Schulz notes that place is "a totality made up of concrete things having material substance, shape, texture, and color. Together these things determine an 'environmental character' which is the essence of place. In general, a place has such a character or 'atmosphere'. A place is therefore a qualitative, 'total' phenomenon, which we cannot reduce to any of its properties, such as spatial relationships, without losing its concrete nature" (Norberg-Schulz 1979, 8). For example, Canter (1977) described place as the intersection of a setting's physical characteristics, a person's individual perceptions, and the actions or uses that occur in a particular location (cf. Bonnes and Secchiaroli 1995, 170-174; Pretty et al. 2003). Place has been described as the point where the setting's physical and cultural characteristics meld with the individual's affective perceptions and functional needs (Bott 2000).

It may be tempting for some readers to hear in "place" a natural place, or, for others, a human made one, but that would be misleading. Acknowledging this, conservation psychologists may legitimately wish to focus on relatively "natural" places, in as much as such a focus may be a corrective to the tendency of modern industrial and urban cultures to overlook or devalue natural places. Technological development has resulted in a shift away from daily interaction with nature, from humans being *a part of nature*, to being *apart from nature* (Roberts 1996). The paradox is that we live at the height of technological mastery, yet find ourselves separated from both the earth and each other in an "unsettling nexus of domination and homelessness" (Seamon and Mugerauer 1985, 1). As a result, the desire for opportunities to reconnect with nature and places is increasing (Dustin 1994).

Granting this possible preference by some conservation psychologists, however, there are good reasons to examine experience of all varieties of places. As we will discuss later, some varieties of relation to place may be deficient or even pathological. Studying such cases may shed light on the human capacity for relation to place. Second, the notion of natural places itself may be problematic in contemporary culture. This is most clearly seen in the concept of wilderness — which is presumably where nature is most natural — as in *not* including humans. Some scholars (e.g., Hoch and Franz 1994, Oravec 1996) contend that our tendency to embellish or otherwise objectify the sometimes unappealing realities of wilderness means that we have removed ourselves even further from the natural world. In such a framework, the potential for a human self-concept that is at home in nature may be diminished. Recognizing and trying to understand the empirically demonstrable blending of human, humanly modified, and natural elements in people's senses of place may serve as a corrective to this tendency (see discussion and sidebar on

Chicago Wilderness). Finally, for conservationists and researchers working with them, campaigns to save nature will be most effective if they accurately locate people's senses of place, whatever the boundaries thereof may be. As emerging work shows, people have strong feelings about nature because of its implications for both social and environmental identity (Clayton and Opotow, in press).

Explanatory Versus Normative Views

One complexity of the idea of place is that, because of its intimate association with human subjectivity, it is neither strictly a scientific concern nor a value-based one. Partly this arises from the value-laden historical circumstances of the increased interest in place. According to Relph (1996), the concept of place only became a significant focus outside geography in the early 1960s, as a result of shifts in academic attention, cultural relationships to environments, simultaneous changes in physical environments, and advances in communication, travel, and ideological globalization. He noted trends in research toward recovery and design of place, and cited the attempts to maintain place as coming from three directions: *local political reactions*, often taking the form of neighborhood protests against the threat of potentially place-destroying intrusions; *personal sensitivity to places* as a foundation for recovering something that is disappearing from the world; and those emphasizing *the need to find ways to design and maintain* distinctive places. All three of these sources of effort embody explicitly normative assumptions.

In the study of place, Zube, et al. (1982) draw a distinction between the social/behavioral sciences, and the environmental design/planning disciplines. They suggest that the former see place theory as *explanatory*, aimed at determining *what is the case and why*, while the latter view it as *normative*, aimed at determining *what ought to be the case*. Alternatively, Carlson (1994) argues that environmental psychology and geography have followed the path of *explanatory theory*, while in contrast, environmental designers and resource managers have sought normative or *justificatory theory* that allows them to formulate and argue in favor of various positions (cf. Williams and Patterson 1996). Carlson's position is that the divergent tracks of research are now contributing to the development of a new perspective with new and practical applications. If so, this is especially promising for conservation psychology, which seeks explanatory theory that can enrich on-the-ground projects informed by conservation values. Examples in the study of place may include new theoretical approaches and design models centered on human scale, community values, simplicity, and preservation of valued resources (e.g., Brandenberg and Carroll 1995; Hiss 1990; Nelessen 1994; Susanka and Oblensky 1998). We will embrace this spirit by discussing scientific theory and findings together with the value-driven applications in the substantive sections to follow.

Cultivating regional pride in Chicago's wilderness

More than nine million people live in the Chicago metropolitan area, and most of them are not aware of the rich biodiversity with which they co-exist. In fact, northeastern Illinois, southeastern Wisconsin, and northwestern Indiana — the region we call "Chicago Wilderness" — is home to thousands of species of native plants and animals, which make up some of the rarest natural communities on Earth.

The Chicago Wilderness consortium is a group of more than 160 public and private agencies working to restore, protect, and manage these communities for long-term health and viability. One of the consortium's main challenges is to foster public appreciation of these precious natural resources, and to build support for restoration and conservation initiatives.

To do that, the consortium's public communications goals include building a general awareness of the biological diversity of the region and creating a sense of regional pride or feeling of connection to that biodiversity. The Chicago Wilderness consortium also strives to provide ample opportunities for involvement in conservation activities. However, that does not necessarily mean that people are going to take advantage of such opportunities, or that involvement will be sustained. We need to understand the motivating factor related to action.

In particular, what inspires people to care about nature, and then act on that caring? Chicago Wilderness hopes that conservation psychology and audience research can help answer these questions. For example, a CW project team recently hired social scientists to conduct focus groups and create surveys that explored area residents' knowledge of, attitudes toward, and concerns about prescribed burning, a key land management practice in the region. The team then used the research to create effective communication tools for Chicago Wilderness members to use to garner support for the land management agencies that conduct the burns.

A larger project is now underway to assess the general level of knowledge and support of the region's citizens for local biodiversity conservation issues. Findings will provide baseline data against which they will measure the collective impact of the coalition's efforts over many years. The researchers will do a meta-analysis of local audience research, identify knowledge gaps, and commission additional research to fill in those gaps.

This audience research will inform the consortium's State of the Region Report Card project, which is being developed during 2003. The report card will help the consortium measure the progress being made in regional conservation, including the changes in public support and action, and will hopefully be a powerful motivational tool in itself.

Lucy Hutcherson and Carol Fialkowski
Chicago Wilderness
www.chicagowilderness.org

Humanistic Versus Social Scientific Vistas

Humanistic epistemologies have generated an evocative and provocative vocabulary used by some scholars to describe the "hard to define" aspects of place experiences. Tuan (1974) used the phrase *geopiety* to denote a form of reverence. Steele proposed that "certain settings that have a

strong *'spirit of place'* will tend to have a similar impact on many different people" (1981, 9). Norberg-Schulz (1979) explaining the idea of *genius loci* said the key to human identity as it relates to nature is, "the ability to find identification in the world, based on the character of a place and the ability for orientation within space, in order to understand the context for living" (1979, 7). The result of identification is the translation of nature into an ordered microcosmos or *imago mundi*, which gives humans a foothold in the world. This leads to existential "*dwelling*," which facilitates the process of being and fulfills a fundamental existential need to have a life filled with *meaning* (Norberg-Schulz). Others have sought to understand the need and potential to *reconnect to place* and community (Daitch et al. 1996; Low and Altman 1992; Twigger-Ross and Uzzell 1996).

We can be in a better position to understand this kind of vocabulary if we look at its roots in humanistic and especially phenomenological psychology. Relph noted that while the direct experience of living is geographical reality, it is often so obvious that it is taken-for-granted and not studied. He described phenomenology as a way of discerning the essence of such taken-for-granted realities. The theoretical principles of place and existentialism were developed by Heidegger, who believed that "dwelling in the world" was the ultimate existential experience. Following founders Husserl and Merleau-Ponty, a phenomenological approach allows perception and experience to stand by themselves, "bracketed off" from analytic reductionism. Thus, the essences of experiences of the spiritual sort alluded to in the phrases above may be studied in themselves, as richly illuminated in Basso and Feld's (1996) collection of essays rooted in ethnographic approaches to the phenomenological. A fundamental consequence is that existence (of self-and-world) itself, which is inaccessible to the scientific method, gains recognition and value through deep examination of our ordinary lived and felt experience. Thus, a place phenomenologist may deem qualities like the "character" or "atmosphere" of a place as truly real, independent of what "objective" description might reveal. By funding alternative world-views, this approach offers a basis for alternative normative assumptions useful in justificatory place theory.

Science and spiritual or quasi-religious concepts can intersect in empirical research on place-based meanings, including their use in justifying environmental policies. Mazumdar and Mazumdar (1993), for example, studied sacred space and place attachment and determined that emotional connectedness to place is forged through the creation of sacred settings. Driver et al. provided insight into new management philosophies that recognize spiritual values. The authors addressed the "spiritual meanings that nature holds for human beings, and consider[ed] if and how a more thorough understanding of these meanings could improve management" (1996, 3). Many contributors to Driver et al. sought to recognize the relationship between place and hard-to-define human experiences (Goodale and Godbey 1996; Greene 1996; Roberts 1996; Schroeder 1996). The authors assert that these dimensions of the person have become so important that they can no longer be overlooked; indeed, the convergence of disciplines in the study of place typically recognizes the societal need to reconnect with nature.

Thomashow (2002) provides an intriguing application of phenomenological insight in the context of environmental education. The first obstacle he faced was the assumption that education must be built on cognitive foundations of natural history and ecology. He recommended developing a place-based perceptual ecology first, from which perception can then be refined in order to move outward, exploring relationships between self, place, and the larger biosphere. Thomashow offered three interconnected pathways that lead to biospheric perception: "natural history and local ecology, the life of the imagination, and spiritual deliberation" (2002, 5). Environmental education, Thomashow noted, is not only an ecological issue — but an existential one also. The means to understanding the relationship between humans and the biosphere is to synthesize book learning with visceral learning, wonder, and care in order to develop a conservation ethic. And just this sort of synthesis may serve the needs of conservation psychologists as well.

Mental and Emotional Topographies

Much of the work on the concept of place has been interdisciplinary or has come from relatively integrative fields such as geography or environmental psychology. Thus, place theories frequently propose multiple factors working together. For example, Stokols and Altman (1987) determined that six factors contribute to aesthetic place perception: experience, knowledge, expectations, sociocultural context, environmental elements, and physical context. Not to contradict the spirit of such approaches, our presentation will attempt to decompose such theories, and group similar variables together across theories. This analytic style is preferred in order to relate the subject explicitly to psychology. We will address three broad categories: cognitive representation and place perception, place-based senses of attachment and dependency, and developmental perspectives.

Cognitive Representation and Place Perception

Place perception entails perception of a whole. As Ittleson (1973) explained, historically, experimental perception research had been carried out in the context of *object perception*, rather than *environment perception*, with "find-

ings of the former providing the basis for understanding the latter" (1973, 3). Research in environmental perception conducted during the 1950s and 1960s by Gibson (1950, 1966) and Maslow and Mintz (1956) broke this mold. Gibson studied how certain perceptual qualities derived from configurations of the whole, rather than additions of parts. Similarly Maslow and Mintz correlated the global attractiveness of settings with a series of ratings.

Gibson (1979) developed a realist theory of "affordances," in which the environment as a whole "affords" useful properties to the individual. But on the other hand, place perception is dynamic because of the mental and physical activity of the human subject. Ittleson (1973) said environmental perception depends on cognitive, affective, interpretive, and evaluative components acting together. Thus, although "place" is a common sense term, and different descriptions of a place seem to apply to a common object, place should nonetheless be viewed as an open and continuously changing system. As most theories do, any practical application of the concept of place perception should assume an interaction between place and person. The value of psychology to the study of place is in identifying and testing the assumptions about the person's internal processing of the raw stuff of physical locations.

Closely linked to perception is cognition. Some knowledge of a place is indispensable in people's connection to specific locations and their motivation to protect them. What roles do human knowledge, conceptual structures, thought processes, and language play in relating us to place? Kaplan (1987), Kaplan and Kaplan (1982, 1989), and Kaplan, Kaplan, and Ryan (1998) conducted research into perception based on the tenets of information processing approaches. Information is extracted from the environment's spatial organization, as guided by human functioning. They proposed two basic features of this extraction sequence: *exploration*, based on complexity and mystery of environmental information, and *understanding*, based on legibility and coherence.

Related cognitive and neurological studies have explored mental representation of space, often focused on more "molecular" units of analysis than perception research. These include theories of cognitive maps and way-finding (Golledge 1999; Kitchin and Freundschuh 2000). Such work has been applied in urban and architectural design. While "space" should be distinguished from "place" (the latter implying an environment organized from the subject's view point, and linked to affect), this work has shown that human perception may process environmental information in different ways. For example, a person's use of a navigational style based on vectors or dead reckoning versus landmarks and unique features may have implications for their sense of place.

Cooper Marcus (1992) described the need for research into the mnemonics of place as the population ages and environmental memories become more extensive. She focused on the importance of memories in determining place attachment, as well as control over meaningful space, the manipulation of that space, and the re-creation of some essence of significant past settings in later life. Such acts have important psychological consequences: we are motivated to effect these changes in order to discover, confirm, and remember who we are. Our memories of, and self-expressions through, settings are profound reminders of self-identity, especially at times when that identity is weakened or threatened (cf. Cantrill and Senecah 2001).

Finally, language as a component of mental representation has implications for sense of place as well. At a simple level is the use of place names by a community of speakers. Place names may increase the intersubjectivity of a group, grounded often in mythology. The ethnographic literature is chock full of landscapes with names for every feature of the terrain (e.g., Basso 1988, Carbaugh 1992). On another level, our appreciation of the importance of places in our lives may be dependent on the vocabulary our language offers. For instance, compare the cognitive responses associated with the terms "brownfield" versus "old industrial site" or "park" versus "preserve."

The links between language and landscape have been noticed by conservation practitioners. Forbes (2001), of the Center for Land and People, has written of the need for language to reclaim our connection to land. The Keepers of the Waters project seeks in part to change the very way we talk about one element of place, water, on the assumption that this will reflect a change in worldview and valuation of water. Conservation psychologists can help by uncovering and providing a vocabulary for some of the difficult to articulate experiences of place that may be widespread, but remain private for lack of a language that expresses them.

Place-Based Senses of Attachment and Dependence

Whereas perception and cognition may be necessary precursors in place theory, the domain of goals, preferences, values, and emotions is the *sine qua non* of the place experience. When human subjective meanings about a location take on the hue of "place," we meet the motivational side of human life, whether it be visceral or sublime in character. Psychology has a rich set of concepts for this domain, and many of them find direct resonance in scholarly work on place. The subjective dimension is of primary importance in understanding how individuals and communities come to care about local or other places, as well as about idealizations of place. Patterns of behavior spring from values people hold about places and the goals they seek to obtain in them. Affect

may offer an even closer link with behavior, as the literature on attachment to places documents. Finally, we will examine what happens when people form a sense of self or identity in relation to a place such that a stable pattern of attitude and action to the place may be born.

The Value and Function of Place. One major category in our relation to place can be understood through biological and functional (goal-related) concepts of motivation. Several researchers argue that *place attachment* occurs when the environment fulfills a functional need, or a goal (Prohansky, Fabian and Kaminoff 1983). Similarly, Stedman (2002) defined attachment as satisfaction, or the attribution of utilitarian value to a setting, rather than salience based on identity. Moore and Graefe (1994) defined *place dependence* as valuing a particular setting for a certain activity. Research conducted in such models shows that when a place serves as a resource for meeting a need or conducting an activity, people develop one sort of bond to it.

Some have explained the functions of place in evolutionary terms. Appleton (1975) put forth a theory of *landscape preference* based on an environment's capacity to provide habitat — locations for meeting prospect and refuge needs. Prospects (i.e., clear views of surrounding land) serve the need to detect both prey and predators early, and refuges serve survival by offering concealment and other resources. A recent extension by those writing about biophilia is the savanna hypothesis, which postulates that we have these preferences because such landscapes typify the African terrain where humans evolved. That such environments appear to be preferred over culturally-typical settings by people from cultures as different as that of South Korea and Texas suggests a universal origin (Yi 1992). Such biophilia may provide a ready source of environmental values, albeit one deficient in ecological validity.

Functional needs might reflect non-survival needs, too. From the literature, Smernou (1992) listed 22 psycho-ecological needs with reference to the built environment. The strength of these needs depends on individual differences. Porteous (1982, 1996) based his theory of environmental aesthetics on Maslow's theory of a hierarchy of human needs. This theory may imply that as basic human needs become satisfied with the help of technology, focus shifts to self-fulfillment needs. At this stage, the opportunity to experience meaning becomes paramount and "feelings may involve attachment (or its opposite), and thus sense of place" (1996, 8-9). Self-fulfillment-type goals in the use of place were noted by Fishwick and Vining (1992). Place aesthetics may also express needs, as proposed by Bourassa's (1991) model integrating habitat theory, cultural rules, and individual creativity and experience.

Research on the values, preferences, and goals that people incorporate in their experiences of, and attachment to, places is important for conservation psychology. People's motivations and action intentions influence behaviors, whether these are private choices or behaviors in support of, or resistance to, proposed public policies or actions (Ajzen 1992; Fishbein and Manfredo 1992). Wyman (1985) used environmental biographies to analyze recreationists' perceptions of nature experiences and to correlate their responses to recreation professionals' expectations. The results showed that recreationists' motivations did not always result in experiences that met the expectations of education, planning, and design professionals, supporting the need for public involvement in curriculum, activity and facility planning. Alternatively, Hannon's studies (1994; Norton and Hannon 1997) suggest that what we value in the environment and how we respond to environmental threats is a function of how close something is in space to places we care for or disdain.

Affective Ties to Heartfelt Places. Affect is central to several place experiences and should be of great interest to conservation psychologists. These experiences include phenomena that have been called *sense of place*; *connection to nature*; and some formulations of *place attachment*. Some scholars have employed powerful emotion words to describe these relations, such as Tuan (1974) who used the neologism *topophilia* to denote a love of place. This sentiment is not particular to Tuan. Sarbin (1983) wrote about "love of place," expressed by the Spanish phrase "*querencia*," as the inclination of people to seek places where they feel safe or particularly comfortable. "A person may undergo hardship and reject opportunities for career advancement in order to reside in or be near to a certain place" (Sarbin 1983, 341).

Beyond describing the affective relation to place, we can ask what influences it. Williams et al. (1992) showed that different users of natural settings held different degrees of attachment based on a variety of factors such as previous visits, residence, setting focus, hunting, sensitivity to site impacts, and horse encounters. Further research by Williams et al. (1995) showed how people use leisure to "thicken" the meaning in their lives and reconnect to place and community, and showed results similar to Williams et al. (1992) that dependence and identity were significant factors in the importance one attaches to a place. The researchers concluded that evaluation of public perceptions could be significant in improving management of wilderness areas. Schroeder's research extends this line of reasoning to suggest that place attachments, as reflected in the underlying themes people use to describe a locale, "have important implications for land and resource planning in the face of increasing urban, suburban, and tourism development in natural landscapes" (2002, 13).

A sense of place also has important consequences for other behaviors. For example, Mitchell and colleagues (1991) reported that for their subjects, attachment to an area was an important reason for visiting the area. Using qualitative methods the researchers found that the affective dimensions of a visit to an area included reminiscing, remembrances, and a sense of ownership for the area. In addition, affective relationships with the area included self-definition, identity, and a way of handling the pressures of modern technology. They noted the value of adding the affective components of place in future planning by directly involving users in the planning process.

Place Identity and a Sense of Self-in-Place. Identity and self are complex psychological constructs that integrate cognition and affect regarding the relation of the self to elements of the person's human, non-human, and ideological environments. Thus they are "higher level" concepts, but potentially robust predictors of behavior because they may represent enduring mental and emotional configurations. In the present case, those environmental elements in which the self becomes vested are, by any other name, places in the heart and mind. Tuan (1974) used the term *rootedness* to denote the merger of personality with place, based on living in a location for an extended length of time. Prohansky, Fabian, and Kaminoff (1983) defined *place identity* as a relationship in which, through personal attachment to a geographically locatable place, a person acquires a sense of belonging and purpose in that place, which gives meaning to life. They held that this process is unconscious, and involves affect, knowledge, beliefs, behaviors, and actions. Moore and Graefe (1994) considered *place identity* to be the valuing of a particular setting for emotional-symbolic reasons, such as profound "first" experiences, or being from a place.

Hull and Vigo built their concept of place and self around a strong affective core, including elements reviewed in the preceding section. They offered the metaphor of place attachment as overlapping layers of opportunities, meanings, and emotions related to settings, like a flower with overlapping petals. The denser and more interrelated the layers, the more likely the setting will develop qualities of place (Hull and Vigo 1990). If the perceived qualities of place are consonant with the person's self-perception, "image congruity" may result, in which the meanings and values associated with the place match a person's image of self. Image congruity in residential environments was found to promote attachment to place and the consequent benefits place membership entails (Hull 1992; Hull et al. 1994).

But while place identity builds on affective ties, it may be distinct from place attachments based on resource dependence. Stedman (2002) found that whereas emotional attachment instills willingness to protect places that are central to identities, place attachment can also be functional insofar as our identities get bound to the solace, succor, and physical satisfaction to be had in various environments. Such a resource-based motivation is closely allied with Cantrill and Senecah's (2001) notion of a *sense of self-in-place*. Following the efforts of cognitive psychologists (e.g., Taylor and Crocker 1981) and earlier studies of place and the relationship between self concepts and environments (e.g., Bragg 1996, Cantrill 1993, Cuba and Hummon 1993, Krause 1993), a person's sense of self-in-place has been shown to affect general environmental orientations (Cantrill and Masluk 1996) and how people react to local land-use controversies (e.g., Cantrill 1996, 1998). Thus, even across extensive geographic regions, citizens' views of the natural and social environment are modified by psychological processes and personal assumptions grounded in personal or indirect experience with particular places.

Ethnic and socio-economic variation also may generate different kinds of place identification. For example, environmental justice, empowerment for urban youth, and environmental health are issues related to a caring connection for the environment in its functional roles for people. Pretty et al. (2003) point out that a sense of community is associated with the social environmental characteristics of place. The fact that some people in impacted communities do not move away, even when economic options exist, suggests intriguingly different relationships to place. Projects that have engaged such populations in place-based activities have been shown to promote environmentally-responsible behavior, to a greater degree than achieved by merely informing residents about the issues (Vaske and Kobrin 2001).

Since self and identity vary so profoundly with social group and culture, place identity research needs to consider these variables. Bonnes and Secchiaroli (1995) propose that there are important distinctions between individual versus collective representations of place. Where cultural variations in place-based senses of self exist, both practitioners and researchers need to make extra effort to work from the grassroots level of immediate interaction with a community, rather than depend on "standard" ways of framing questions and surveys. Research has shown that conservation scholars and practitioners have different perceptions and preferences than the rest of society (Kaplan et al. 1998). Conservation professionals should be careful to work closely with particular communities as they define research or management agendas, as we discuss in the section on application, below.

Developmental Perspectives

Development of place attachment, sense of place, and place identity can be investigated at different levels of analy-

sis (from basic perception to culturally-shaped identity), over different age or time frames (child or adult; short-term or lifespan), and within functional or mechanistic causal frameworks (functions of place versus assembly of components). Studying development also calls for examining the integration of biological, psychological and contextual, and cultural factors over time. Given the complexity of this branch of psychology it is not surprising that development of place phenomena has progressed less than more basic areas. Growing literatures look at both childhood and adult pattern.

Place in Childhood Development. Beginning with Cobb's (1977) speculations about the role of childhood experience with nature in inspiring later adult creativity, interest in children's experience of place has grown in the last few decades. Works by Chawla (1986, 1992, 1994), Sebba (1991), and Cooper Marcus (1992), have done much to elucidate the complex relationships between retrospective memory, actual childhood experiences, and connection to place. Other researchers have worked directly with children to understand their relations to places. Hart (1979) and Moore (1986) laid the groundwork by accompanying children in their familiar environments, discovering how they used different areas, and how their "home ranges" varied with age. To a striking degree, children's senses and uses of space and place do not map onto adult perceptions and relations to the same areas. Sobel (1993) has found similar home-range changes over ages like those reported in Hart and Moore by using map-drawing activities (see also Monroe, this issue). Nabhan and Trimble (1994) suggested how dramatically changes in cultures and in the nature of childhood (and its institutions) are affecting children's experience of place, and indeed opportunities to experience natural places at all. Children, however, are not passive in the political relationship to place, or at least need not be. Hart (1997) documents how children the world over are agents in their communities' collective efforts to improve their environments.

Although little longitudinal research has been conducted to explore it, another pattern evident from adult retrospection is that environmental concern may stem from early experience in nature. This finding comes from the literature on the "significant life experiences" which environmental educators and activists describe as influential in their eventual career direction (Tanner, 1998). Experience in nature alone did not lead to such commitment; social factors are also important (see also Monroe, this issue). Nonetheless, place relationships may predict environmentally responsible behaviors.

Adult Adaptations to Place. Smernou (1992) proposed an idealized model for the development of place identity in adulthood that includes reciprocal and reiterative influences between setting and person. Structural information in the built environment and associated sociocultural factors are perceived and interpreted. A motivational component provides the major impetus to action, and may reflect a variety of types of need. The environment in turn can facilitate and channel the meeting of these needs. The environment is subsequently evaluated, depending on whether the person perceives the needs are met or not. This evaluation is expressed in behavioral, affective and cognitive responses.

More so than children, adults shape the landscape not only directly, but also through their participation in social, political, and economic systems. Since place identification represents a high cognitive integration and emotional investment of self in place, an important result may be action, perhaps on behalf of a place. Vaske and Kobrin (2001) suggested that place dependence plus place identity) may result in environmentally-responsible behavior (ERB). They noted that educators can capitalize on knowing that as emotional connections to place develop, environmentally-responsible behavior can also be encouraged.

Adults may invest themselves in a new environment, or reinvest in a familiar one. This finding comes from studies of housing, including across cultures (Ittleson et al. 1976; Rapoport 1982), and may generalize to natural environments as well. Conservation psychology could add to this body of research and practice in a number of ways. Educators and managers might note that phenomena like place identity depend on complex, multi-dimensional, and dynamic processes that only develop over time (Cantrill 1998). On the other hand, the move to create general models may be premature. Rich descriptions of individual longitudinal change are often a prerequisite to developmental theories that specify the domain and dynamics of change accurately. Chawla (1994) offers one such in-depth examination. One implication may be that rather than applying complex theories, public involvement processes need to provide rich and prolonged opportunities for authentic communication if existing senses of place are to be heard and understood, if more positive ones are to be cultivated, and if contrasting ones are to find harmony.

An Applied Psychology of Place

Broadly conceived, as people act as historical agents, they change the very nature of place experience. In other words, "we create our own places, they do not exist independent of us" (Steele 1981, 9). At the same time people create critical and creative discourses that reflect upon these experiences. Relph (1996) noted it is significant that spiritual values, the role of sacred places and the defining role of place, and symbols and meanings of place have only recently

received attention. This indicates a need for meaning in the environment, which Relph suggests is a recent postindustrial phenomenon. "This is a radical transformation. In the geography of global culture it involves a sort of space-time-culture compression, the global village, in which a diverse mixture of international practices and tastes is being made more or less equally available everywhere" (1996, 917). He suggested methods for recovery of place, as proactive citizen involvement or "self-help design," and an effort toward a "geographically responsible way of doing things in which global processes and fashions would cease to be imperatives and would be used only when refracted through the lens of locality and implemented in a locally responsible way" (1996, 920).

Conservation psychology can work within this perspective by documenting experiences of place that critique maladaptive management of environments. More proactively, it can work with institutions using critical education, participatory management, citizen empowerment, and action research approaches to relate people to places as natural-political landscapes. The Baykeeper/Waterkeeper Alliance program, for example, trains citizen to monitor shoreline and other aquatic habitats, not only for biological indicators, but for Clean Water Act permit violations and other statutory violations as well. The volunteers learn how to lodge complaints into the regulatory process and affect future permit negotiations. Such a critical-transformative perspective coheres with the justificatory place theory. It implies some value basis on which critique, and/or reform efforts are mounted. Consequently, in this final section we examine the potential relationship between two areas for the application of the place concept: mental health and resource management.

Mental Health and Psychopathology

Qualities of place and place experience may be associated with both individual and collective mental well-being. While only phenomena such as agoraphobia are recognized as formal diagnostic categories, there is strong evidence that place qualities may exert a force on mental health. Ittleson (1973) used his theory of environmental perception to evaluate the influence of settings on individuals' well-being. There is good evidence for the "restorative" theory that nature in the context of everyday life lessens stress and improves healing (Kaplan et al. 1998, Moore 1996). Ulrich (1979, 1984, 1986) for example, found that a view from a window may speed recovery from surgery. The increasing documentation of benefits of nature for human well-being supports the need for everyday access to nature. Research on nature-based programs might show them to improve mental well-being, reduce crime, and promote ecological health. In addition, environmental design and building that are done in concert with nature can be restorative to the body and spirit as well as the landscape (Pease 1995), as supported by the movement for "greener" hospitals.

There is great variation in how people evaluate a place. When a place is evaluated negatively, are there negative consequences for personal and/or ecological health? Some people perceive nature (urban or otherwise) as "dangerous," "out there," "the other," or something that "we don't want to be a part of," or just "icky" (Bixler and Floyd 1997). When motivating residents of urban areas, we must accept that for many, the construct of nature is of an alien place. A question needing attention is how might educators bring nature into the urban settings to make the experiences positive?

Some kinds of places may afford only impoverished experiences; study of such negative cases could tell us important things about the basic human relation to place. For example, two of Hummon's (1992) four kinds of sense of place are negative — alienation and placelessness. Smernou (1992) theorized that high identification with built places may serve as a defense mechanism, and found that it correlated with neuroticism. On a societal level, Relph (1976) argued that historical lack of attention to the experience of place in modern society has led to the loss of significant places, and the flourishing of meaningless places, embodied in kitsch, mass communication, mass culture, big business, and spaces dominated by a central authority. Since subjective meaning is integral to the concept of place, these place pathologies may be linked to cognitive deficits in the orientation of contemporary individuals to their surroundings.

Places in the Mind and Landscape-Level Resource Management

One convergent finding from the previous sections is that many of those studying affective bonds to place have found that these feelings may be very strong, but are often very ignored by land managers. The obvious recommendation is for practitioners to start considering them, as indeed many are doing. Williams and Stewart concluded that sense of place has become salient in resource management when they observed:

> *By initiating a discussion about sense of place, managers can build a working relationship with citizens [which offers a] shared language that eases discussions of salient issues and problems and that affirms the principles underlying ecosystem management.* (Williams and Stewart 1998, 18)

Williams and Stewart offer suggestions to integrate sense of place and management into the planning process: 1) know and use the variety of place-names, 2) communicate management plans in locally recognized place-specific terms, 3) understand the politics of places, and 4) pay close attention to

places that have different meanings to different groups (1998, 21-22).

A different applied expression of place connection is occurring in regional and local efforts to create new bonds between people and their nearby places. Some of these are educational in nature, such as the Leopold Education Project, which bases its curriculum on Aldo Leopold's classic writings about a land ethic. Writers such as Thomashow (2002) point to different ways for mediating our relation to the landscape, starting with close observation of one's immediate ecological setting, and linking this to larger, eventually planetary landscapes. Other examples are restoration projects, where volunteers help remove invasive species, replant native ones, and tend the site over years. Indeed, as pointed out by Higgs (1997), good restoration is not only ecologically sound, but must also transform the relation of the surrounding culture to the sites being restored.

Ongoing work in the "Chicago Wilderness" is aimed at precisely the sort of re-connection envisioned by Higgs (1997). The land embracing the southern shores of Lake Michigan has seen the ravages of industry and neglect — associated with extensive industrialization, bioaccumulative effluent generated within the Milwaukee-Chicago-Gary axis. Also present are environmental justice concerns borne on the backs of lower-income generations who have lived in an area largely spoiled by the pollution of the greater regional society (e.g., Babcock 1998; Cronon 1991; Jones 1998). Nevertheless, this region also contains significant remnants of exceptionally diverse flora and fauna found few other places in the Great Lakes basin, as well as unique landscape niches harboring threatened and endangered species. Along with these biological treasures is the coalition called Chicago Wilderness (see sidebar), devoted to restoring and protecting these natural ecosystems where citizens dwell (e.g., Friederici 1997; Peterman 2000).

The entire Chicago Wilderness region is currently facing the prospect of substantial landscape change as a variety of local units of government, including agencies such as USEPA and USDA, and site-specific nongovernmental organizations begin to rehabilitate degraded environments, attract benign industry to revitalize brownfield locations, and preserve cultural values. A key component in current efforts to make amends for historic environmental damage is an attempt to understand the manner in which people living in the region perceive *who* they are or may be in relation to *where* they live. The goal is not to undermine valued existing social structures, but indeed to enfranchise the larger population in the effort toward landscape rehabilitation (Ryan 2000). Conservation psychologists could assist citizens living amidst the Chicago Wilderness to identify the unique qualities that constitute the place they call "home." Additionally, they could help management agencies better appreciate what elements of the region are most salient in people's daily lives so that land-use planning at various scales can preserve what is cherished by residents. Conservation psychologists could also inform the design of educational campaigns that will produce the greatest local empowerment for future decision making. Indeed, the conjunction of the word wilderness with the name of a great city invites the rethinking of the human relation to nature — and thereby human identity itself — rooted as it is in place and time.

On a grander scale, we suggest that the concept of place is also applicable to the widespread use of ecosystem management regimes in the United States, particularly those associated with the practice of *adaptive management* (Boormann et al. 1994). As policy makers and natural resource specialists attempt to mesh economic and social desires for on-the-ground activity with the need to maintain the natural rhythms of ecosystems, they also attempt to account for perceptions of place. As Shindler, Cheek, and Stankey observe: "It is important to pay attention to the specific characteristics of the management setting and the participants involved; these are often the reasons citizens choose to become involved [in the adaptive management process] in the first place" (1999, 1). Considered in this light, practices of adaptive management should acknowledge the local perceptions of place embraced by those most affected by land use policies. In particular, Stankey and Shindler contend that the drawing of boundaries around an adaptive management area must be carefully considered:

> *Boundaries, as Michael (1995) notes, are important to both individuals and organizations. They support prevailing belief systems and, in turn, reinforce them. They determine access, power, and legitimacy.... The key point is that the designation carries with it a meaning that many people recognize and value.* (Stankey and Shindler 1997, 3)

In short, *place-based knowledge* is an essential foundation for instituting an adaptive management regime, and a person's awareness of place serves as a platform for understanding proposed changes to the environment, thus instilling a motivation for action and reaction in the policy making process (Cheng et al. 2003). Therein lies the role for conservation psychologists as they help citizens, activists, professionals, and those who govern to understand what places are and how they function across the topography of the mind.

Concluding at a Place to Begin

We began this review of previous scholarship with a suggestion that, as conservation psychology grows as a distinct

field, we would do well to use the existing body of knowledge related to the concept of place. A comprehensive recitation and integration of the scholarly traditions of place was neither our intent nor the destination at which we arrived We know that our survey of the psychology of place has been cursory, and that important insights may have been understated. Nonetheless, we hope that our survey of the intellectual landscape may inform the practice of public involvement regarding natural resources today, as conservationists strive to authentically communicate a shared language for places we all hold dear in our hearts and minds. While aspirations for a robust synthesis for this divergent field probably must wait, we should recall the lesson of Senator Douglas' experience: It may be better for each of us to take our own small steps in our own cherished places than to leap across landscapes all at once!

Endnotes

1. E-mail: suzanne@sonoran.org
2. E-mail: jcantril@nmu.edu
3. E-mail: gmyers@cc.wwu.edu

Acknowledgments

We would like to acknowledge the helpful comments of two external reviewers and the guidance of Carol Saunders in preparing the manuscript.

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