MASSACHUSETTS SCHOOL OF PROFESSIONAL PSYCHOLOGY

ECOPSYCHOLOGY: EXPLORING PSYCHOLOGICAL ASPECTS OF OUR RELATIONSHIP TO NATURE

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Abstract

Based on the ecopsychological principle of interdependence among human life, culture, and the natural environment, this qualitative study is designed to gather information about significant psychological aspects of individuals' relationship to nature. The psychological literature regarding our relationship to nature is reviewed, including empirical evidence of our preference for natural landscapes and a range of wilderness benefits. A critique of Western values within clinical psychology illuminates the role of individualism and the defensive denial of death. These cultural trends are thought to promote maladaptive behavior in relationship to the natural environment. Ecopsychology is introduced as an adaptive approach to clinical psychology which acknowledges the interaction among individual

human behavior, culture, and the natural environment, in the context of the global environmental crisis.

Nine adult women who have spent some time considering their relationship to nature were recruited to talk about this issue in the context of their own lives. The individual interviews began with two general questions asking participants to describe their personal conceptions of "nature" and any personally significant experiences related to the natural environment. Follow-up questions asked participants to make connections between their relationship to nature and other aspects of their lives. The final question explored participants' experience of talking about nature in the context of their personal lives and was intended to elicit some recognition of the emotional significance of this issue.

The nine participants all described nature as an integral part of their life experience as a whole, related to emotional, cognitive, and physical responses, existential concerns, interpersonal relationships, and worldly matters such as school, work, and leisure activities. For these individuals, attending to nature often seemed to be a way of attending to themselves and led to a sense of continuity, connection, and perspective in relationship to the broader cultural and natural environment as a whole. In support of ecopsychology, the implications of this research suggest that clinical psychology would benefit from extending the boundaries of inquiry and intervention to include our relationship with nature, on the individual and cultural levels.

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CHAPTER ONE
INTRODUCTION

Inspired by the contemporary threat of global environmental deterioration and ecopsychological principles which offer hope of more adaptive human behavior, this qualitative study is designed to gather information about the ways in which individuals experience their relationship to nature.

My interest in the growing field of ecopsychology was sparked by an article in the *Boston Globe* which triggered profound feelings in me. Dumanoski (1992) had written a critique of American individualism, lamenting the lack of community solidarity which would enable us to band together to solve local and global environmental problems efficiently. Dumanoski began the article by wondering, since our public water supply is getting too polluted to drink, why we are not "up in arms, demanding that the problem be fixed? Why is there no crusade to make our aquifers clean, no Mothers for Safe Water?" "Instead," she explained, we seek "the individual solution—the bottled water, the filter, the private technical fix. It's the American Way" (Dumanoski, 1992, p. 25).

There I sat, with a closet full of bottled water, hating myself for indulging in a luxury (clean drinking water!) others might not be able to afford but deserved as much as I did, and feeling anger toward the people who have polluted our common water supply so irresponsibly. Although I did not feel personally responsible for pollution and other environmental

problems, I wondered guiltily whether I had profited in some way from the industries which demand destruction of our resources and knew that, in any case, I was not contributing toward a healthy solution. I was angry and ashamed and terrified that someday we might run out of such a simple yet essential resource as water. It seemed ironic, sad, and enraging to think that despite the sophisticated knowledge and wealth of material goods afforded by modern society, we continue to destroy one of Earth's most abundant and precious natural gifts which is essential to life.

Just as I was becoming totally overwhelmed by my feelings of anger, sadness, confusion, and frustration, Dumanoski (1992) went on to cite a number of thinkers who criticize the "atomized view of self" (p. 28). Sarah Conn, for example, argued that "we think we are separate entities, self-contained, masterful. We think we can control the environment, that we have control of nature. This is what we assume people are like" (Conn, as quoted in Dumanoski, 1992, p. 28). Instead of individualistic models of human life, which are pathological, Conn argued, the "interdependent web of life" metaphor offers a more adaptive conception of human and planetary welfare which would promote solidarity in human society. Collective cooperation and support would enhance our ability to recognize and resolve contemporary global conflict and environmental crisis more effectively.

Before I knew it, my despair had turned to joy and hope at discovering that others who shared my doubts and concerns had found a way to think psychologically *and* politically about these problems. Of course, other people have not only been worried about our unhealthy habits, but have been working long and hard to preserve our environment and to educate others

about the dangers of denial and destruction (Stern, 1994). I had even made contributions to the Clean Water Action Project. Why had I *not* been so acutely aware of my feelings about social and environmental problems before? It seems as though it was only in learning about others bold enough to critique society and suggest alternatives on a global social level that I was able to acknowledge my personal emotional response.

I felt relieved, no longer alone, confused, or anxious about my feelings. I had discovered that others share my love of people and water, as well as my deep concerns and fears about our contemporary life and prospects for the future. Reading about these ideas in the local newspaper, I began to believe that I could and *should* integrate my professional goals with my personal concerns in a socially productive way. And so, this study is an attempt to integrate my training in clinical psychology with my interest in environmental issues.

Theories about the relationship between human beings and nature in clinical psychology have been heavily influenced by the mechanism, dualism, and individualism which characterize Western culture in general (Cushman, 1990; Merchant, 1992). As currently practiced in the U.S., clinical psychology is still primarily focused on early development, intrapsychic conflict, and individual behavior. Personal pathology is attributed to internal, interpersonal, or cultural variables which do not account for the interaction among individuals, society, and nature (Hillman & Ventura, 1992). The "environment," as traditionally conceived in clinical psychology, has been limited to the context of contemporary culture and usually refers to interpersonal relationships and the "relatively

unstructured, passive, probabilistic arena of objects and events upon which man behaves in accordance with the programming he carries about within himself..." (Barker, 1968, p. 4).

Systemic theories of human behavior (Bateson, 1972) such as field theory (Lewin, 1951), Gestalt theory (Perls, Hefferline, & Goodman, 1965), "ecological psychology" (Barker, 1968; Bronfenbrenner, 1979; Mace, 1989), feminist theories (Jordan, Kaplan, Miller, Stiver, & Surrey, 1991), and group, family, or community approaches to mental health (Auerswald, 1968; Dumont, 1992) attend to a broader range of external social influences on behavior. However, even these more systemic theories of human behavior fail to examine the complex interdependence among individuals, human culture, and the natural environment at a global level, in practice if not in theory. Some theories address the interaction between the natural environment and human behavior (usually focusing on more circumscribed aspects of behavior such as perception) but lack the political analysis of cultural influences, while others (which address more holistic aspects of behavior) include social factors but stop short of the natural environment.

There is a minor history of psychological work which explicitly addresses the significance of emotional resonance with "non-human" elements of our environment such as nature, household objects, and mechanical devices (Noel, 1990; Roszak, 1992; Searles, 1960). The boundaries of human behavior were further expanded as themes of social justice and responsibility emerged in the context of Cold War concerns about nuclear

annihilation, establishing the connection between personal welfare and political issues (Staub & Green, 1992).

However, very little theoretical, research, or clinical work has addressed the reciprocal relationship *between* human welfare and the natural environment. There are no comprehensive, developmental theories about the profound, intricate, pervasive, and enduring interdependence between human life and the natural environment.

The newly emerging field of ecopsychology expands the context and boundaries of psychology to investigate the relationship between human behavior and the natural environment, as this is mediated by human culture(s). Arising in the context of our increasing awareness of the human causes and effects of global environmental change, ecopsychology combines ecology's study of environmental systems with psychology's focus on human behavior, to further understand the relationship between mental health and the welfare of the natural environment.

As distinguished from most Western psychological perspectives which value "scientific neutrality," ecopsychology is an interdisciplinary approach to the theory and practice of psychology which explicitly promotes environmental values and active involvement in pursuing harmonious relationships among human beings and the natural environment.

Proponents of ecopsychology (Conn, 1991; Mack, 1992a, 1992b; Roszak, 1992) argue that mainstream theory and practice in clinical psychology and psychotherapy is limited by its inattention to the impact of natural and political events which affect individual and collective behavior. Although individual psychotherapy may be experienced as personally satisfying, for

example, it does not attend adequately to the source and consequences of distress which are natural human responses to environmental degradation, and so is ultimately ineffective in promoting more adaptive behavior which would improve individual and collective welfare, as well as preventing further distress.

The systemic and political perspective offered by ecopsychology provides some of the impetus and support necessary to confront problems in the relationship between nature and society on a collective level, enhancing our ability to maintain personal and planetary welfare. This new approach to psychology attempts to reintegrate human society into its natural environment, to achieve a richer, fuller, and more mature understanding of our ecosystem. As a consciousness-raising perspective which integrates people and our planet together in the interest of our mutual welfare, ecopsychology offers an innovative approach to mainstream clinical psychology, augmenting limited "bottled water" solutions.

A radical ethic regarding the "nature" of the relationship between humans and our environment is outlined in the philosophy of deep ecology (Devall & Sessions, 1985). Deep ecology suggests that our unique sense of identity and self-realization as human beings will be enriched by identification with non-human aspects of the natural world (Fox, 1991; Naess, 1973; Seed, Macy, Fleming, & Naess, 1988). According to this "biocentric" perspective, all members of the planetary community have equal intrinsic value. Deep ecology may be contrasted with more "shallow" environmental movements, founded on "anthropocentric" ethics, which

advocate preserving the natural environment in the interest of human society.

Accelerated changes in the political, social, and economic realms of modern Western society have altered both our natural and cultural environments. International networks of communication and exchange support our interdependence, and we are more aware of global events than ever before, with heightened sensitivity to diversity and community among human cultures and nature (Gergen, 1991; Hiss, 1990; Toffler, 1970). Ecopsychology integrates interdisciplinary principles of systemic relationships from such fields as philosophy, psychology, ecology, education, spirituality, and social activism to reflect our expanding consciousness of human identity (both individual and collective) in the context of global events (Roszak, 1992).

Ecopsychology offers the promise of new paradigms of mental health and global welfare which acknowledge the relationship between individual experience and the larger cultural and natural environment. However, it is not yet clear how ecopsychological theories and interventions might be integrated into the theory and practice of clinical psychology. Does awareness of the ecological, political, and cultural events which influence individual development and behavior enhance individual functioning? Does it promote insight, emotional relief, improved functioning, or activism? Would a collective raised consciousness about our ecosystemic relationship with the natural environment promote respect for the balance of nature? Would this understanding change our attitudes and behavior regarding the non-human environment? If we treated the natural environment

differently, would we feel better, and vice versa? These are all questions which will require attention in the future.

A major assumption of this study is that the exclusive distinction between "human life" and "nature" is misleading. Based on principles of deep ecology and ecopsychology which explore human identity in the context of the larger cultural and natural environment, it would seem more accurate to conceive of human beings and the natural environment as highly interdependent. Psychology would therefore benefit from a more comprehensive understanding of the interaction between human behavior and the natural world. Integrating this information into the theory and practice of clinical psychology might promote more adaptive responses to the individual, social, and environmental problems which threaten the quality of contemporary life and long-term survival on Earth.

My goal in doing this study is to obtain phenomenological information about the ways in which people integrate their experience of nature into the ongoing context of their lives. I am particularly interested in the dynamic emotional and developmental aspects of individuals' personal relationship to nature, and how this may be related to others aspects of their lives.

Since Western culture does not generally encourage human self-realization within the ecological context of the natural world, psychology does not have much information about this aspect of human experience, and individuals may not be aware of their relationship to nature. In order to elicit information about the personal experience of nature, I interviewed people who have spent time considering the various aspects of this issue, through active participation in wilderness activities, meditation, job or

educational experiences, or discussion, for example. Ultimately, I hope that my analysis and interpretation of the results gathered from nine participants who *can* talk about their relationship to nature will provide information about the psychological significance of this issue for individuals in general.

Inspired by the work of psychologically oriented environmental educators (Conn, 1991; Merchant, 1992; Thomashow, in press) who use a variety of innovative exercises to clarify the connection between personal experience and events in the natural, social, and political environment, this study attempts to elicit information about the emotional significance of individuals' experiences in nature, and to explore how this is related to other important aspects of their lives. My approach to this research is based on the postmodern conceptions of relational dialogue, which aspires "not toward a single truth (as in the empirical tradition), but toward an expansion of intelligible realities" (Gergen, 1992).

I will proceed with a review of the psychological literature which addresses the relationship between human life and the natural environment, including theory, research, and clinical findings. I will distinguish ecopsychology as a comprehensive, systemic approach to understanding the multiple emotional, political, economic, and social implications of Western culture's treatment of the natural environment, including contemporary critiques of individualism, and arguments for the model of transpersonal interdependence offered by deep ecology.

Following the literature review, I will present a detailed description of the qualitative interview method I used to gather material, an analysis of significant results, and my final interpretation and commentary.

CHAPTER TWO
LITERATURE REVIEW

Introduction

Human beings have speculated about our relationship to nature for as long as we have been aware of ourselves as a distinct species. Across the boundaries of time, culture, and discipline, the various beliefs about what it means to be a human being on this planet have all contributed to clinical psychology's understanding of the relationship between human society and the natural environment.

Within the field of Western psychology, which represents human development in culture, ecopsychology promotes the postmodern cultural trend toward more comprehensive, holistic, and interdisciplinary perspectives by tapping into a range of relevant disciplines outside the field of psychology, such as spirituality, ecology, and social activism.

Since my goal for this project is to introduce ecopsychology as an adaptive approach to clinical psychology in the context of our contemporary global environmental and social crises, I will present theoretical, empirical, and clinical material from the field of psychology only. Psychology itself makes a limited contribution to our understanding of the relationship between humankind and nature in Western culture, and this literature review covers only a small portion of the work within the field of psychology, so the reader should bear in mind a number of limitations. The influence of

art, spirituality, and natural sciences such as ecology will not be examined, nor will I present aspects of Native American philosophy, Eastern religions, or other cultural practices which may be considered viable alternatives to mainstream Western clinical psychology. Although these philosophies enrich our psychological understanding of our relationship to nature and are therefore quite relevant to the topic of ecopsychology, it is beyond the scope of this paper to do them justice.

While I have attempted to review the general psychological literature regarding our relationship to nature and to present the essential aspects of ecopsychology, this is a new field, and I have both relied on the information available and taken liberties in piecing it together.

This literature review will begin with a discussion about the individual and collective aspects of the contemporary global environmental crisis which demand psychological analysis, including some ideas about how and why we have continued to destroy our natural habitat. Then I will present a brief overview of the traditional psychological literature which addresses our relationship to nature, including theoretical and empirical studies from environmental psychology, leisure and recreation, and wilderness benefits. I will go on to present the psychological literature which explicitly addresses the absence of psychological information regarding our relationship to nature. This literature includes a critique of conventional Western cultural values regarding the individual self and scientific neutrality which have rendered psychology ineffective to confront global social and environmental problems, dynamic theories about the conflict and denial related to fears of death, and recent work in the field of psychology

and social responsibility. Finally, I will present the theory and practice of ecopsychology, a systemic, biocentric, consciousness-raising perspective on contemporary life which promotes individual and collective welfare among human beings and nature in the context of the contemporary global community.

My intention is to focus on the distinctive contribution of ecopsychology as a consciousness-raising tool, based on psychological principles but having a wide variety of historical roots and social implications. The major assumption underlying this project is that ecopsychology serves to promote individual, social, and environmental welfare by enhancing our understanding of the systemic relationships among the psychological, cultural, and natural factors which influence human behavior in the context of global environmental crisis.

Human Aspects of the Contemporary Environmental Crisis

Many contemporary environmental conditions have long been recognized as problematic, including global warming, acid rain and toxic pollution, loss of biodiversity, and human population growth. These global trends, fostered by the expansion of industrialized Western civilization, threaten the quality of life for human beings and non-human aspects of our environment as well. Despite ample evidence of the human causes and consequences of environmental degradation, however, we have been slow to respond collectively to the environmental crisis. While environmentalists are alarmed by the prospect of irreversible ruination of the natural world,

advocates of industrial growth argue that continued development of natural resources and technology will benefit human society. Unfortunately, the average citizen is left hanging between paralyzing terror and oblivious denial, helplessly wondering how to respond to pervasive environmental problems in the context of competing demands and conflicting information (Brown, 1992; Carson, 1962; Kellert & Wilson, 1993; Lévy-Leboyer & Duron, 1991; Meadows, 1985; Meadows, Meadows, & Randers, 1992; Ornstein & Ehrlich, 1989; Pawlik, 1991; Stern, Young, & Druckman, 1992).

As Groff (1988) explained in his introduction to a collection of writings on survival and the evolution of consciousness:

> In view of the dangerous situation in the world, it seems extremely important to understand the roots of the global crisis and to develop effective strategies and remedies to relieve it. Most of the existing approaches focus on factors of historical, political, or economic nature, that are symptoms of this crisis rather than its causes.... There exist means and technological know-how for feeding the population of the planet, guaranteeing reasonable living standards for all, combatting most diseases, reorienting industries to inexhaustible sources of energy, and preventing pollution.... What stands in the way are factors intrinsic to human nature and personality. Because of them, unimaginable fortunes are wasted in the insanity of the arms race, power struggles, and pursuit of "unlimited growth" and unlimited wealth of select individuals and groups. These forces prevent a more appropriate division of resources among individuals, classes, and nations as well as reorientation of ecological priorities that are vital for continuation of life on this planet. (p. viii-ix)

Various interdisciplinary studies which address human aspects of the contemporary global crisis support the notion that environmental problems are related to psychological issues of political, economic, and social justice (Brown, 1992; Groff, 1988; Meadows, 1985; Meadows, Meadows, & Randers, 1992). Based on her work with computer global models, for example, Meadows (1985) argued that "people's needs are not being met and

resources are being degraded because of inequities, wastefulness, and mismanagement, not because of any immediate physical scarcity" (p. 59).

Based on his review of some contemporary books about the global crisis, Rapoport (1993) concluded that "...the environmental challenge is formidable enough to elicit contributions from every imaginable corner of the concerned scholarly world; ...across this wide range of works a common concern seems to be emerging...a very widespread urge for a new global ethic which will unite people in the kind of moral community which is capable of dealing with the current environmental crisis" (p. 173).

A number of researchers (Brown, 1992; Pawlik, 1991; Stern, Young, & Druckman, 1992) point out that a range of interdependent sociocultural variables influence the human behavior related to environmental issues, from individual perception to national policy. Furthermore, complex social and environmental problems and resources extend beyond cultural boundaries, requiring a systemic perspective, interdisciplinary collaboration, and international cooperation. As L. R. Brown (1992) explained, "No country can stabilize its climate in isolation. No country, acting unilaterally, can preserve the earth's biological diversity" (p. 181).

Researchers have identified characteristics of local and global environmental problems which make these problems difficult to address on both the individual and collective levels. Hazards of human origin such as toxic contamination are likely to cause unique or long-term psychological stress, due to their invisibility, unpredictability, delay, chronicity, and transgenerational effects. The human response to such stress may result in cognitive, affective, and existential problems such as depression, guilt, and

powerlessness, as well as social isolation, alienation, or stigmatization (Baum & Fleming, 1993; Ellis, Greenberg, Murphy, & Reusser, 1992).

Global climatic change may be even vaguer than more circumscribed environmental degradation and hazards (Lévy-Leboyer & Duron, 1991). Pawlik (1991) discussed our failure to respond adaptively to global environmental change in terms of experimental psychology, explaining that our individual sensory and cognitive capacities are too limited to understand the complex relationships among international and ecological events. For example, he argued that the evidence of global change is difficult to perceive, compared to more obvious and dramatic changes in environmental conditions. Also, global changes take place over a large space and long time, which prevents personal responsibility and social learning. The relationship between causes and effects of human interventions which affect the environment may be delayed or obscured. And environmentally destructive behavior may provide more immediate gratification from a financial, individual, or short-term viewpoint.

This brief introductory discussion about some of the psychological aspects of the environmental crisis is intended to convey a sense of the complexity of the systemic interaction among human behavior and nature. Clearly, human behavior is a significant element in the environmental crisis, whether cause, consequence, or solution. It would seem, therefore, that a broader and deeper understanding of the psychological aspects of our problems at both the individual and social level, including emotional and sociocultural behavior of our species in relation to our natural environment, would enhance our ability to resolve environmental problems

more adaptively (Groff, 1988; Keepin, 1991; Mack, 1992a, 1992b; Myers, 1990). As Maser (1994) put it:

> We the people of Western civilization, whether we acknowledge it or not, are an inseparable part of Nature. That not withstanding, how we participate with Her in creating our environment is a choice of motives, thoughts, and actions. In our choices we have free will. So how we choose will be the saving grace of human society or its condemnation.... Although we have no choice but to participate with Nature simply because we exist in and of Her, we can and must choose how we participate, because participation is the active part of relationship. And we must exist in relationship. (p. 10)

The schism between humanity and nature perpetuated by the tradition of dualism in Western culture is thought by many to provide the philosophical underpinnings of our contemporary environmental crisis (Capra, 1982; Groff, 1988; Merchant, 1992; Tarnas, 1991; White, 1967). Merchant (1992) argued that the dichotomy between self-conscious human beings and "indifferent" nature emerged in the context of the mechanistic world view, which accompanied the scientific, industrial, and technological revolutions. Merchant (1992) referred to the rejection of ancient, egalitarian, "I-Thou," organic and animistic conceptions of the relationship between humans and our environment as "the death of nature" (p. 48). The privileging of human life and cultural development at the expense of "inert" nature resulted in domination, exploitation, and degradation of the environment.

The enduring and pervasive controversy regarding "nature" versus "nurture" in the field of psychology reflects our historically mechanistic and polarized conceptions of human behavior (Kleese, 1989). Throughout the history of psychology, however, there have been "voices in the wilderness," more ecologically oriented theories which avoid the conflict

between subjectivity and objectivity by acknowledging the essential interdependence between human subject and environmental context. For example, Frank (1951) argued that humans belonged to a "self-governed and self-regulating, interrelated and interacting universe" (p. 39). And according to Gestalt theory, "The definition of an organism is the definition of an organism/environment field; and the context-boundary is, so to speak, the specific organ of awareness of the novel situation of the field..." (Perls, Hefferline, & Goodman, 1965, p. 258).

Arising in the context of our contemporary environmental crisis, ecopsychology maintains a culture-conscious perspective to identify the range of connections among all elements of nature, which counteracts the detrimental alienation between humankind and our natural environment. Reconceptualizing our psychological and ecological relationship with the earth in more organic, integrated terms is thought by ecopsychologists to offer a way of improving the quality of existence for humans and our natural environment as well. As Theodore Roszak (1992) argued in his seminal book on ecopsychology, *The Voice of the Earth,* our human suffering in the context of the environmental crisis is a symptom of our interdependent relationship with the planet.

One of the central contributions of ecopsychology to the field of psychology is a more comprehensive understanding of the historical role of the human species within the context of the planetary ecosystem. Self-conscious acknowledgment of the interactions between human culture and the natural environment which have led to the environmental crisis should give us a clearer understanding of our limits and potential for adaptive

response, integrating the historical dualism between humankind and nature which has caused such psychological and ecological damage (Capra, 1982; Ornstein & Ehrlich, 1989; Roszak, 1992).

Before going on to review the psychological literature which addresses our relationship to nature, I would like to point out that the contributions made to theory, research, and practice in this area are characterized by a variety of philosophical values and perspectives, ranging from biocentric egalitarianism among all elements of nature, to anthropocentric preference regarding human life, depending on what factors of the environment or human behavior are assumed to be influencing other events (Stokols, 1990; Strathman, Baker, & Kost, 1991). This variety of values associated with environmental issues may be a source of controversy and inconsistency in our attempts to address global problems (Seligman, 1989).

This psychological study will be undertaken with a bias toward the biocentric ethic of equality among both human and non-human elements of nature but will explore the unique experience of human beings in promoting, suffering, and resolving the environmental crisis and redefining a harmonious relationship with nature. Although the most radical ecological philosophies, including deep ecology, reject anthropocentric ethics which privilege human life above all else (Devall & Sessions, 1985), it seems impossible to avoid some human bias in psychological studies. Insofar as the environmental crisis is a threat to the survival of both humans and our natural environment, it is beneficial for psychology to examine our mutual interdependence. In an attempt to present a diverse sample of the psychological literature which documents

our human relationship to nature, contributions from a range of perspectives will be included, to highlight the range of significant issues. I will conclude with a discussion about the systemic, sociopolitical, and ecocentric features of ecopsychology's distinctive philosophical perspective.

Overview of the Psychological Literature Regarding Our Relationship to Nature

Introduction

There are many areas of inquiry within and beyond the boundaries of social science which contribute to an interdisciplinary understanding of the relationship between humans and the natural environment. These areas provide a wide range of perspectives on human experience, including environmental psychology, forestry and natural resources management, health, recreation and leisure studies, environmental sociology, natural resource economics, geography, market research, and philosophy (Driver, Nash, & Haas, 1985; Knopf, 1987).

While a multidisciplinary approach to this topic would provide more comprehensive and holistic representations of the relationship between human society and nature, it would also introduce a complicated and potentially conflicting variety of values and methodological approaches which would require analysis, interpretation, and comparison at all levels. It is well beyond the scope of this paper in clinical psychology to provide such a comprehensive review, but the reader should continue to bear in

mind the limitations imposed by our individualist and subjective biases in psychology.

A number of empirical studies have examined various psychological aspects of our individual and collective relationship to nature. While landscape preference research explores our immediate perceptual, affective, and cognitive response to nature, wilderness benefits studies measure a particular aspect of positive change in functioning over time as a result of actual experience in a natural setting.

Most studies suggest that human beings prefer natural scenes and derive benefits from nature, but there are various hypotheses to explain this positive response. The controversy over whether human cognitive, affective, and social behavior is primarily innate or learned plays a central role in discussions about the interaction between human beings and our natural environment (Daniel, 1990; Kaplan & Kaplan, 1989; Kellert & Wilson, 1993; Knopf, 1987; Schroeder, 1991; Ulrich, 1983; Wohlwill, 1983; Zube, 1991).

The various benefits of wilderness experience range from positive psychological responses, to improved physical and social skills, to spiritual rewards, all of which are believed to improve functioning (Driver, Nash, & Haas, 1985; Gibson, 1979; Knopf, 1987; Rossman & Ulehla, 1977).

Landscape Preferences / Perception

Based on research studies which measure physiological, affective, cognitive, and experiential responses to visual representations of nature, environmental psychologists generally conclude that people respond

positively toward nature (Kaplan & Kaplan, 1989; Kellert & Wilson, 1993; Knopf, 1987; Ulrich, 1983).

According to the "evolutionist" view of innate preference for nature (Daniel, 1988; Kaplan & Kaplan, 1989; Sheets & Manzer, 1991; Ulrich, 1983), the positive aesthetic, affective, and cognitive response to nature is adaptive.

> Aesthetic reactions thus reflect neither a casual nor trivial aspect of the human makeup. Rather, they appear to constitute a guide to human behavior that is both ancient and far-reaching. Underlying such reactions is an assessment of the environment in terms of its compatibility with human needs and purposes. (Kaplan & Kaplan, 1989, p. 10)

Evolutionists agree that visual properties of nature provide human viewers with biologically significant information and reduce stress, although there is a wide range of opinion as to how and why this occurs. Ulrich (1983), for example, argues that visual properties of the natural environment pertaining to features of structure, depth, and content initially elicit an affective response. Cognitive processes, although they may influence the affective response, are secondary. Although not universal, aesthetic and affective responses show a consistency which defies an explanation based primarily on cultural learning variables.

Rachel and Stephen Kaplan (1989) also attribute the physical and emotional benefits of nature to its aesthetic qualities. They note that visual attributes such as spatial configurations and the amount of human influence, familiarity, and importance of a scene enable viewers to make "a very rapid (albeit unconscious) assessment of what it is possible to do in this setting" (p. 36). According to the Kaplans, the "fascination" or involuntary attention elicited by natural settings offers a sense of "mystery" or "coherence" which helps to restore the capacity for directed attention. So, in

addition to providing pleasure and adaptive information, contact with nature may provide restoration by reducing perceptual exhaustion and mental fatigue caused by over-stimulation in modern urban civilization.

To test the Kaplan's theory about restorative effects of the natural environment, Hartig, Mang, and Evans (1991) compared relaxation responses in different settings. The first study showed self-reports of positive affect and a behavioral measure of improved cognitive functioning in subjects who had taken a wilderness vacation, compared to subjects who either took a different vacation or no vacation at all. The second study found that a nature walk was perceived as inducing increased restoration, overall happiness, and positive affect more than an urban walk or time spent in a lab, according to self-report, behavioral, and physiological measures. Hartig et al. concluded that findings of improved capacity for attention in natural settings support the Kaplans' theory of restoration.

A study by Ulrich, Simons, Losito, Fiorito, Miles, and Zelson (1991) contradicts this finding, however. The study by Ulrich et al. tested hypotheses about the stress-reducing influence of natural environments. Stress was first induced in subjects by showing them a stressful movie, and then reduced by showing them video tapes of either natural or urban settings. Stress recovery was measured by self-report of affect and physiological tests. Ulrich et al. found that "recovery was faster and more complete when subjects were exposed to natural rather than urban environments" (p. 201) and included "a salient parasympathetic nervous system component" which was absent from responses to urban scenes. Ulrich et al. noted that "both the stressor film and the nature settings

elicited high levels of involuntary or automatic attention, which contradicts the notion that restorative influences of nature stem from involuntary attention or fascination" (p. 201).

Whatever complex combination of factors in the human-nature interaction serve to create a restorative effect, the resulting relaxation is characterized by enhanced attention, affect, and physiological states (Kellert & Wilson, 1993). Many authors discuss the importance of nature in urban settings; even small elements of nature or mental representations help to promote tranquillity and nourishment (Kaplan, 1983; Knopf, 1987; Sheets & Manzer, 1991).

While empirical evidence appears to support the notion that nature scenes are aesthetically appealing, doubts have been raised about the ability of traditional research to explain the meaningful, experiential aspects of the interaction between nature and human beings (Daniel, 1990; Kellert & Wilson, 1993; Schroeder, 1991; Wohlwill, 1983; Zube, 1991). For example, Wohlwill (1983) pointed out that the distinction between "natural" and "manmade" environments is somewhat arbitrary to begin with, since human beings are "an integral part of nature" (p. 35).

Daniel (1990) questioned the methodological validity of correlating viewers' reactions to pictures with direct experience and translating viewers' responses into meaningful psychological experience. Schroeder (1991), who recommended using both quantitative and qualitative methods, studied the more experiential meaning of arboretum scenes which evoked personal associations related to viewers' lives, as well as identifying the stress-reducing and recreational qualities of water and vegetation. Zube

(1991) also stressed the importance of grounding landscape research in local areas and using both quantitative and qualitative methods in order to understand "the dynamics and multisensory characteristics of human-landscape transactions" (p. 323).

The methodological limitations and arbitrary distinction between nature and human society reflected in preference studies which compare "wilderness" and "urban" landscapes obscure the complex relationship between human society and our natural environment, and may therefore be subject to criticism for generalizing too broadly from results based on limited designs. As critics point out, both urban and nature scenes presented visually may lack the full range of cognitive, affective, and behavioral opportunities stimulated by the actual locations, and psychophysical or behavioral methods of measuring response may be misleading or incomplete. A broader range of views or fuller exposure to natural and urban stimulation, as well as more comprehensive and accurate measurement, might indicate a wider variety of preferences, and/or a truer sense of consistencies.

It is likely that variable cultural, personal, and situational factors which lead to diverse social values and individual behavior influence our response to nature, as well as universal, species-wide innate predispositions and perceptions which are based on evolutionary adaptation. As Knopf (1987) puts it, "People respond to their environments not as mere collections of physical attributes but as storehouses of past experiences and repositories of accumulated emotions and meanings..."

(p. 786). In response to the controversy over whether our response to nature is innate or learned, Knopf concluded:

> Perhaps a more integrative view is to propose that response to nature emerges from an interaction of both innate and experiential forces. It seems logical to propose that perceptual and cognitive tendencies are strongly innately prescribed, whereas affective tendencies are strongly experientially prescribed. In this sense, the evolutionary and cultural perspectives are both correct — each addresses a different aspect of people-nature transactions. (p. 789)

The various evidence offered in support of the "biophilia hypothesis" (Kellert & Wilson, 1993) also suggests that our response to nature may be determined by a combination of genetic predisposition and cultural learning. Wilson (1984) asserted that we have a strong attraction (and aversion) toward other living organisms which developed through a historical process he called "biocultural evolution, during which culture was elaborated under the influence of hereditary learning propensities, while the genes prescribing the propensities were spread by natural selection in a cultural context" (p. 32).

In the context of this project in clinical psychology, in which the focus on systemic interaction applies to all levels of human behavior, it seems appropriate to assume that there is interaction among perceptual, cognitive, and affective processes, without specifying which tendencies are innate and which are learned. It is sufficient to acknowledge that both innate predispositions and environmental influences affect our relationship to nature.

Wilderness Benefits

Setting aside the controversy over whether the human response to our natural environment is innate or mediated by cultural and individual variables, there is widespread support for the conclusion that nature offers many benefits to people (Knopf, 1987). Due to the difficulty of identifying, measuring, and generalizing about the nature of benefits resulting from interaction with nature, there is uncertainty about whether benefits derive from human factors, characteristics of the natural environment, or some complex combination which results from their interaction in the context of contemporary lifestyles.

In the following section, I will present a brief review of some studies which explore more holistic aspects of the interaction between human behavior and the natural world, to identify the psychological benefits of wilderness experience. For organizational purposes which reflect divisions within the literature, I have divided the benefits into three interdependent categories: general psychological benefits (including physiological relaxation, interpersonal skill building, and enhanced spiritual perspective), recreation (also related to relaxation, control, and skill building), and education (including experiential learning in the cognitive, affective, and spiritual realms).

General psychological benefits. Although descriptions of the various psychological aspects of the human experience in wilderness vary, four general categories of unique benefits have been identified in the research literature (Driver, Nash, & Haas, 1975; Gibson, 1979; Hammitt, 1982; Kaplan

& Kaplan, 1989; Knopf, 1987; Rossman & Ulehla, 1977; Scherl, 1989; Wohlwill, 1983). These benefits may essentially be described as follows:

1. Nature may provide a refuge; restoration, tranquillity, serenity, aesthetic enjoyment, stress reduction, and self-reflection.

2. Nature may provide a therapeutic environment which enhances mental health and emotional adjustment, including the sense of competence and control, self-esteem, satisfaction, and interpersonal functioning.

3. Nature represents a historical symbol of meaning and continuity in life; a source of mystery and spiritual inspiration which affirms the individual's sense of self and the collective value of cultural pride.

4. Nature promotes diversity: essential for preserving the integrity of ecosystems which support biological diversity, nature also offers an alternative environment in which humans enjoy novel perceptual stimulation, adventure and challenge, and the freedom to explore.

There have been a number of studies which examine the therapeutic aspects of structured wilderness programs (such as Outward Bound) which are designed to enhance psychological functioning (Gibson, 1979; Greenway, 1990; Hendee & Brown, 1988; Kaplan & Talbot, 1983; Marsh, Richards, & Barnes, 1986; Scherl, 1990; Talbot & Kaplan, 1986). The nature of improvement promoted by these programs might generally be described as "personal growth" or "self-actualization," but researchers have identified a range of different aspects of this general goal, including self-concept, locus of control, interpersonal skills, and insight.

Despite the widespread conviction that wilderness offers a variety of psychological benefits, the most common complaint among researchers regards the lack of adequate information about the precise source and process of improvement. Gibson (1979), for example, wonders what specific aspects of wilderness programs may contribute to therapeutic gains. Is the neutral, unambiguous, and stable setting of wilderness, away from the usual environment, therapeutic in and of itself? Or is it the group experience which promotes cooperation, communication, and problem solving? Although Gibson acknowledges the benefits of structured wilderness programs, he ultimately questions the validity of studies which attribute positive changes in functioning to the program without evidence of how this change is caused.

Studies by Kaplan and Talbot (1983, 1986) emphasize a change in perception regarding the relationship between the individual and the natural environment, leading to harmony rather than control struggles. Kaplan and Talbot suggest that the "restorative" benefits of wilderness experiences are due to the compatibility between human needs and characteristics of the natural environment such as distance from daily setting, fascination, and coherence. Although they did not rule out the possibility that similar effects might be achieved in other places, Kaplan and Talbot argued that the wilderness environment is essential in promoting "more profound benefits" such as tranquillity, contemplation, receptivity, and insight (Kaplan & Talbot, 1983).

Scherl (1989) also considers the qualities of both the natural environment and human behavior to explain the unique process and

benefits of wilderness experience from an "interactionist" perspective. Scherl explained that the stable, unambiguous, and "non-responsive" quality of the natural environment promotes awareness of immediate internal (physical, cognitive, and affective) processes in relationship to the external world, providing an opportunity for self-reflection, awareness, and self-control, which enhances competent functioning and personal growth. Scherl furthermore argued that natural environments are essential to maintaining the integrity, diversity, and complexity of human experience.

Hendee and Brown (1988) also describe the "heightened state of personal and social awareness" in relation to nature, fostered by wilderness programs, which precedes behavior change. Hendee and Brown explicitly mention the receptivity of participants and qualities of the structured program as important influences on the process of personal growth, in addition to the characteristics of nature and the human-nature interaction alone.

After a long-term investigation into the therapeutic benefits of wilderness programs, Greenway (1990) concluded that the social problems which prompt people to seek improvement in wilderness settings might be more appropriately addressed in cultural settings. Emphasizing the importance of program activities over the natural environment in and of itself, Greenway claimed that "wilderness may be the most *efficient* context for such changes, but not the only possibility, and perhaps a possibility more difficult to integrate than other contexts" (p. 104).

Clearly there exists a wide range of opinions about the unique role of the natural environment in promoting psychological benefits, especially in

the context of structured programs designed to improve mental health. The major authors in this field recommend further research to clarify what the natural environment *means* to people and to explore more dynamic psychological aspects of the wilderness experience, as well as to acknowledge the value of nature and preserve it as a resource (Kaplan & Kaplan, 1989; Scherl, 1990). Recent theoretical and qualitative research does support the findings that wilderness offers a range of therapeutic benefits which enhance personal growth and well-being, including an increased awareness of immediate cognitive, affective, and physical experience, spirituality, and transpersonal connections (Meisner, 1993; Richley, 1993; Segal, 1989; Shaw-Jones, 1992; Walsh, 1990; Willis, 1989). However, more qualitative research is needed to compensate for our individual and collective neglect of this issue in contemporary Western culture. As Kaplan and Kaplan (1989) noted, individuals may not be aware of their relationship to nature in the context of their daily lives at all, or may simply acknowledge their enjoyment of beauty or outdoor activities. The current study is an attempt to provide further psychological information about our emotional and developmental experience of nature.

Recreational benefits. Leisure and recreation studies which focus on outdoor or wilderness activities share many observations in common with studies on the psychological benefits of structured wilderness programs. The benefits of human experience in nature appear to revolve around the opportunity to relax away from the stress of the daily setting, but the exact

source of particular benefits remains a controversial issue (Frank, 1962; Gans, 1962; Mercer, 1976; Reser & Scherl, 1988; Webber, 1962).

Contradictory views are represented in a national report of the Outdoor Recreation Resources Review Committee conference held in 1962. One perspective affirms the clinical importance of the various physical and mental health benefits offered by outdoor recreation, in the context of other aspects of individuals' lives (Frank, 1962). A contrasting perspective is that social factors such as financial security and family life are more critical factors in maintaining mental health than outdoor recreation (Gans, 1962). Perhaps the mediating view is best expressed by Webber (1962), who argued that "...it is not the out-of-doors, in and of itself, that brings benefits to a person's mental health. Rather it is the out-of-doors and outdoor recreation activities as they are seen and experienced by the individual through the cultural lenses of his own reference group" (p. 247). Webber explained that, like other types of recreation, outdoor recreation is influenced by a variety of cultural and personal factors and offers a variety of personal benefits and values. In addition, however, outdoor recreation may foster a deeper understanding of our identity in relationship to the larger natural environment (Webber, 1962).

In their account of the historical development of outdoor adventure recreation, Ewert and Hollenhorst (1990) argued that the vicissitudes of economic, religious, political, scientific, artistic, educational, and technological trends have affected the value and popularity of leisure adventure over time. Discussing the evolution of outdoor recreation involving dangerous risks, for example, they point out that "whereas early

Western cultures (and the frontier of the American West) emphasized order, comfort, and security, adventure implied danger, hardship, and insecurity. To view adventure as worthwhile in and of itself was incomprehensible because, quite simply, it evoked the conditions these societies were painfully trying to transcend..." (p. 30).

A number of personal social variables may be interacting to affect the motivation, setting, and activities involved in outdoor recreation behavior as well, including history of residence and other factors (Mercer, 1976). For example, individuals may choose recreation activities which are either similar to their daily lives or extremely different (familiarity versus compensatory). And if pleasurable childhood memories beg repetition, unpleasant associations to a recreation setting or activity may prompt avoidance.

Reser and Scherl (1988) explained the motivation for adventure activities from a more individualistic behavioral perspective on the human-nature transaction. According to Reser and Scherl, challenging outdoor activities offer clear, unambiguous, and self-relevant information about the relationships among the internal, natural, and social environment. Although Reser and Scherl allow for a cultural perspective regarding the social alienation which prompts individuals to seek clearer feedback in "escape" activities, their focus is on the role of information processing during stressful outdoor recreational activities, more reminiscent of the "evolutionist" perspective regarding adaptation in the natural environment.

There appears to be a wide range of hypotheses to explain the motivation and role of outdoor recreation, from the effects of biological

feedback to the symbolic satisfaction of recreating frontier life. The range of benefits reflects the multidimensional nature of interaction among innate, social, and environmental factors in the relationship between human beings and nature.

Educational benefits. The literature on environmental education is dedicated to promoting the conscious integration of human experience and nature through a combination of learning activities, both cognitive and affective, for individuals and groups in a range of settings, from academic to wilderness (Brown, 1989; Cohen, 1991, 1994; Greenwald & Greenwald, 1993; Grumbine, 1988; Miles, 1986–87, 1991). The benefits of environmental education range from gaining concrete knowledge and skills about surviving in harmony with nature, to a more integrated and expansive sense of one's self in relationship to the natural environment, which are thought to promote more conscientious behavior with regard to human and environmental well-being (Grumbine, 1988; Miles, 1986–87).

M. Brown (1989) affirmed the complexity of personal growth through outdoor experiential education and recommended a balance of adventure activities, meditation, and relaxation exercises. Brown's description of an experiential exercise he refers to as "Fascinations" takes the Kaplans' theory about the biological benefits of natural stimulation to a holistic psychoeducational level. Brown suggested using whatever element of nature happens to elicit fascination as a guide to stimulate "awareness, insight, inspiration, energy, and transformation" (p. 55). This particular exercise incorporates our biological response to the natural perceptual

environment, psychological and social processes, and spiritual dimensions of experience in relationship to nature. It suggests that attending to and integrating the various aspects of our relationship to nature is a useful way to achieve holistic psychological benefits.

Cohen (1991, 1994) addressed the importance of sense awareness in relationship to nature, explaining that contemporary Western culture inhibits the use of sense information which would enable us to appreciate our connection to the natural environment. "Painfully, our modern upbringing rips us from the natural world. It tears our many interconnecting natural senses, lets them die, or reattaches their injured, sensation-seeking raw ends to questionable, short-term technological satisfactions" (Cohen, 1991, p. 13). Cohen suggested that reconnection with the natural environment from which we have become estranged is nourishing and relieves the stress and other pathology caused by urban alienation (Cohen, 1991, 1994).

Conclusion

The purpose of this overview of the psychological literature regarding our relationship to nature has been to present empirical findings which contribute to our understanding of the relationship between humans and the natural environment.

Amidst the uncertainty and controversy which prevails in the context of various disciplinary values, hypotheses, methodological designs, and conclusions, this review of the empirical literature suggests that cultural and personal experience influence our innate cognitive and affective

response to nature in a complex way. Characterized by anthropocentric biases and reductive scientific analysis, most empirical psychological studies of the human response to nature conclude that we derive a range of physiological, emotional, and social benefits from nature, including physiological relaxation, sensory awareness and aesthetic enjoyment, insight and personal growth, a spiritual sense of worth and continuity, and a source of diversity and adventure. The exact source of wilderness preferences and benefits remains uncertain, embedded within the complex interaction between human behavior, contemporary culture, and features of the natural environment. The most consistent and valuable feature of wilderness experience appears to be an enhanced understanding of the relationship between the human self and the natural environment.

Whereas previous studies have focused on preferences and benefits which result from contrived measurements of the natural environment and human functioning, the trend appears to suggest more qualitative and interdisciplinary studies which account for more dynamic aspects of the relationship between human beings and the natural environment. This research in ecopsychology is designed to explore the dynamic interaction among experiences in nature and other significant aspects of individuals' lives, including interpersonal relationships, work, and spiritual beliefs, with the goal of contributing to an increasingly intricate understanding of the emotional and developmental aspects of our relationship to nature.

Bearing in mind a global, systemic, sociopolitical perspective on the contemporary environmental crisis, as well as the variety of empirical information which psychology contributes toward our understanding of the

relationship between human beings and nature, I will now present a brief review of the work which has been done in the area of socially responsible psychology. Connecting "personal" and "political" aspects of human behavior, these psychological theories account for the Western cultural conceptions of individual human beings, society, and the relationship between them, which has affected the treatment of environmental issues in the field of psychology.

Integrating Sociocultural Issues into Clinical Psychology

The Broadening Scope of Clinical Psychology: From Intrapsychic Factors to Social Issues

Since the early years of clinical psychology when Freud (1962) described the emergence of the ego as a result of the clash between id and superego, the relationship between internal drives and the demands of civilization has generally been conceived as a conflict requiring mediation within the individual. The theory and practice of clinical psychology which developed to address individual behavior has traditionally focused on intrapsychic and interpersonal processes rather than broader environmental factors, identifying the source, course, and effects of psychological problems as a result of conflict within the individual.

The history of psychological literature which offers a broader perspective on individual and collective behavior also extends back to the early years of clinical psychology. Based on his early socialist and pragmatic perspective, Adler argued for a "social medicine" (including

preventive education) which would address the social and environmental sources of physical and mental illness, an approach which promoted the integration of politics and medicine (Stephansky, 1983; Way, 1950). "What Adler was in search of was a reconciliation between individual and society, a means of effecting reintegration of the maladjusted neurotic with his environment through a simple and rational code of conduct that would satisfy the demands of both" (Way, 1950, p. 162). Although elements of psychological theories which address cultural issues have managed to enter the mainstream literature, most have remained marginalized.

Radical critics of traditional Western clinical psychology point out that narrow conceptions of human behavior are outdated. Constrained by dualistic religious and scientific beliefs, and cultural values which promote individualism, autonomy and independence, psychological theories of human development, behavior, and treatment focus on intrapsychic and interpersonal values in isolation. Unfortunately, these critics argue, culture-bound theories about human behavior fail to account for the influence of global factors and the interaction among individual, social, and natural systems which contribute to the development of interrelated problems in all three realms (Bellah, Madsen, Sullivan, Swidler, & Tipton, 1985; Cushman, 1990; Hillman, 1992; Prilleltensky, 1989; Roszak, 1992; Sampson, 1988, 1989).

As Sherman (1992) observed, psychotherapy has been influenced by the same cultural forces which shape our social attitudes, prohibiting a critical view of sociopolitical issues within clinical theory and practice:

> We have underestimated how profoundly our lives have been shaped by social, cultural, and political forces, that is, by the context in which we

> live. The psychotherapists and client alike are affected by society's views on a broad range of matters such as class, race, sex, and technology. We can only appreciate our client's struggles if we consider the effect of our society's attitudes and values on certain aspects of their personal experience. (p. 222)

Much of the more recent psychological literature about the causes and effects of destructive behavior at a collective level in Western society emerged in response to the perceived dangers of nuclear war. Although there are important differences between the problems associated with nuclear armament and the current environmental issues which have become prominent more recently, they both pose serious threats to the natural environment and human society and are thought to be influenced by cultural trends which bear psychological analysis (Staub & Green, 1992).

A number of critics condemn clinical psychology for perpetuating the individualism which prevails in Western culture (Bellah et al., 1985; Cushman, 1990; Fromm, 1955; Hillman, 1992; Prilleltensky, 1989; Sampson, 1988; Stephansky, 1983; Sullivan, 1964). Fromm (1955) criticized the conception of individuals in "modern society" as:

> ...atoms (if we use the Greek equivalent of "individual"), little particles estranged from each other but held together by selfish interests and by the necessity to make use of each other. Yet man is a social being with a deep need to share, to help, to feel as a member of a group. (p. 127)

Although their explanations differ slightly, these critics argue that culture has a profound influence on the conception of human identity and suggest that the alienation and competition fostered by industrialization and capitalism leaves individuals feeling isolated and "empty," vulnerable to political oppression and excessively consuming products and services to compensate for the lack of sustaining relationships with family and

community (Bellah et al., 1985; Cushman, 1990; Prilleltensky, 1989; Sampson, 1988).

From early advocates of socialism through recent advocates of social responsibility, critics of individualism call for a broader sense of interdependent identity, which acknowledges the self as embedded in community. Even Sullivan (1964), whose "interpersonal theory" is widely accepted among mainstream practitioners of clinical psychology in the United States, argued that the cultural environment is an essential aspect of personality, which can only be studied through interpersonal relationships. "It makes no sense to think of ourselves as 'individual,' 'separate,' capable of anything like definitive description in isolation..." (p. 220). Cushman (1990) went so far as to argue that human identity is "incomplete and therefore unable to function adequately unless embedded in a specific cultural matrix" (p. 601) which defines essential aspects of character. "There is no universal, transhistorical self, only local theories" (p. 599). Sampson (1988) referred to this more expansive sense of identity as "ensembled individualism," while Hillman (1992) conceived of it as "the interiorization of community."

These cultural critiques of psychology identify the limitations of our understanding of human behavior and suggest that more expansive conceptions about our role in the broader cultural and natural context would enhance the success of psychology in providing more adaptive resolutions to our problems in the individual, social, and environmental realms.

The systemic perspective of many theories about family and community dynamics (Auerswald, 1968; Dumont, 1992) address behavior in the context of the larger culture in which individuals are embedded. These theories of group behavior offer a comprehensive understanding of the range of both cultural and natural environmental variables which influence individual behavior, by establishing connections among individual or group welfare and the quality of the natural or cultural environment. However, theory and practice in clinical psychology remains focused on promoting the welfare of individuals or groups with a well-defined relationship to each other. Clear boundaries between the specified group and its external environment are identified, and the individuals and group as a whole are encouraged to adapt to their environment. In practice, if not in theory, global cultural and natural environmental variables are not considered a source of problems or the target of change.

The increasingly systemic perspective in Western (social) science has led to more politically oriented psychological discussions about the relationship between human behavior and culture (Stanton & Perry, 1951). Klineberg (1951), for example, argued that international problems "have a psychological aspect as well as a political and economic and historical aspect..." (p. 249) and recommended investigating such issues as cultural difference, stereotypes, attitudes, aggression and cooperation, demographic and population characteristics, and the effect of technology and industry. Linton (1951) concluded that the rational response to crisis depends "primarily on the degree to which the various groups which compose the

nation share common attitudes and values with each other and with the ruling group," as well as by "attitudes toward authority" (p. 146).

In the context of increasingly sophisticated networks of communication which bring a global, systemic perspective to modern technological culture, psychology should reflect our growing insight into the cultural relativity of behavior. Given the heightened awareness of global social, political, and economic interdependence (both resources and problems), Western conceptions about the role of the human community, in historical relation to the cultural and natural environment, should be reexamined (Frank, 1951; Gergen, 1991; Oelschlaeger, 1991; Tarnas, 1991).

Denial of Death and the Limitations of Individualism

Among those who have explored psychological aspects of global problems, there is overwhelming consensus that some form of denial is the most common human response to the threat of extinction posed by nuclear war or environmental destruction which is caused by human civilization (Bardy, 1992; Gerber, 1992; Hillman, 1992; Lifton, 1992; Mack, 1992a, 1992b; Macy, 1992; Searles, 1979; Tarnas, 1991; Walsh, 1993; Zeitlin, 1992). Psychological theories about the function of defenses such as apathy and denial may help to explain the puzzling failure of human society to respond more adaptively to global environmental degradation.

Searles (1979) described a "paranoid" tendency to polarize the enemy forces of "nature" versus "technology." According to Searles, we identify with technology as a defense against intolerable feelings of insignificance, terror, deprivation, guilt, and frustration. Searles also described the apathy

and neglect of environmental problems threatening survival as a "depressive" response to the loss of our environment due to human shortsightedness. The "Oedipal" explanation of environmental degradation, according to Searles, involves our "unconscious defiant refusal" to "relinquish our hard-won genital primacy, symbolized by our proudly cherished but ecologically offensive automobile..." (p. 232). Searles evoked collective feelings of fear, envy, guilt, and hatred toward preceding and succeeding generations, perpetuating degradation as revenge. In this scenario, environmentalists enact the moral role of the superego and arouse anxiety by acknowledging humankind's guilt for having "raped" the earth.

Macy (1983) argued that Western values such as individualism, competition, and independence undermine solidarity and collective concerns in Western society, and that the dichotomy between reason and emotion leads to devaluation of deep feelings. Macy elaborated the fears, values, and expectations in Western society which may explain our individual and collective suppression of feelings related to the environmental crisis. For example, fearing that nothing can be done, we may hesitate to acknowledge a problem without consistent hard data or ideas about how it might be solved. We may be avoiding the guilt and embarrassment of responsibility for having caused the problems, or we may be afraid of being considered "pessimistic," "morbid," or "unpatriotic" to question the "progress and development" afforded by technology and other potentially harmful processes.

Ultimately, Macy argued, we fear the loss of religious and civic faith, personal pride, and our sense of control. Ironically, the perceived risk of acknowledging emotional despair in relation to the environmental crisis, which seems overwhelming, prevents us from recognizing the collective means to confront emotional and practical problems more adaptively, perpetuating the problems of both environmental degradation and emotional anesthetization. For example, Macy suggested that ignoring the underlying anxiety about the environmental crisis in order to perform "business as usual" in contemporary society leads to fragmentation and alienation, isolation, self-doubt, and dependence on external authority and logic, instead of solidarity and creativity. Furthermore, Macy argued, the suppression of personal feelings to avoid emotional pain and to protect social norms leads to a sense of powerlessness, projection of bad feelings onto socially sanctioned scapegoats or enemies, destructive displacement activities (such as drug abuse, vandalism, short-term "escape" behavior) and the avoidance of useful but painful feedback information which would promote adaptation and survival (Macy, 1983).

Lifton (1979, 1992) coined the term *psychic numbing* to describe the anesthetization of feeling which is a profound response to the trauma of overwhelming environmental danger. Lifton speculated that the threat of extinction deprives us of the sense of symbolic continuity which might enable us to confront the possibility of death and address global problems effectively.

Bardy (1992) compared our treatment of nature to the psychological response triggered by the "lethal and whimsical" disease process. Unable to

confront our mortality in the face of illness and environmental constraints, he argued, we attempt to dissociate from, control, and ultimately destroy the forces we perceive as evil enemies. Unfortunately, the denial of our fears promotes the misconception of safety and separation from nature, perpetuating the degradation of the environment at our own peril.

Like others, Kets de Vries (1980) attributed the controversial nature of environmental issues to their psychological association with death. While religion, love and reproduction, and work regulate the social attachment behavior which promotes survival of the species, denial and other defenses are less realistic attempts to cope with the emotional response to mortality.

Rinzler (1987) traced the roots of our violence toward others and our degradation of the environment to our "profound and terrifying disconnectedness from ourselves as physical organisms" (p. 99). Our disregard of our physical sensations in pursuit of logic leaves us feeling fragmented, lonely, enraged, and empty, relying on connection and stimulation from external sources, unable to feel compassion for ourselves or anything else. Rinzler claimed that the "hollow words, thoughts, and logic" which replace compassion "creates in us a chronic state of passivity and victimization" (p. 105).

Zeitlin (Greenwald & Zeitlin, 1987; Zeitlin, 1992), who found that children and adults suffer similar psychological consequences in response to the threat of nuclear war (e.g., escape behaviors, anesthetization of feeling, resentment, denial, and powerlessness), wondered why families do not talk about the possibility of nuclear war. Zeitlin hypothesized that parents cannot afford to acknowledge feelings which threaten their role of

protector by revealing their impotence; instead of acknowledging feelings of guilt or inadequacy, they may resort to blaming or judging others. Zeitlin (1992) concluded that the major danger to children is not the existence of nuclear weapons or pollution *per se,* but the lack of intergenerational communication: "A central fact of life is avoided and children are alone with their thoughts and feelings, literally believing that adults are unconcerned about the issues. Children's capacity for trust is impaired" (p. 382).

Walsh (1992, 1993) used concepts from a number of psychological perspectives, including cognitive, psychodynamic, social learning, and behavioral theories, as well as Eastern philosophies, to explain environmental problems as "symptoms" which

> reflect and express the faulty beliefs and perceptions, fears and fantasies, defenses and denials, that shape and misshape our individual and collective behavior. The state of the world reflects our state of mind; our collective crises mirror our collective consciousness." (1993, p. 87)

Walsh (1992) described such common responses as fear, greed, aversion, ignorance, and shortsightedness as symptoms of individual and cultural "immaturity." According to Walsh, society may perpetuate "a shared conspiracy against self-knowledge and psychological growth in which we collude together to protect one another's defenses and illusions" (p. 70), as well as promote adaptive development.

Many authors (Lifton, 1992; Mack, 1992a, 1992b; Macy, 1992; Tarnas, 1991; Walsh, 1993) have attributed the repression of feelings related to global crisis to the dread and denial of our collective, symbolic death as a civilization. The global environmental crisis may therefore be conceived as

a developmental event which offers both the threat of death and the opportunity for growth, depending on whether conflict or solidarity prevails in the global community. From a systemic, historical, developmental perspective, this collective consciousness-raising acknowledgment of our collective mortality, what Lifton (1992) calls our "shared fate," may serve to prompt the evolution of human culture into maturity. As Tarnas pointed out, "A civilization cannot become conscious of itself, cannot recognize its own significance, until it is so mature that it is approaching its own death" (p. 445).

Advocates of socially responsible psychology complain that our denial of the stressful feelings and global problems which are caused by modern Western culture extends into apolitical clinical treatment, where the therapist's most ethical stance has traditionally been conceived as "objective," "neutral," or "value-free" (Gerber, 1992; Mack, 1992a, 1992b; Sherman, 1992; Walsh, 1992). As Sherman (1992) argued, "We must now acknowledge that whether by our actions or by our inaction, we are always making a political statement" (p. 226).

If and when sociopolitical material emerges in therapy (and some argue that it must), therapists may interpret it as a reflection of unresolved intrapsychic conflicts or interpersonal issues. Unfortunately, this preference for individualized interpretation prevents the opportunity to make genuine connections between individual difficulties and real conditions in the external environment, which is considered to be a painful but therapeutic process (Gerber, 1992; Mack, 1992a, 1992b; Sherman, 1992).

The more radical proponents of integrating social justice issues into the theory and practice of clinical psychology go so far as to claim that individual treatment of psychological problems which are caused by social conditions is counterproductive (Albee, 1992; Lerner, 1987; Prilleltensky, 1989). When psychological problems are "interiorized" (i.e., attributed to personal characteristics and treated by enhancing the individual's sense of personal power), it deflects attention from sociopolitical issues which require collective action and leaves individuals vulnerable to continued stress and oppression in the face of real social and political powerlessness and injustice (Albee, 1992; Lerner, 1987; Prilleltensky, 1989).

Hope for Growth Through Connection: Clinical, Educational, Research, and Political Activities in Psychology

Based on these various critiques of traditional individualistic and "neutral" approaches to clinical psychology, many proponents of socially responsible psychology recommend exploring the connections between personal difficulties and political issues, acknowledging the influence of personal and political values, power issues, and social injustice, and engaging in prevention, education, and sociopolitical activities, in order to address the social issues which are a source of pathology (Albee, 1992; Gerber, 1992; Lerner, 1987; Mack, 1992a, 1992b; Prilleltensky, 1989; Sherman, 1992; Walsh, 1992).

Mack (1992b) argued that socially responsible psychology which attends to the interaction between the individual and the environment, making connections among intrapsychic, interpersonal, cultural, and

natural events, is essential to promote individual and collective well-being at a time when rigid assumptions and distinctions between continuous aspects of experience is specious.

> Whether we consider the alter egos that our computers have become, the loss of privacy that has characterized this century, the invasion through television in our living rooms by war and terrorism, the interpenetration of the experience and artifacts of diverse cultures, the seepage of environmental devastation into our minds and bodies, or the heightening of human anguish through the increasing global awareness of economic inequality and injustice, the notion of the individual mind or self as a more or less discrete entity is being replaced by a view of the human psyche as a far-reaching field, interdependent, interconnected, and interpenetrated by other minds or psyches. (Mack, 1992b, p. 400)

In keeping with the explicitly international, interdisciplinary, and political bias of socially responsible psychology, a number of authors have suggested clinical, educational, research, and political activities to enhance well-being through environmental awareness (Berger Gould & DeMuth, 1994; Demick & Wapner, 1990; Dyal & McKenzie-Mohr, 1992; Geller, 1992; Gerber, 1992; Hungerford & Volk, 1992; Newhouse, 1990; Stern, 1994; Vaughan, 1993; Walsh, 1992; Wandersman & Hallman, 1993). Strictly clinical aspects of socially responsible psychology applied to environmental issues will be examined in the next section on ecopsychology, but it is worth mentioning some applications of this perspective in research and education in the context of the present qualitative study.

Educators have emphasized the need for experiential activities which go beyond simple awareness of environmental issues in the context of uncertainty and controversy, in order to help individuals develop more socially and environmentally adaptive attitudes, values, skills, and participatory behavior (Dyal & McKenzie-Mohr, 1992; Hungerford & Volk,

1992; Walsh, 1992). Based on principles of behavioral analysis, Geller (1992) recommended using immediate and clear reinforcement to encourage environmentally beneficial "target" behavior in the absence of tangible natural consequences, to counteract the rewards of detrimental behavior.

In the social realm, there are various ways in which psychology may be utilized to address cognitive, emotional, and behavioral aspects of the environmental crisis. For example, since diverse or seemingly "irrational" responses to environmental dangers may be influenced by variable personal characteristics as well as whatever "scientific" information is available, risk-management strategies should address the economic context, beliefs about control over health care, and assessment of personal risk, all of which influence individual or group response to environmental problems. Psychological perspectives may also enhance mediation and political interventions regarding environmental issues (Vaughan, 1992, 1993; Wandersman & Hallman, 1993).

Stern (1994) reminded zealous converts to the cause of environmental issues in psychology that there is a 20-year history of literature in this field. Describing some typical "errors" made by newcomers, Stern went on to suggest ways in which psychologists can effectively contribute to solutions of environmental problems, emphasizing the importance of collective activity in the social and political realm.

Clearly, further research regarding psychological aspects of environmental issues would be helpful. Based on her research finding "discrepancies between verbal and nonverbal measures of nuclear worries," DeMuth (Berger Gould & DeMuth, 1994) recommended using expressive

research methods, which do not rely on verbal response, to better measure the depth of response to global crisis. Investigation of the complex interaction among personal and social experiences over time would provide a better understanding of educational and political strategies which promote environmentally responsible behavior (Demick & Wapner, 1990; Newhouse, 1990).

According to critics of the cultural bias toward individualism and neutrality in Western clinical psychology, the "interiorization" of pathology fails to address the social roots of individual problems. Instead of focusing on individual symptoms, they argue, psychology should explore the interaction between individuals and the cultural environment in which they are embedded, which involves identifying and challenging traditional values which perpetuate the social *status quo.*

The integration of sociocultural issues into clinical psychology served to broaden the perspective of the field, from intrapsychic, interpersonal, group, institutional, and community issues toward more cultural issues, identifying the ways in which collective values and organization affect individual behavior.

Concern about the state of the global community and how clinical psychology might improve individual and collective welfare in the context of social chaos and environmental crisis has led advocates of socially responsible psychology to expand the boundaries of theory and practice, based on the changing concept of individuals in relationship to the environment in which they live. Maintaining this sociocultural perspective, the next and final section of this literature review will introduce

ecopsychology as a way of understanding our relationship to nature in the context of the global environmental crisis.

Psychology and the Ecological Worldview

Multidisciplinary Contributions

In his account of the historical development of the science of ecology, Worster (1977) starts with two trends of "pastoralism" which emerged in the context of modern developments in Western culture in the eighteenth century. Following in the tradition of pagan conceptions of organic interdependence within "the order of nature" (p. 380), the "arcadian" ideal is reminiscent of a rural region in ancient Greece (Arcady) where people co-existed peacefully with nature. According to Worster, this holistic perspective "has been advocated by those who have an intense distaste for the fragmentation of the industrial culture and its isolation from the natural world" (p. 21). The arcadian spirit characterizes the work of Rachel Carson, who, according to Worster, "more than any other person launched the recent ecology movement" (p. 23).

According to Worster (1977), there was also a more "imperialistic" attitude toward nature which emerged out of the Christian and scientific values of the eighteenth century Western culture, in which "God was seen both as the Supreme Economist who had designed the earth household and as the housekeeper who kept it functioning productively" (p. 37). This ideology promoted a mechanistic conception of the natural world as created by God to serve humankind. Worster describes Linneaus' essay on "The

Oeconomy of Nature" as a seminal description of this early approach to ecology which combined scientific appreciation of the harmonious hierarchies and cycles in nature with principles of political and economic organization, within a Christian framework.

Worster (1977) goes on to chronicle the vicissitudes of ecology in the context of contemporary cultural trends throughout the eighteenth, nineteenth, and twentieth centuries, highlighting the critical significance of Charles Darwin's theories of evolution, natural selection, competition, and diversity. Although the term *ecology* was first used to describe the scientific study of the relationship between living things and their environment in 1966, Worster argued, the roots of ecology extend further back in time, and the field continues to include an eclectic variety of approaches.

Although it is beyond the scope of this paper to outline the historical development of ideas about the ecological nature of the relationship between humans and our environment, it is important to remember that the history of the ecological worldview has been heavily influenced by cultural trends. So, in addition to natural and social sciences which explore distinct aspects of human behavior and the human environment, and sociopolitical perspectives on the relationship between culture and behavior, our psychological understanding of the dynamic relationship between human life and nature may be enriched by contemporary philosophical perspectives on our "place" in nature which espouse an "ecological worldview" (Groff, 1988; Shaw-Jones, 1992; Worster, 1977).

Naturalists. American naturalists such as Henry David Thoreau, John Muir, and Aldo Leopold outlined an ecological worldview in which humanity had emerged as the "self-conscious" component within the cosmic environment, endowed with the responsibility to honor and preserve a healthy relationship to nature (Oelschlaeger, 1991). Recent doctoral research (Branch, 1994) which applies ecological philosophy to American romantic literature explores and supports the historical role of naturalists in depicting human identity in the context of the natural environment.

Earth as a self-regulating system: Gaia and biophilia. An ecocentric conception of environmental harmony, equality, and interdependence is evident in two recent hypotheses about the essential relationship between human life and the natural environment, the Gaia hypothesis (Lovelock, 1979) and the biophilia hypothesis (Kellert & Wilson, 1993). According to the Gaia hypothesis, the earth is conceived as a self-regulating system composed and maintained by interaction among its four spheres, the atmosphere, the hydrosphere, the geosphere, and the biosphere (which includes human beings and other living species). The biophilia hypothesis (Wilson, 1984) suggests that humans have an innate attraction toward "life and lifelike processes."

These controversial conceptions of the systemic nature of ecological functioning, according to which human society has historically evolved as a species within the context of the natural environment, have profound implications, since the suggestion that the cosmic system of nature includes human society challenges mechanistic beliefs about human

superiority and dominance over nature (Abram, 1990; Kellert & Wilson, 1993; Merchant, 1992; Roszak, 1992). While a critical discussion about the scientific merits of the Gaia and biophilia hypotheses is beyond the scope of this paper, the paradigm of earth as a self-regulating system in which human beings and nature are profoundly interdependent is supported by recent writings on the significance of "place." Combining physical science, outdoor recreation research, psychology, landscape architecture, and historical change from an ecological perspective, these discussions explore the connection between human welfare and the environment (Gallagher, 1993; Hiss, 1990; Williams, Patterson, Roggenbuck, & Watson, 1992).

Our sense of place. The psychological study of "place attachment" explores features of both the natural and human environments in order to determine the "emotional or affective bond between an individual and a particular place; this bond may vary in intensity from immediate sensory delight to long-lasting and deeply rooted attachment..." (Williams et al., 1992, p. 31).

Environmental psychologists point out that attachment may occur in relation to a specific site, a particular region, or a general type of setting. The special "sense of place" may refer to how well an environment is perceived to serve as a unique resource ("place dependence"), or how it contributes to personal and social identity, including "personal emotional ties" as well as "abstract and symbolic meanings" ("place identity") (Williams et al., 1992).

In a study measuring attachment to wilderness settings, Williams et al. (1992) concluded that understanding the emotional, symbolic, and spiritual relationship between human beings and special geographic areas is complex but important. While the authors addressed significant issues in recreation research and wilderness management, their conclusion is pertinent to the psychological study of our relationship to the natural environment in general:

> ...Places are not just the sum of interchangeable attributes, but whole entities, valued in their entirety.... Resources are not only raw materials to be inventoried and molded into a recreation opportunity, but also, and more important, places with histories, places that people care about, places that for many people embody a sense of belonging and purpose that give meaning to life. (p. 44)

Hiss (1990) argued that humans have a "built-in ability to experience places directly, an ability that makes it possible for people to know personally, through their own senses, about many of the ways our surroundings work within us" (p. xii). Hiss explained that "simultaneous perception" of multisensory patterns of environmental information promotes a sense of orientation and safety, providing a fluid connection between subject and surroundings. Hiss illustrates his own experience of this "sixth sense" in navigating an urban crown or a natural landscape, for example.

Hiss (1990) went on to explore the social, economic, and political history of industrial development which has altered the balance of wilderness, farmland, and urban landscapes in America, explaining how simultaneous perception interacts with environmental trends to influence physical and mental health, quality of work and home life, and use of specific places in both urban and rural areas.

Based on the work of early land-use experts such as Frederick Law Olmsted ("the father of landscape architecture" (Hiss, p. 42)), Friedrich Froebel ("the inventor of the kindergarten" (Hiss, p. 182)), and Benton MacKaye ("the father of the Appalachian Trail" (Hiss, p. 187)), as well as more recent work which emphasizes the connection between the natural environment and human welfare, Hiss (1990) concluded that human life is best sustained and enriched in connection with a well-rounded regional environment which includes urban, rural, and wilderness components. Hiss appeared to endorse "the regional approach to metropolitan development" (p. 126), which promotes "three different forms of connectedness — the sense of kinship with all life; the sense of partnership with working landscapes [i.e., farmland]; and the sense of community and companionability that is traditionally fostered by villages and urban neighborhoods..." (pp. 126–27).

Gallagher (1993) explored the broad range of environmental factors which have affected human behavior, including climatic conditions such as light, temperature, air pressure, extreme environments, and geomagnetic fields. These external environmental conditions influence a range of human behavior including physical health, mood, sleep, aggressive or cooperative behavior, immune-, hormonal-, and nervous-system activity, level of arousal, breathing, and cognitive functioning. According to Gallagher, everything from climate to clothing (including the moon!) may serve to elicit special behavior. Some seemingly bizarre or pathological behaviors occurring in drug addiction, multiple personality disorder, and

post-traumatic stress disorder highlight the association between certain experiences and their settings in a dramatic way.

Arguing that "our well-being depends on the delicate business of getting just the right amount of stimulation from our surroundings at the right time" (p. 106), Gallagher (1993) discussed how multisensory environmental stimulation in infancy, what Hofer refers to as "physiological regulation" (usually between newborns and their mothers), determines all aspects of newborn behavior, "from his [or her] cardiovascular rate to his [or her] growth hormones, his [or her] appetite to his [or her] activity level" (p. 120). In this way, relationships are "not merely social or emotional, but environmental as well" (p. 115).

Gallagher (1993) suggests that "urbanization" has been "the most important environmental influence on behavior in the twenty-first century" (p. 19), as well as the most important behavioral influence on the environment. Gallagher correlates the alienation from nature, which occurred as urban life moved indoors during the Industrial Revolution, with the rise of psychoanalysis and psychiatry. "Both psychoanalysis and drugs, which are often seen as antithetical, emphasize the individual's internal processes as the determinants of mental health, and pay little attention to the external environment, as earlier schools of thought had" (pp. 14–15).

> The basic principle that links our places and states is simple: a good or bad environment promotes good or bad memories, which inspire a good or bad mood, which inclines us toward good or bad behavior. We needn't even be consciously aware of a pleasant or unpleasant environmental stimulus for it to shape our states.... On some level, states and places are internal and external versions of each other. (p. 132)

Deep Ecology

"Deep ecology" describes a spiritual approach to ecology based on ecocentric principles of interdependence and equality among all elements of the human and natural world. The philosophy of deep ecology may be contrasted to more "shallow" utilitarian and anthropocentric approaches to environmental issues which call for conservation of resources to promote human welfare (Merchant, 1992). Ecocentric values are based on maintaining the welfare of the natural and human environment as a whole (Devall & Sessions, 1985; Merchant, 1992; Naess, 1989). Deep ecology addresses a range of human behavior, from consciousness to social action, and is perhaps the most general term for the ethical and philosophical foundation underlying ecopsychology.

Deep ecology is characterized by a respectful, egalitarian, relational model of human and non-human life within the environment conceived as a community, which values diversity, complexity, harmony, and decentralization of power among all elements of the ecosystem rather than domination or competition. Deep ecology describes the expanded sense of self which may be achieved through "transpersonal" identification with other elements of nature, and advocates human intervention to counteract the destruction of nature which is caused by human civilization (Devall & Sessions, 1985; Drengson, 1992; Fox, 1991; Merchant, 1992; Roszak, 1992).

A modified version of deep ecology is offered by ecofeminism. Both share a critique of the anthropocentric values embedded in Western culture which lead to devaluation and destruction of the environment and call for a radical transformation of human values and behavior (Kheel, 1991; Plant,

1989). Based on the feminist critique of patriarchal culture, however, ecofeminists attribute the oppressive exploitation of both women and nature to Western androcentric socialization which prohibits vulnerability, dependence, and compassion in men, while preventing women from having social power and responsibility outside of childcare.

Western patriarchal culture is thus thought to separate power from compassion, dividing our most essential qualities between males and females (Kheel, 1991; Plant, 1989; Zimmerman, 1990). Anticipating the inevitable ethical dilemmas of establishing rights and responsibilities among a global community of equals, Zimmerman (1990) recommended avoiding "isolated egos on the one hand and unconscious blending on the other" (p. 147) by remaining grounded in the particularity of our species or gender individuality while relating to other members of the global community in a respectful way.

Much as the masculine process of individuation and separation from mother is considered by feminists to be a source of male domination of women in patriarchal society, the process of "speciation" necessary to develop human identity is hypothesized by some to be the psychological source of our devaluation of nature (Kheel, 1991; Searles, 1960). Searles (1960) posited a "pre-object" stage of "deeply felt kinship with nature" from which we must "differentiate" in order to develop human sensibility. Whether or not there is an initial stage of oneness with nature in the history of our individual development, paralleling our collective experience of co-existence with nature throughout the early history of human civilization, is up for debate. However, the experience of increasing

separation between human culture and nature in Western society is widely considered to be a source of the oppression and destruction of nature, an attempt to assuage our fears and feelings of vulnerability (Griffin, 1989; Macy, 1989; Roszak, 1992).

While a major aim of deep ecology is to avoid privileging human nature at the expense of other aspects of the planetary system by asserting equal status for all, Roszak (1992) made a case for the evolutionary superiority of human consciousness. Roszak was cautious to distinguish the notion of hierarchical differences based on the increasing complexity of organic and ecological systems, from the patriarchal, political, and social structures which lead to oppression and devaluation.

Roszak (1992) argued that our destruction of the environment is not the result of arrogant anthropocentrism, but a grandiose attempt to escape the meaninglessness and despair caused by the "narcissistic wound" of industrialized society, which overshadows human life and robs individuals of our unique value.

Advocates of the ecocentric perspective espoused by deep ecology argue that this alteration in our Western post-industrial sense of identity in relationship to nature raises an interesting paradox (Macy, 1989). If we were to relinquish our grandiose sense of superiority and separation from nature, we would actually improve our ability to empathize and identify with a wider range of other aspects of our environment, including the diversity of creatures and natural elements, as well as people. Thus, the expanded sense of self-realization recommended by deep ecologists affords a potentially "bigger," "stronger," and more humane sense of self in

connection to our environment, despite the loss of our "special" status. We are *enhanced* by acknowledging our relationship to nature, not diminished by it. As Arne Naess (1988) put it, "We underestimate ourselves" when we confine ourselves to "the narrow ego" (p. 19). Naess went on to describe the benefits of increased realization of the "ecological self" through identification with the nonhuman community as well as human beings. All of these "constitutive relations" contribute to the maturational process of "broadening and deepening of the *self.*"

Although a discussion about spirituality is beyond the scope of this paper, it should be noted that a spiritual dimension is essential to the ecological worldview underlying theories of deep ecology and ecofeminism. One of the interdisciplinary functions of ecopsychology is to expand traditional psychological theories about human behavior to include spiritual issues (Berry, 1993; Ruether, 1989; Starhawk, 1989; Walsh, 1993).

Ecopsychology

Radical theories about the nature of the relationship between humans and our natural environment culminate in a conception of human life as the conscious component of the ecological planetary community (Elgin, 1993; Frank, 1951; Graham-Smith, 1987; Groff, 1988; Macy, 1983; Myers, 1990; Noel, 1990; Roszak, 1992; Seed et al., 1988; Tarnas, 1991; Walsh, 1992).

Tarnas (1991) offered a more elaborate description of the process Macy (1983) referred to as "the universe becoming conscious of itself" (p. 27). As Tarnas (1991) explained:

> Nature pervades everything, and the human mind in all its fullness is itself an expression of nature's essential being. And it is only when the

> human mind actively brings forth from within itself the full powers of a disciplined imagination and saturates its empirical observation with archetypal insight that the deeper reality of the world emerges. A developed inner life is therefore indispensable for cognition. In its most profound and authentic expression, the intellectual imagination does not merely project its ideas into nature from its isolated brain corners. Rather, from within its own depths the imagination directly contacts the creative process within nature, realizes that process within itself, and brings nature's reality to conscious expression. (p. 433)

Noel (1990) argued that Jung's travels inspired an ecological conception of the relationship between natural landscapes and psychic symbolism in individual and collective unconscious processes, what Noel referred to as an "archetypal ecology." According to Noel, Jung discovered in nature "architectural correlatives" to unconscious symbolic events, which represented the "dialogue of soul and earth" (Noel, 1990). Noel described Jung's belief that respect for the power of nature is "a model of psychocultural sanity. It can just as easily be seen as an ideal of *ecological* health..." (p. 69).

Also basing his ideas on Jungian concepts, Myers (1990) argued that contemporary environmental problems are "expressions of unresolved inner conflicts," so that the establishment of a "healthy and balanced world" requires external social change and internal change. In his article entitled "The Inner Nature of the Environmental Crisis," Myers described various aspects and advocates of deep ecology, ecofeminism, bio-regionalism, and the green movement which enhance our understanding of individuals, civilization, and "the larger context of the evolutionary development of humanity" (p. 45). Myers concluded that attending to both inner and outer environments, as well as the relationship between them, leads to a conception of human life as "that being in whom this grand diversity of the

universe celebrates itself in conscious self-awareness" (Berry cited in Myers, 1990, p. 54).

Roszak (1992), one of the founders of ecopsychology, offered a modern revision of psychoanalytic theory to explain the emergence of "the voice of the earth" in the context of our contemporary environmental crisis. Substituting the natural environment for the individual "primary caregiver" who fosters development, Roszak imagined "parenting" that promotes "...'relational individuals' whose relations extend beyond family and society to embrace the natural world that sustains all living communities" (p. 293). In order to nurture truly "interdependent human beings," he argued, we need to expand our concept of the "environment" beyond the interpersonal realm, to include the natural world. Accordingly, Roszak expanded Freud's concept of the "id" and Jung's concept of the "collective unconscious" to represent "the repository of an evolutionary record that ties the psyche to the full sweep of cosmic history" (p. 303). A warehouse of ecological wisdom accumulated over the ages, the ecological unconscious represents our connection to Gaia (Roszak, 1992).

According to Roszak (1992), the "primal crime" in the psychic and cultural history of the development of Western civilization "may not have been the prehistoric betrayal of the father, but the act of breaking faith with the mother: Mother Earth..." (p. 83). Roszak described "our estrangement from Gaia" (p. 304) as "the underlying neurosis" and environmental ills as "the psychopathology of *our* everyday life" (p. 13), symptoms of our alienation from nature. "The crowded industrial city, with its killing pace and compulsive habits of consumption, may disseminate an 'urban madness'

that exacts a heavy toll upon both the person and the planet" (p. 61). Roszak's theory of ecopsychology suggests that the disavowal of our evolutionary relationship to nature (repression of the ecological unconscious) is the source of individual psychopathology, social problems, and environmental degradation in modern society; and that "synergy" or harmony between human life and the planet may be promoted by consciousness-raising interventions which develop the "ecological ego" and prevent exploitation of the environment.

Walsh (1992, 1993) claimed that the contemporary global crisis presents a challenge for human cultural development, including the opportunity to evolve into collective maturity, as well as the risk of defensive regression which perpetuates destructive "immaturity." As Walsh (1993) explained, "Because this psychological maturation is demanded of us, our global crises may function as an evolutionary catalyst" (p. 88). Seed et al. (1988) also referred to the prospect of annihilation as an "invitation to change, to evolve...search for a viable consciousness" (p. 38).

Elgin (1993) outlined the process of historical development of the human species, starting from our original fusion, through the early stages of separation and individuation from nature, and predicting our eventual reintegration into the ecological web of life as a "self-reflective and self-organizing planetary civilization" (p. 24) in maturity. Like Walsh and Roszak, Elgin's notion of evolution is correlated with concepts from Western social science, Eastern philosophy, and religious traditions which address the potentially "synergistic" interdependence of mind and matter. "As humanity develops its capacity for reflexive consciousness, it enables the

universe to achieve self-referencing knowing of itself. Through humanity's awakening, the universe acquires the ability to look back and reflect upon itself — in wonder, awe, and appreciation" (p. 18).

In recent theoretical research integrating both psychological theories and deep ecology, Harter (1992) argued that Western culture perpetuates an immature relationship to nature, lacking mutuality. Harter suggested that "empathy with nature is a mature means of relating to nature" which "may lead to an increased sensitivity to the needs and condition of nature, a desire to care for nature, and a reduction in our tendency to exploit nature solely for our own purposes" (p. 1064).

Other recent theoretical and phenomenological research explores psychological implications of the contemporary ecological worldview (Case, 1995; Goerner, 1993; Shaw-Jones, 1992). Based on assumptions about the interdependence between humans and nature, these studies explore systemic aspects of contemporary evolutionary development in the context of the environmental crisis. For example, Case (1995) explored the cognitive processes characterizing proponents of the ecological worldview, while Shaw-Jones (1992) sought qualitative evidence of the many dimensions of the ecological worldview in his analysis of the narratives of environmental studies students who described their relationship with nature.

Clinical Applications of Ecopsychology

As these richly interdisciplinary contributions to the field of ecopsychology suggest, the continued survival and well-being of the human species may demand a radical transformation in our understanding of

ourselves as human beings and the cultural and natural environment around us, emphasizing the interdependent relationships among all. Accordingly, ecopsychology adopts an ecocentric and sociocultural perspective in order to expand the territory of psychology to the outer limits of our environment, acknowledging the profound and pervasive relationships among human life, culture, and nature (Roszak, 1992).

The theory and practice of clinical psychology may benefit from incorporating this more comprehensive understanding of human beings in relationship to the natural environment. A broader scope of analysis and intervention has the potential to promote a more adaptive sense of flexibility, diversity, interdependence, and harmony among human civilization and the planetary ecosystem. Still in the incipient stage of development, ecopsychology may be incorporated into the theory and practice of Western clinical psychology in a variety of ways, from existential speculations to active political interventions. In this very last section of this literature review, I will discuss some of the more specific applications of ecopsychological principles to clinical and educational work which attempts to promote the welfare of people and our planet together.

Based on his belief in the importance of incorporating sociopolitical issues into treatment, Gerber (1992) inquired about any reactions to worldly events during initial sessions of psychotherapy with 18 new patients, and went on to note the ways in which cultural issues and attitudes might be related to the personal issues which emerged in treatment. Gerber concluded that this approach was successful in providing personal benefits, including "a place where 'worldly' concerns can be expressed and

acknowledged" (p. 179), and a "broader awareness, caring, and concern for the life of the community as well as a greater sense of connectedness to events in a larger national and even international context" (p. 179).

Macy (1992) argued that painful feelings such as sadness, anger, depression, guilt, dread, and despair are natural human responses to increasing awareness of "unprecedented peril" in our modern world. Unable to acknowledge these feelings in the absence of meaning or hope for the survival of the species, however, we repress our individual and collective emotional response to the global crisis, which causes personal and social pathology.

Based on this formulation of how environmental distress is perpetuated, Macy (1992) recommended acknowledging these feelings at both the intellectual and emotional levels. The reward for enduring the emotional pain of this process is described as a sense of relief, solidarity, and empowerment. Macy's "despair and empowerment" work uses a combination of experiential techniques, including discussion, meditation, and body work, to promote consciousness raising. The process of acknowledging, validating, and experiencing the vulnerability and pain which individuals feel in response to collective global crisis is thought to lead to a therapeutic sense of caring and connection when experienced in community.

Mack's (1992a, 1992b) conception of ecopsychology and social responsibility charges practitioners to confront institutional resistance to environmental problems on a collective level, encouraging clinicians and

clients alike to become active in direct intervention in the sociopolitical realm.

Watkins (1991) applied Friere's (1989) politically oriented educational concept of "conscientization" to traditional psychotherapy techniques, encouraging individuals to understand personal problems in relation to their cultural context. Watkins argued that this clinical process of "consciousness raising" not only nullifies any shame or blame which might accompany the interpretation of pathology as internal "personal failure," but also enhances individual's experience of membership in the global community. Valuing both individual treatment and political action, Watkins suggested that once individuals recognize that they are not alone with their problems, they may find comfort in resolving social problems collectively.

Another advocate of making connections between personal problems and cultural conditions, Conn (1991) envisioned ecotherapy as a way to "recontextualize personal pain in an ecological context, to develop a new understanding of psychological health that connects the person and the environment both diagnostically and therapeutically" (pp. 8–9). Criticizing the Western conception of autonomous individuals which contributes to isolation, impotence, and denial in the face of global problems, Conn recommended revising our conception of the relationship between the human individual and our environment to reflect our interdependence. According to ecopsychological paradigms of mental health, people may identify, understand, and accept personal pain as a sign of both membership in and disconnection from the global community, a "symptom"

which indicates the existence of some problem in the global system as a whole, as well as within the individual.

Conn (1991) delineated four interdependent components of the "self-world connection" — awareness, understanding, experience, and action — all of which contribute to a sense of "earth mindedness" and "response/ability," which empowers us to address both personal and global problems. In her clinical work with individuals and groups, Conn integrates social and spiritual issues into psychotherapy by "tack[ing] back and forth" (p. 17) between individual, group, and global issues.

Along with environmental educators who actually conduct experiential exercises in wilderness settings (Brown, 1989; Buell, 1978; Cohen, 1994; Greenway, 1990), advocates of an ecopsychological perspective who teach in more traditional settings also use a variety of consciousness-raising techniques to both inform and transform students' experience and understanding of themselves, society, and the ecological nature of our relationship to the earth (Conn, 1991; Greenwald & Greenwald, 1993; Palka, Wood, Russell, & Lynch, 1994; Sewall & Greenway, 1994; Thomashow, in press).

A recent qualitative study by Greenwald and Greenwald (1993) suggested that environmental education will be more effective if it is tailored to the cognitive-developmental characteristics of individuals, which determine "the reasoning underlying concern and action (or lack thereof), as well as the kinds of information, programming, and style of presentation most likely to facilitate changes in attitude and behavior" (p. 11).

Environmental studies teacher Thomashow (in press) formulated an experiential teaching method called "political autobiography," which integrates psychological insights, political values, and environmental issues in an educational context. Asserting that experiences in nature may help to integrate the bodily, psychological, and social processes which determine identity, Thomashow described a number of individual and group activities designed to help students articulate their sociopolitical values and "environmental identity" by exploring their "developmental relationship with nature." Educators in ecopsychology (Conn, 1991; Palka et al., 1994; Sewall & Greenway, 1994; Thomashow, in press) use exercises such as lifelines, genograms, journal writing, and other forms of personal and public exploration and documentation in order to elicit a compelling representation of the connections among personal, cultural, and natural events in a meaningful way.

Summary and Conclusion

This review of the literature regarding psychological aspects of the relationship between human beings and the natural environment has identified a variety of pertinent issues and information, including descriptions of our cognitive and affective response to natural settings, the mental health benefits of wilderness, aspects of human civilization which are detrimental to the environment, philosophical and scientific speculations about the significance of humankind's self-conscious role in the evolution of the planetary ecosystem, and educational and clinical

activities which promote individual, social, and environmental well-being by raising consciousness about the connection between personal distress and global issues.

In addition to suggesting that we may experience nature more deeply than we think we do, the range of findings illustrates the complexity, uncertainty, and controversy involved in managing the personal, political, and global aspects of our response to the natural environment in the context of the contemporary environmental crisis. Our relationship to nature involves a range of variables which characterize human experience and the natural environment over space and time, including genetic factors, learned behavior, cultural values, and environmental events. The psychological significance of this relationship is both as personal and as public as the air we breathe.

Even this brief survey of the psychological literature regarding our relationship to nature, organized as an introduction to the field of ecopsychology, reveals a wide variety of values, approaches, and findings which can appear controversial and inconsistent. Based on assumptions of ecopsychology which highlight the profound and pervasive interconnections between individual human behavior, culture, and the natural environment, I will distill some general conclusions from among the diverse literature presented here.

There is evidence that human beings exhibit both attraction toward nature as well as avoidance, including a range of physiological, cognitive, affective, and aesthetic responses. These responses suggest that we find nature compelling, even/especially in the context of modern urban society.

Presumably, both innate genetic factors and cultural learning experience influence individual behavior in the context of historical evolution and contemporary events.

There is also evidence that human beings derive a variety of general psychological benefits from interaction with a benign natural environment in the context of contemporary society, including relaxation, an enhanced sense of competence and esteem, spiritual meaning and continuity, and experiential and biological diversity. It is not possible to locate the exact source of these benefits resulting from the interaction between human beings and the natural environment. However, perhaps the most unique and important benefit afforded by wilderness experience may be described as the heightened sense of ourselves in relation to the natural environment. Human preferences and benefits regarding nature may reinforce our interdependence with a biologically adaptive environment (in contrast to urban environments, which are not yet sustainable).

The literature from environmental psychology and wilderness benefits studies has thus begun to provide some fundamental information about specific aspects of our human response to certain benevolent features of the natural environment. However, our more holistic experience of the natural environment has only recently emerged as a subject worthy of investigation in the field of clinical psychology, coinciding with the acceleration of global environmental crisis.

Given our preference for nature and its benefits, the absence of information about our relationship to nature and the continued degradation of our environment are alarming. Successively more expansive and

systemic perspectives on the relationship between human life and the natural environment in the context of global crisis have led to critiques of the cultural limitations imposed by individualism, dualism, and denial in Western society. These cultural trends are thought to explain the neglect of global issues in psychology. Contemporary revisions of our conception about the role of human civilization in the context of the natural environment emphasize the profound interdependence among human behavior, culture, and nature. According to the ecological worldview underlying contemporary ecopsychology, human beings are an equal and integral part of our natural environment, with the unique gift of self-consciousness.

Further research will be helpful to counteract the conspicuous neglect of our relationship to the natural environment in the field of psychology. Based on the theory and practice of ecopsychology, which explores personal, political, and philosophical aspects of the relationship between human society and nature, this study is an attempt to provide phenomenological information about the ways in which individuals experience their cognitive, emotional, and behavioral relationship to nature over time, in the context of other significant aspects of life. The method, which I will outline in the next chapter, invites participants to describe significant experiences in nature, and then go on to identify and explore connections between their relationship to nature and other significant aspects of their lives. My intention is to use the human capacity for self-reflection, which is essential to theory and practice in clinical psychology, to illuminate the ways in which individuals experience the unique but integral role of the natural environment in their lives. I hope this research will shed light on how

information about the relationship between human beings and nature might be incorporated into theory and practice in clinical psychology.

CHAPTER THREE
METHOD

Since the field of psychology has very little phenomenological information about the ways in which individuals experience the natural environment in the context of other aspects of their lives, I chose a qualitative method to explore this issue. The present study in ecopsychology is intended to provide clinical psychology with information about the developmental significance of the natural environment as this is experienced and described by individuals.

As the literature review for this research suggests, the subject of our relationship to nature may be examined from a wide range of perspectives, even while limiting the focus to recent work in psychology which identifies aspects of the relationship between human life and our natural environment which have bearing on clinical psychology. While the recent increase in interdisciplinary activity enhances our understanding about environmental issues, it also highlights the gaps in our knowledge, stimulating as many questions as answers. There is so much more we could learn about psychological aspects of our relationship to nature, and psychology has only begun to expand our methods of inquiry.

With so many questions yet to be asked, it was painful to choose so few among them, and the process of selecting a method for this research was not easy. While my initial impulse was to research the process of exploring connections among individuals and nature in the context of a group

exercise, in order to tap into the rich dynamic experience of discovery, the methodological complications of this open-ended approach would have compromised the validity of any findings. So I decided on a simpler combination of semi-structured interview questions which might elicit some fundamental information about significant emotional and developmental experiences of nature in the context of other aspects of individuals' lives. The combination of both open-ended general questions, followed by more specific follow-up questions, seemed an appropriate way to provide empirical support for theories of ecopsychology which could potentially enhance the practice of clinical psychology.

Following in the footsteps of more advanced colleagues who have inspired my interest in ecopsychology (Sarah Conn, Malachy Shaw-Jones), my intention is to gather information from people who have given some thought to the issue of their relationship to nature. By virtue of having recognized their relationship to nature as a unique and integral part of their lives as a whole, these participants may shed light on the psychological significance of nature for those of us who may have similar experiences without being consciously aware of it, let alone able to talk about it. My hope is that information regarding our personal relationship to nature will enrich clinical psychology's understanding of mental health in the context of the global environmental crisis, enhancing our ability to promote the welfare of human beings and nature, individually and collectively, in relationship to each other.

Semi-structured individual interviews were used to elicit information about participants' cognitive, emotional, and behavioral experience of the

natural world. The interview began with a request for each participant's personal definition of "nature," followed by an invitation to describe any personally significant experiences involving the natural environment. After these preliminary exercises, participants answered six questions designed to help them identify and articulate significant psychological aspects of their relationship to nature within the broader context of their lives, including change over time, relationships with significant people, daily activities, and beliefs.

Participants

I recruited locally to find nine individuals who would acknowledge an interest in exploring their relationship to nature, and who have spent some time considering this issue in their own lives, through any sort of vocational or avocational activity such as outdoor or environmental work, recreation, reading, discussion, experiential or educational activities, structured wilderness programs, or meditation, for example. Women and men of any ethnic, racial, or socioeconomic status aged 30 years or older were eligible. The minimum age limit was intended to ensure that participants would have an adequate amount of life experience on which to draw, as well as an adult developmental perspective.

I selected the first nine individuals who fit the minimal criteria to participate in this study, who turned out to be a very homogeneous group of nine middle-class white women between the ages of 30 and 46 who currently live in New England and Canada.

Gathering of Material

Recruiting

I recruited participants from the local community through word of mouth, letters to colleagues, and referrals from three Massachusetts organizations dedicated to environmental education: a local Audubon site, the Center for Psychology and Social Change, and Earthlands. The Audubon site manages a sanctuary, walking trails, and a number of activities which are available to Audubon members and the community. The Center for Psychology and Social Change, affiliated with Harvard University and Cambridge Hospital in Cambridge, MA, sponsors a robust program of classes, workshops, speakers, and a library, contributing to the local and national network of environmental activities in the field of psychology. Earthlands is a residential community in Petersham, MA, which offers a variety of environmental education programs. Based on the ecocentric principles of deep ecology and appreciation of the history and ecology of the region, the goal of Earthlands is to promote and sustain a harmonious relationship between the human community and the natural environment. I informed friends, colleagues, and leaders at the three organizations about the nature of my study, with a request that they refer eligible individuals who would be interested in participating (see Appendix A).

Three of the nine participants were referred by friends, three by previous participants, and three by recruitment letters to the local environmental/educational organizations described above. Clearly, my

recruitment strategy accounts for the homogeneity of my participant sample.

Since potential participants were invited to call me directly or provide contacts with a phone number at which they could be reached, my first contact with participants was a phone call. The initial phone contact (see Appendix B) consisted of a brief description of the purpose and process of my research, as well as a listing of the eligibility criteria for participants. I answered any questions potential participants had at that time, and, for those who were interested in joining the study, asked if they met all the criteria. For those participants who agreed to be interviewed for this study, I scheduled a 75-minute individual appointment at a convenient time and place.

Following the initial phone contact with each of the nine participants, I sent written confirmation of our meeting time and place (see Appendix C), along with a copy of the Informed Consent form (see Appendix D) and the Demographic Questionnaire (see Appendix E).

The Interview

During a brief overview of the 75-minute meeting with individual participants, I instructed them to read and sign the Informed Consent form, and to fill out the Demographic Questionnaire, if they had not already done so. They were invited to discuss any questions or concerns they had about the project at this time. Audiotaping began when I read the orienting information and continued throughout the interview (see Appendices F–H for Orienting Statement, General Questions, and Follow-Up Questions).

When the first participant continued to make relevant and valuable comments after the "official" interview had ended and the tape recorder had been turned off, I decided to leave the tape recorder on in subsequent interviews, in order to capture any comments the other eight participants might make. I also asked a few spontaneous questions, with their permission.

I began the interview with the following orienting statement:

> As you know, I am interested in how people experience their personal relationship to the natural environment. So, I will ask you two general questions which you can take as long as you want to answer. When you have finished your response, I will ask you some follow-up questions. I will not interrupt your answers, respond to your remarks, or ask any other questions unless I don't understand something you've said and need clarification.

After this orientation to the purpose and process of the interview, I read the following statement, which invited subjects to describe their personal concept of "nature":

> Please tell me what you think of in response to the word "nature." This description doesn't need to be a formal definition; just try to outline your concept of nature so that I'll have a better understanding of what you will be going on to talk about later during our interview.

Once participants had provided a general description of "nature," I asked them to tell me about any personally significant experiences related to nature, a task designed to evoke a more immediate sense of their cognitive, affective, and behavioral responses to nature.

> I would like to hear about any experiences related to the natural environment which have been personally significant and have affected your life in a memorable way. These can be either current or historical events, positive or negative, ongoing routines or single episodes, dramatic, disgusting, scary, delightful, simple, ordinary, emotional, or any combination of whatever characteristics seem important to you.

Just tell me whatever occurs to you regarding your experience of the natural world which seems personally important.

After participants finished describing their experiences, I asked them to talk about the personal significance of their relationship to nature and how it may have changed over the years from childhood through adulthood. Follow-up questions were designed to help participants make connections between their experience of nature and other aspects of their lives.

Is that all? Okay, thanks. Now I'll ask you some follow-up questions. You may have already addressed these issues in what you have told me, but please consider these more specific questions in case there's anything you'd like to add.

Q1: How has this experience — your experience of nature — been important to you?

Q2: How or why has the natural environment and your relationship to nature come to your attention throughout the course of your life?

Q3: Has your relationship to nature changed over the years, from childhood through adolescence and adulthood?

Q4: How is your relationship to nature related to your relationships with family, friends, and other important people in your life?

Q5: How is your relationship to nature related to other aspects of your life, such as school, work, leisure activities, and spiritual or philosophical convictions?

Q6: What's it like to talk about your relationship to nature?

After the interviews, I sent a personal note to each participant, thanking her for her contribution to my study and reminding her that I would send along a copy of the results when these became available.

Analysis of Material

Interview tapes were professionally transcribed; I then reviewed them to ensure the accuracy of the transcriptions and to refresh my memory of the tone of the interviews. After reviewing the demographic questionnaires filled out by each participant, I made a chart of the demographic data and generated a profile of the group as a whole. I augmented this demographic information with interview material to obtain a more personalized profile of each participant.

I reviewed each interview to find any material relevant to the general questions regarding personal definitions of nature and significant experiences. Then I reviewed the material to get a sense of the personal meaning of participants' significant experiences in nature, the evolution of their relationship to nature, and any specific connections between this experience of nature and other significant aspects of their lives. From this initial collection and organization of the material according to question topics, I culled a number of significant themes which emerged throughout each interview and noted the frequency of similar themes among all nine participants as a whole. Keeping in mind the integrity of patterns within each participant's description of her own experience, as well as the similarities and differences among all nine participants as a whole, I tried to get a general sense of the ways in which individuals may experience a personal relationship to nature, as well as an understanding of the variety of individual experiences in and of themselves.

I will go on to present the results of my analysis of significant themes in Chapter 4.

CHAPTER FOUR
ANALYSIS OF RESULTS

The structured interview at the center of this study was designed to elicit an understanding of participants' psychological experience of nature, and to identify connections between their relationship to nature and developmental events, including interpersonal relationships, work and school, leisure activities, and existential convictions. Although separated for the purpose of identification and analysis, these categories of experience, ranging from the mundane to the spiritual, are much more fluid in real life. Participants' rich responses to the combination of interview questions (general, follow-up, and probe) reflected this continuity of experience, as well as yielding specific information about discrete aspects of their lives.

My goal in presenting the results of this research is to preserve the overall integrity of each individual's experience of nature as described in their own words, as well as to show the patterns and range of specific experiences among the participants as a whole. My emphasis will be on the emotional, developmental, and existential significance of this information.

My presentation of the results of this research reflects my organization of the literature review, the design of my study, and my analysis of the material gathered. The initial overview of responses to the general questions will be followed by a more detailed exploration of the developmental aspects of participants' personal experience of nature, including: the cognitive, emotional, and behavioral responses to nature, and

the relationship between nature and existential convictions, interpersonal relationships, and worldly activities. Direct quotations from the interview text will be used to convey a richer understanding of the meaning of individuals' experience where appropriate.

Participant Profiles

The participants in this research were a group of nine white women ranging in age from 30 to 46. Six of the nine were in their 30s, and three were in their 40s. The women all described themselves as middle class. Seven were born in the U.S., one in Canada, and one in Switzerland, with a range of nationalities in their backgrounds, including European, Canadian, Russian, and American. Three women grew up in suburban settings, three in urban settings, and three grew up in a combination of urban, suburban, and rural settings. Five of the women currently reside in suburban settings, one each in urban and rural settings, one in a combination of rural and suburban settings, and one in a combination of rural and urban settings. Seven of the nine women live with their male or female partners, and the two single women live in households with roommates. One woman is divorced. Three of the women who have male partners also live with their children, ranging in age from three months to 13 years. The level of education reported by participants ranges from two years of college to master's-level training. Three of the women work in mental health, one is a teacher, two work in environmental education, one is a farm manager, one is a broadcast journalist, and one is a homemaker. Four women reported

having no affiliation with the Jewish or Christian traditions into which they were born. Of the rest, one woman is Jewish, one is Roman Catholic, one is Sufi (born Catholic), one is Jewish/Protestant, and one is Buddhist/Christian.

Melody

Melody is a 34-year-old single woman, currently living with housemates in Boston, where she goes to graduate school. Passionate about spiritual and emotional aspects of her relationship to nature, Melody described the "evolution" of her personal relationship to the natural environment within the context of her increasing ability to experience her feelings in general, noting that the influence of LSD enhanced her experience of the natural world. Melody's dedication to environmental issues pervades her whole life at this time. She says, simply and strongly, "It means everything to me." Melody would like to continue to integrate her love of music and her appreciation of psychological experiences into her ardent interest in nature and environmental issues. Her relationship to nature is nourished by participation in earth-centered gatherings and workshops, rainforest activism, meditation, reading, writing, and camping activities.

Alexis

Alexis is a 33-year-old woman who lives with her partner on the suburban animal farm she manages outside Boston. In addition to the horses which live in a barn connected to the kitchen, the farm is home to

cats, a dog, and a garden. Alexis spends most of her day outdoors, caring for her beloved horses, accommodating the weather, and marveling at the interconnection among all the elements of the planet which she so keenly observes. She talked about these topics tirelessly during our interview, explaining that "it feels like everything I could talk about would relate to nature. To me, nature is just like life." In addition to her love of animals, she enjoys skiing, biking, hiking, camping, and swimming, and recycles "like mad."

Georgia

Georgia is a 32-year-old woman who grew up in a small city and considers her current suburban household "rural" by comparison. Living on this suburban farm with her partner and numerous pets, houseplants, and farm animals, Georgia is a teacher and graduate student interested in languages, social justice, writing, knitting, and older animals, and has spent time walking in the woods and camping. Georgia is grateful to have survived two terrifying experiences in the outdoors during childhood which gave her an appreciation for human vulnerability at the mercy of the elements, and continues to maintain a healthy respect for the instinctive responses of four-legged creatures. Despite her caution, Georgia finds nature soothing as well as threatening. "It sort of restores me, recharges me to go back and do some of the other things that I have a passion for. It feels like it's a life force for me."

Muriel

Muriel is a 46-year-old married woman who lives with her husband and two sons in a rural area on the coast of New England. Muriel is trained as a nurse, considers herself an artist by avocation, and currently works as a psychotherapist, with a specialty in bodywork. Muriel is a lively storyteller with a hearty sense of humor, who vividly recalled moments of sheer terror as well as delight in describing her experiences of "tracking" animals and spending time alone in the wilderness. A keen observer, she also talks to herself and to nature while out alone. Muriel followed the "lifeline" of her relationship to nature within the "tapestry" of her life, concluding that it has and will always be a precious part of who she is. Although she currently spends more time in Buddhist meditation than in direct contact with nature, she has spent a great deal of time in nature doing a variety of activities over the years, including "tracking" animals, camping, experiential workshops, and sketching. Muriel has used nature as a setting for meditation and a topic for reading, discussions, and environmental activism. She stated: "I could let all of my education go, but I wouldn't touch my connection to nature. I'd rather die than have that removed from my being."

Priscilla

Priscilla is a 42-year-old woman who lives with her husband and three children in a "village" house adorned with plush old furniture, a freely flying parakeet, and a nature-inspired fairyland scene which she artfully arranged in an enormous potted plant. Priscilla has a college degree and a

creative approach to motherhood and homemaking. She enjoys handwork, waterpainting, spiritual celebrations, and social and musical activities. Priscilla expressed a wide range of emotions during the course of our interview, from inspired optimism to profound sadness. Priscilla's account of her relationship with nature is fully integrated into her emotional and spiritual development. In early childhood, her family's frequent relocations exposed Priscilla to a wide variety of settings and lifestyles but left her feeling a bit fragmented. After recovering from a 10-year period of eating disorders and substance abuse which she attributes in part to the existential "deprivation, the alienation that I've had by being disconnected from nature," she feels nourished by her blend of "Christianity and the earth connection." For Priscilla, her relationship to nature is "something that's been the life of my life; it's just really essential to everything."

Lois

Lois is the 30-year-old director of a wildlife sanctuary in the Boston area, currently living with her partner and plants in a nearby suburban town. Growing out of her enjoyment of outdoor recreational activities in childhood, Lois' interest in nature remained an avocation until the increased media attention to environmental issues in the late 80s helped her to realize she could pursue a professional career based on her love of nature. Trained in natural resource management and policy, Lois has a very political perspective on the issue of our relationship to nature and takes a consciousness-raising educational stance toward improving our appreciation and treatment of the environment. Lois continues to enjoy

outdoor recreation activities such as hiking and camping, in addition to the educational and organizational aspects of her career which enrich her relationship to nature. Asked for her personal definition of nature, Lois said, "I think of it as something that's all around us, that's not separate from you and me."

Charlotte

Charlotte is a 36-year-old married woman who lives with her husband and two children in a combination of suburban and rural settings in New England. Charlotte's fascination with nature extends back to childhood, an excitement she tries to spark in others who participate in her environmental education program at a wildlife sanctuary. Charlotte obtained degrees in natural resources and education and continues to read, write, and teach about "relating to and enjoying nature." Charlotte described the evolution of her interest in nature. Starting with naive curiosity in childhood, Charlotte endured and then rejected the more technical aspects of her scientific training and developed a more inspirational style of "coaching" kids to appreciate nature. Coming full circle in her own family, Charlotte notes the enthusiasm her daughter has for nature. Charlotte's interests include quilting, knitting, and decorating her home with natural objects found outdoors, as well as tending a garden and houseplants and participating in a number of outdoor recreational activities, including canoeing, skiing, swimming, and exploring. As Charlotte explains, nature "seems very much a part of my every waking hour. It's really deeply part of everything."

Yvonne

Yvonne is a 41-year-old broadcast journalist who lives in the city with her partner during the week and spends weekends in a rural region of Canada. Yvonne's main interests are in the arts and music. Having enjoyed the outdoors since childhood, when she would skin-dive, fish, or contemplate the sky, Yvonne currently spends time gardening, walking, and skiing. Seeking out natural settings as a source of relaxation and contemplation in her otherwise hectic lifestyle, Yvonne will often "just go somewhere and sit and breathe in what's going on around me," and especially likes the ocean, which makes her feel "at one, in rhythm."

Sylvia

Sylvia is a 34-year-old single woman, raised in an urban setting in Europe, who is currently living with two roommates in a suburban household outside of Boston, where she is a special education teacher and graduate student in expressive arts therapy. Sylvia describes being heavily influenced by her early experience of growing up in a city in Switzerland, surrounded by beautiful scenery in a culture that promotes respect for nature. Later periods of living in natural settings allowed her to open up and "blossom" without the stress of urban stimulation. An artist who creates her work out of bits and pieces of the natural world, she says, "I bring everything from outside in — rocks, branches, and, lately, even ants!" Sylvia enjoys outdoor activities such as hiking, biking, and windsurfing, as well as swimming, dancing, and reading. Sylvia has nurtured her interest in nature through meditation, outdoor sports, sleeping under the stars,

writing, taking and leading workshops, and teaching outdoors. "I think my whole life is connected to the natural world."

Definitions of Nature

The initial general question regarding participants' descriptions of nature was a preliminary exercise designed to help them focus on the interview topic. While I will not include this material in the formal analysis of results, I present participants' responses to this question here in order to give the reader a sense of the conceptions of nature on which participants' personal experience is based.

In response to the first general question regarding their personal conception of "nature," the participants offered a range of descriptions, from "rocks in the driveway" (Yvonne), to "everything on the planet" (Georgia), to cosmic "rhythms" (Priscilla). Participants itemized elements of our natural environment such as trees, animals, ocean, sand and stars, described the forces of nature over which humans have no control, such as weather and seasons, and located nature as "outside" and "all around us." Alexis and Priscilla mentioned nature as a source of resources such as food and water, while Lois described nature as a spiritual, pleasurable place for humans to teach, learn, and grow, and Muriel suggested the concepts of "beauty" and "safety." Sylvia conceives of nature as "something very alive...as you and I," while Priscilla refers most directly to the "organic connection" between the earth and the spiritual life of humans: "An internal or spirit experience

that's connected or aligned or paralleled or sensitive and reverent of the cycles that our earth goes through."

The single most frequent issue participants focused on in their description of nature was its relationship to human life. Five out of nine women (Melody, Alexis, Georgia, Muriel, and Priscilla) specifically included humans in their descriptions of nature. Four out of the nine women specifically excluded anything made or affected by humans; two of these included humans themselves, one later described feeling a part of nature herself (Yvonne), and one claimed that nature is as "alive...as you and I" (Sylvia).

While Priscilla attended to the grand scheme of "our connection as people as part of nature too, how we as people respond both to the heavens and to what is of the earth," others addressed the interconnection between humans and the natural environment on a more mundane level, in the context of their daily lives. As Charlotte explained, nature is "very much a part of my every waking hour, because it's what I do all day long, every day." Lois thinks of nature as "something that's all around us, that's not separate from you and me, a physical space that's really everywhere, that's an integral part of all our human communities." Alexis struggled most vigorously with the elusive concept of "nature" to include both pristine wilderness and "what I see every day in my life." Many of the women mentioned the difficulty they had answering this first question regarding their conception of nature, noting that it is a huge question and the boundaries are not well defined.

Thematic Analysis: Elaboration and Illustration of Significant Themes

Emotional Responses to Nature

Participants' experience of nature was associated with a wide range of feelings, including safety, joy, fear, soothing, and sadness. There was a way in which being in nature seemed to heighten participants' awareness of their emotional experience in and of itself. As Sylvia said, "Putting myself in nature has allowed me to really see what happens to me internally. It allows for the stuff that's not so important to fall away and maybe to stay with what's important." Describing contemporary life as like being "drugged" or in a "trance," Muriel claimed that "the quiet in nature can really wake you up."

All of the women described positive feelings in relation to nature. It was experienced as a source of beauty, safety, fun, and soothing when they otherwise felt alienated, disappointed, confused, or overstimulated. As Melody explained, " What I would do to console myself was just to be outside and in the woods. I would feel the trees and just feel that connection with nature. It made me feel better."

Understandably, participants most typically reported feelings of fear in threatening circumstances where storms or other elemental forces of nature posed a danger, leaving the individual feeling scared and vulnerable. Georgia recalled an experience from childhood in which she felt vulnerable in the face of frightening forces of nature. While a lightening storm raged outside the family's "tiny little cabin on the top of this mountain, we just held onto each other and stood in the middle of the cabin

and just let it pass. And that felt significant, because there wasn't anything we could do." And Muriel, who typically found nature to be a source of comfort, nevertheless recalled a terrifying incident which happened one night when she was sleeping out in the woods alone. She became aware that

> something was circling me out in the woods for quite a while. I was terrorized, I was so scared. I was lying there like a primitive person, thinking "what creature has anything to gain by circling a human being?" My whole system went on alert. There was something there in the dark that knew the territory better than I did. I was the intruder.

Quite a few of the women described poignant episodes of sadness associated with a sense of loss. For example, separation from nature or awareness of environmental destruction was experienced as the source of personal emotional pain. Melody, who has had a variety of richly emotional experiences in nature, described a combination of both joy and sorrow in her nascent awareness of an emotional relationship between herself and the natural environment:

> I started noticing my own emotional response to nature as I would come back from college year after year, noticing that it really had meaning for me and it really affected me. Just noticing how beautiful it was, I'd cry, because it was so beautiful. And here, I'd lived there my whole life and I didn't even know how beautiful it was.

Melody also recalled her sense of loss after viewing a scene of decayed trees on a mountainside:

> I was expecting it to be really beautiful, and it was all dead trees. They were just like decayed. It looked really horrible. I felt like it was because of acid rain; it certainly didn't look like it was supposed to. I started grieving right in the cable car, just feeling the pain of how like raped — I just had this incredible reaction to it and I didn't even know where it came from.

As Priscilla said, "It's not cerebral."

Cognitive Responses to Nature

Participants described a variety of cognitive responses in relationship to nature. On the simplest level, natural settings appeared to help individuals clear their minds of whatever stressors were troubling them, and/or to focus on personally important issues which were otherwise eclipsed by the stimulation and demands of daily life. Yvonne said, "All these experiences in nature help draw my attention away from what isn't important, from what is scary to me, to what is important, and helps me be more and more what I'm supposed to be."

Many participants furthermore reported a compelling sense of fascination or awe in response to seeing beautiful scenery or observing the behavior of animals or insects, for example. Charlotte said, "I vividly remember from childhood where something happening related to the natural world excited me; I remember spending really long periods of time watching. I was mesmerized."

On a more complex level, participants often described consciousness-raising experiences in which they became aware of making connections between themselves and their environment which led to a heightened awareness of their own internal thoughts and feelings, a sense of continuity and connection among people and nature, and a sense of themselves and their place in the universe, what might be described as "perspective."

Alexis recounted an incident which happened while she was riding her horse to visit a friend when she was 10 years old.

> One of the trails was closed off, and there was a sign that said "Nesting Hawks — Trail Closed." And I remember asking somebody and they said, "You can't go down that trail because the hawk will attack you." And I remember thinking to myself, "Wow, what do you mean, this hawk is going to attack you!?" I always thought you just ride through the woods like you get in your car. And I think that was the first time that I can remember some vivid memory of realizing that I have to coexist with nature or animals in the wild, that you can't always manipulate your environment to suit whatever your daily routine is going to be. That was one of the first awarenesses I had that people just don't go through life and are unaffected by nature.

Physical Responses to Nature

Relaxation was a frequent physical response to nature, often noted in terms of breathing. As Sylvia explained,

> I can relax when I'm outdoors. I feel like I can breathe. The tension really just leaves my body in many ways. I'm able to be much more peaceful and much more quiet. I lose this driven quality I have when I'm not there. My breath changes, I'm able to take much more deep breaths.

Many of the women reported enjoying outdoor activities, and Lois, in particular, attributed this satisfaction to the personal benefits of exercise (presumably physical and mental), as well as the setting.

Priscilla made a more abstract connection between her physical and spiritual response to nature: "I know in my solar plexus that it kind of takes my breath away, and it's like, it's the air I breathe, it's my breathing. It's experience — I am a part of nature, and nature is a part of God."

Physiological responses also seemed to be suggested by participants' frequent references to emotional arousal. For example, Muriel's "whole system went on alert" as she lay "terrorized, like a primitive person" being circled by an animal in the woods. As Yvonne said of going to the beach

after a hurricane: "For days the swells and the waves were incredible. We'd all hold hands and walk into the surf together. It's insane but it was so exhilarating."

Existential Issues

All participants described existential aspects of their experiences in nature, spiritual or philosophical convictions about the meaning and purpose of life on earth, whether or not they felt a commitment to any particular religion. The most significant psychological aspect of participants' existential experience of nature was the development of a sense of internal and external coherence and continuity; a sense of integration within themselves, and a sense of connection or community among individuals, the natural environment, and some higher principle of cosmic or planetary organization. I will present some rather lengthy examples of the existential issues discussed by the women to illustrate the variations on this general theme, which seemed to be at the heart of individuals' relationships to nature.

Personal spiritual beliefs. Many of the participants described "spiritual" beliefs inspired by nature. For example, Priscilla described her experience of a guided nature walk in Yellowstone National Park when she was 10 years old that has affected her whole life.

> I was struck — it was sort of like lightning bolts — with the interconnectedness as this guide was telling us about the life chain. Just one thing that was connected to another thing. The connections were endless. And so from there I think that transported me to a real spiritual dimension in terms of what I was hearing impact one thing to another. And I really got a sense of God and the divine.

Priscilla went on to explain that she has been

> trying to find how to have continuity. But it's not going to be found in an artificial world. It's got to be found in the natural world, because that's where continuity is. It's not arbitrary. It's grounded. My relationship to nature I just see as something that's been the life of my life. In all dimensions whether it's my body or my heart and soul and spirit.

For Priscilla, then, "every facet of life can be connected to this, the connection to spirituality and the earth, and with nature, just a spiritual sense, a sense of community. I feel like I can start to feel like I can get integrated."

Sylvia mentions her adoption of the Sufi religion, in which

> nature is the scripture. My spiritual connection is very connected to nature. Something happens inside of me when I'm there. It's hard to put it to words. I do believe it's alive because I do believe there's a relationship that takes place. It helps me reconnect with myself; when I can be the most connected to what I think, feel, and do are the same thing — they're not different — then I'm really living a spiritual life."

Of her experience in nature, Sylvia said,

> I feel actually congruent between what I think, feel, and do. I feel happier when I can be out there; I feel more centered, I feel like I'm congruent with myself and I'm not split in many ways, which I do when I'm not connected with it.

Yvonne recalled a relatively recent experience she had at a workshop on spirituality, during which she took a blindfolded romp through nature.

> Usually I experience nature as being outside of me and I'm sort of privileged to be there. This was quite different; I was part of nature. It was the most extraordinary feeling of being completely connected with the natural world. Usually if I sit and think of that time, it's not historical; I begin to feel that connectedness. It really was being part of whatever the ineffable is. I am firmly confident that all of this goes on. Nature is a big part of my spirituality, it's a good way of keeping me humble, not in a terrorized way, feeling small and helpless, but just feeling that I'm part of it too.

Lois admitted:

> I'm not a very religious person, and I'm pretty skeptical about even spirituality, but there's something that is so wonderful or awesome, in the best use of that word, about being outside. So I think for me maybe the only spiritual outlet that I have is nature.

Alexis also struggled with the notion of spirituality, but said:

> I think because of what I've chosen to do with my job, and my experience when I was young, that I've always had this sense of being part of the environment. I've never really felt separate from that. And I think that maybe because of that I think that maybe I'm a very spiritual person and I don't know it. I just know that I feel very connected to nature and the environment, and that without it, it would be hard for me to live the life that I live now and feel the way I do now. I really see how everything fits together, how things are affected long term. I've always had this sense of being part of the environment, not manipulating it but coexisting with it. It kind of puts me in my place on this planet. I have a sense of who I am in relation to this planet or the universe. When you see something that's just so vast, or when you see a waterfall or something that's carved out of rock on the side of a mountain, or something like that, that's the only thing I can think of that might be like what spirituality is. I do believe that there is some force that kind of makes everything go together, and I have this sense that if we continue to manipulate nature, this whatever it is, can't hold everything together anymore.

Muriel described nature as

> a teacher safe enough for me to learn from. Through that teaching in the natural world, I think I was able to start to see what a trance I had been in. I've been pulled towards it. Maybe it could have happened another way; it happened for me through nature. I think we have assistance to evolve, not to get killed. Something is trying to assist us, and it will use whatever it can. For some people it'll use nature, for others it'll use music, or art, or something that will start to help them become more of who they are. And I think that spiritual force spotted me and said, 'This one likes to look at what's happening around her."

Melody simply said, "I feel like the places that are deepest inside of me are deeply, deeply connected with the earth. And nature. And there's just a huge amount of meaning that's there for me in that."

Participants' beliefs about the importance of the relationship between human beings and nature thus served as a foundation for their spiritual or philosophical conceptions about the relationship among individuals, human society, and the environment as a whole, on both the individual and collective levels. Despite their personal convictions of interrelatedness, however, some participants considered their appreciation of nature to run counter to Western cultural trends which promote an exclusive distinction between human beings and nature.

Philosophical convictions about our collective relationship to nature in Western culture. Most participants expressed concern about the alienation between humankind and nature in Western culture as a source of dysfunction among the planetary systems as a whole, promoting maladaptive human behavior such as some types of emotional illness and destruction of the natural environment. Although participants found it hard to put their experience of this sense of Western culture's separation from nature into words, the loss was often experienced by individuals as a feeling of pain and was associated with environmental degradation. For example, Melody's description of her grief upon viewing trees she thought had been destroyed by acid rain represents her own personal feeling of sadness, as well as her participation in the collective experience of grief over how humans have affected nature. Some of the women furthermore suggested that if people appreciated the extent of the relationship between nature and human beings, we would treat the environment better.

Alexis argued vociferously:

I do have this sense that we are not as powerful as we think we are when it comes to nature and the environment and the weather. We tend to separate ourselves out and isolate ourselves and put ourselves in this artificial little world and think we can get through life this way. And you can't. People have really separated themselves away from what nature is doing or what the environment is doing or what the seasons are doing or what the planets are doing; people have really separated themselves out of that. Like they are not part of this other world. And like nature is the birds and the trees and the fish and the stream, you know, the leaves falling off the tree. But people don't see themselves as part of that whole thing. Human beings try to separate themselves out and manipulate the environment; we're not encouraged to be in tune with nature.

Melody confided:

I don't feel like it's just me. I feel like our society has separated us so intensely from our experience of the natural world, and most people don't even realize that they have the ability to connect with nature in these deep ways. I say that because I didn't used to feel this way. It's been an evolutionary process for me, to the point where my own connection is really powerful and profound, of absolute vital importance to me.

Sylvia said:

I feel like there's something very wrong with society. And in thinking about what's wrong with it, this is what I go back to: We're really not connected to the place we live in. I truly believe that, from mental illness to physical illness to being discontented, from child abuse, from drug abuse. I really believe if people had a different connection to nature you wouldn't have a lot of the illnesses we have, because it affects people in many different ways that they don't even have any concept about. We're a 24-hour society. We totally forgot that there are cycles that we go through.

Similarly, Muriel argued that "one of the things that's so hard is knowing our species is in such dire straits. We've become alienated from the very planet that's holding us there."

And Priscilla explained:

> There's a lot of disturbance in terms of our lives and in terms of our planet, in terms of the balances and rhythms of the earth and our connections with that, and our spirit, too. That's something our society's become very sterile around. I think that's a big problem, to be in a society that's technological, consumer oriented, materialistic. We really get far removed quickly, especially little ones, from our natural environment.

Priscilla described crying while she viewed the destruction caused by agricultural use of insecticides.

> It's something as a white member of Western civilization — it's like alien thoughts to be bumping up against this thing in our culture. You just dig into the earth and blow things away and make it ugly; it's not beautiful anymore. And nobody quite feels the pain around that. So you don't know what to call that pain because it's not defined. All I could do is feel it; it just feels sick inside. Not just because it's ugly, but because there's not a consciousness of us as a humanity where we can bring some redemption to what we do in terms of the destruction that we create. I think what we have is a culture of people, a lack of reverence. There's opportunity for reverence and we don't have any. I don't feel like we're in a society that supports that in a certain way.

The conflict between participants' philosophical convictions and their perceptions of Western cultural attitudes toward nature in the context of the contemporary environmental crisis is a theme which runs through a number of issues, including interpersonal relationships, education, and work; it will be further addressed where appropriate.

Symbolic significance of nature. In addition to some fairly elaborate conceptions of the existential aspects of nature such as those cited above, participants also mentioned its general symbolic significance as a setting which offers a compelling (preferable) alternative to the usual pace, activities, and state of mind they experience in the context of daily life in more developed settings, a place which promotes a sense of coherence,

freedom, safety, and healing. There was unanimous appreciation of nature as a "teacher" in one way or another, a setting which promoted acceptance, understanding, and personal growth.

Interpersonal Relationships in Family and Society

Participants discussed the connections between their relationship to nature and interpersonal relationships in different ways. Most frequently, the experience was associated in a positive way with inspiration and emotional connection to family members. Participants also mentioned the gratification of relationships with others who share their interest in nature. In describing beneficial aspects of their relationships to nature, however, some participants acknowledged painful aspects of interpersonal relationships in family or society. Here again, because interpersonal relationships are a highly significant and complex psychological issue, I will illustrate the rich variety of interpersonal issues with a number of lengthy quotations in participants' own words.

Family relationships. Many participants specifically mentioned being inspired to pursue nature-related interests by significant family members or other people to whom they felt emotionally close regarding their experience of nature. Nature was a source of special attention, attachment, or status within the family.

For example, of her parents' role in nurturing her interest in nature, Charlotte said:

> If an adult who I trusted and loved hadn't said, "Wow, this is neat," I don't know that I would have continued thinking it was. So the

> experience, the fact that my observations and discoveries were accompanied by a supportive adult, I think it's important.

Charlotte told a charming story about how her father convinced her to stop pulling a seedling out of the rock in which it was embedded, to let it go and "wait and see what happens to it."

> Over 20 years, it split the rock in half and it became this huge cherry tree and we used to make cherry brandy later on out of the cherries. And birds used to fill the tree on mornings in the spring. So I always really liked that tree. I went home years later, and the tree was gone. And not one of my siblings remembered that it was even there. I thought it was pretty impressive that this tree was right next to our house and nobody else knew it was there. I'm glad I appreciated it.

Charlotte reported that she has "found a wonderful community of colleagues and friends through my work and through my outdoor recreation pursuits. But that's very different from where I came from."

Like Charlotte, Yvonne's relationship to nature contributed to her identity within the family: "I'm certainly known in my family as the one who goes and sits out on the rock and just stares into nothingness." Yvonne claims that her mother was very important in bringing her attention to nature.

> She taught me how to pick up my first snake. She taught me to love animals and to respect nature. She was big on cycles, life cycles. And she was the one who sat me down and we watched an ant funeral, she called it.... My mother has everything to do with my appreciation of nature and looking and just seeing things. My father was, too, in a funny sort of weird way. He was the one who used to lie out on the hill with me looking at the clouds. We wouldn't say much. He was the one who took me fishing. I had a brother, but he wouldn't go fishing with my brother because my brother wasn't that interested. We'd sit for hours; I don't think we ever caught much, but it was wonderful.

Lois credits her brother and sister with fostering her appreciation of nature.

> My brother and my sister, and to some extent my mother, really took me away from that suburban setting. I went hiking with my brother and sister and another older friend of theirs, and then we came to a huge lake and we were able to swim out to an island. It was just incredible. There is an element to my enjoying the outdoors that has to do with really working out and getting exercise. But it was just the wandering through forest and this pristine water and being able to swim. It's so vivid to me, that day, that trip.... My brother and sister were definitely helping me to appreciate being outdoors and how beautiful those surroundings were. And when I would go home and I'd be in this pretty yucky developed suburb, I knew it didn't have to be this way. It was important in raising my awareness of spending time outside in nature.

Although she admits that "not all my friends are outdoors people or enjoy that," she says "anyone who's close to me in a significant relationship and also with my family, that's something that we value doing as a group.... I can't think of a better way of spending time with friends than being outside."

Five of the women described more painful aspects of family life related to their experience of nature. Both Alexis and Sylvia told poignant stories about early childhood, during which nature served as a refuge and source of nurturance which they failed to get from parents. Alexis described growing up in "a big family, and there was a lot of chaos in my family. And I was like the invisible child. I didn't speak at all until I was nine. I just tried to stay out of the way and do my thing." After meeting an outgoing friend who convinced her to try horseback riding, Alexis was "hooked." Although her parents supported her interest by buying her a horse and building a barn, Alexis still described her love of horses as "an escape from

my house — it was my own world. I think part of it was an escape from my family, not having to be around a lot of chaos and stuff. And I think the other was just like attachment to the animals," who offered unconditional love, understanding, and validation. As an adult, Alexis enjoys time with her sister, brother, colleagues, and friends who share her awareness of living in tune with nature.

In a similar way, Muriel described finding a beauty and safety in natural settings which she could not find elsewhere. People were confusing, so she spent much time outdoors. "It's always been a pretty solitary thing. I don't think I've shared it with other people. It hasn't been about sharing with anybody else. I happen to have chosen a partner who's a city person." Muriel continues to have conversations with elements of the natural world such as birds, in addition to her social service work, robust family life, and a variety of social relationships.

Sylvia attributed her connection to nature to her mother, grandmother, and the nature-respecting culture of her birth country (Switzerland).

> One significant event for me is that my grandmother had a chalet. My mother grew up going to her chalet every weekend on vacation. And there I got to spend some time when I was a teenager. So that was something very special to me. That place was part of the family. That's a place where I got nurtured and my grandmother had breakfast ready before I got up, and had lunch and supper ready after I came back from skiing all day.

However, Sylvia went on to explain that nature

> gave me a mother when I didn't really have a mother. I had a physical mother but emotionally I didn't get what I needed. And I think nature was the substitute in some ways. It's the one thing that connected me to my birth mother because that's a connection she had, so it's something that we have in common; that was the only positive thing that we had to relate around.

Priscilla explained that her relationship to nature came through her "down to earth" parents and the family's many moves in childhood which exposed her to a variety of natural and cultural settings. Although her experience of living in different environments enhanced Priscilla's sensitivity to the environment and cultural relativity, it also contributed to a sense of fragmentation and alienation during her adolescent years.

Explaining that she had always felt like her family were "outsiders" in the town she grew up in, Georgia remarked on how important the nearby woods were in helping her to feel some attachment to that place. Georgia found herself feeling very pained to learn that the woods had been cut down for development: "It kind of like cut one more thread that was holding me to some place." While the early frightening experiences which inspired Georgia's feelings of helplessness and urge to cling to others for safety involved her father and sister, she thinks of her relationship to nature as more of a personal and solitary part of her life.

> It's not something that I talk to people about a lot. Or that I have over the years. Not in a personal way. I'll talk to people about how we're destroying the environment. But it feels like more of a personal thing to me. It was sort of a way to be by myself, not something that I consciously shared with others.

The experience of resonance and alienation. The conflict between participants' personal assumptions and their perception of cultural attitudes is relevant to the theme of interpersonal relationships, insofar as some participants described the difficulty of going against mainstream values in pursuing a relationship with nature. Participants attributed feelings of alienation or connection to the social world around them with

respect to others' regard for the environment. For example, five participants (Priscilla, Alexis, Sylvia, Melody, Muriel) described feeling out of sync with American culture, or identifying with Native American culture. As Melody said: "I feel more radical, different from how most people look at the world and their relationship with nature. I feel like I'm walking around crazy almost, because I see things so differently from most people — my values."

Melody spoke eloquently about the role of intimacy and identification in interpersonal relationships within the evolution of her relationship to nature.

> Before I really developed my own connection with nature, it didn't have anything to do with my relationships with other people, friends, or family. Once I developed this connection, I was starting to connect with people around that. And I feel a different quality of relationship with them because we share this. And it's so important to us and they're such deep values that I feel more connected with them and closer to them than I do to my friends and family that I've know my whole life. So in a sense it's actually separating me from my older friends and family...and I feel like they don't understand really; you know they may sort of respect it somewhere, but they don't see it, don't get it, don't understand me. And so I can't really be myself with them and be accepted. And so I think I hide a little bit. I mean I think I still try to learn how to be who I really am with the people in my life, but this feels like something so challenging to who they are, and that's very scary to bring to a relationship.

About the friends who inspire and share her feelings regarding the natural environment, Melody says:

> Listening to people sharing about their relationship with the earth, spending time with me, thinking of what it was for me, just meeting people where there was so much to learn — I felt like I was coming home. Like I'd never had that experience before, being with so many people that shared my concern about what's happening with the earth. And it felt like it touched me in this really deep place, that this is what I care about. I feel really connected to the earth and really want to save the planet. I love the earth a lot and so I sort of have this family, this

> way to express my feelings and feel empowered about what to do about it.

Talking about her relationship to nature reminded Melody of her commitment to this issue, which has been a source of empowerment in her life.

Priscilla said: "I think it's a real hard thing to carry on a consistent connection with what's natural in the world today. I feel like I'm moving upstream all the time, whether it's within the family or it's outside the family." Currently, Priscilla's involvement in the Waldorf School community provides relief from the isolation and alienation she feels in mainstream American society. Through "education that embraces the natural order," Priscilla can combine her "passion" for her children and for nature: "My saving — the place where I feel — it's like saved my life, it's the Waldorf School community."

In general, participants described working very hard to integrate their relationship with nature into interpersonal relationships when this did not occur spontaneously. They sought friendships with like-minded people, educated others who were not as sensitive to nature or environmental issues, and understood their identity in relation to family and friends in terms of their relationships to nature.

Worldly Matters

Education and work. All nine participants described nature as a significant aspect of their school or work careers. Even Georgia, whose work does not directly involve the natural world, admitted that nature

> provides me with sort of a sense of serenity. It sort of restores me, recharges me to go back and do some of the other things that I have a passion for. If I don't have that restoring force, I kind of lose some of the things that are important to me.

Among participants' educational and vocational experiences related to nature, the importance of educating other people emerged as a highly significant issue. Whether as mothers, teachers, or mental health workers, seven out of nine women made specific references to the importance of educating children and others to appreciate the natural environment. This was in keeping with the personal importance of nature as a source of experiential learning which offered the women a sense of meaning and mastery in their own lives.

Either directly or indirectly, participants indicated that the increasing attention to environmental issues in American society as a whole had raised their awareness of the relevance of these issues, on both an individual and a collective level. For some of the women, this also raised the possibility of integrating their personal interest in nature into educational and professional activities.

Most of the participants (seven out of nine) described a developmental process which included periods of uncertainty, frustration, confusion, and disappointment as they tried to find a meaningful way to incorporate their relationship to nature into a satisfying and viable career. Here again, the conflict between personal experience and the perception of cultural attitudes is relevant, because as the environment became more of a political issue, it sparked strong feelings and controversy which were not easily resolved within existing disciplines. At times, it seemed difficult for

participants to attend to nature *and* feel connected to mainstream American culture.

In the process of trying to integrate nature into their formal education or professional training, five women came to the realization that their interest in nature did not extend to working with technical scientific details. For these women, their compelling personal experience of nature (as a source of emotional comfort, fascination, existential meaning and coherence, or enjoyment, for example) is what inspired them to pursue environmentally related educational and work activities. Attempting to keep this part of their experience alive, the women were often turned off by the technical demands of traditional education and training.

Muriel recounted a stage in early adulthood:

> I did debate for a while being a marine biologist. But what drew me was my connection to nature, and then when I was in classes and lab and getting specimens, I was like "What are you doing? This is nuts! We just raked up a half a mile of the ocean bottom to do what?!" It was totally inane. It's a way of learning, but it's not the way of learning that I think we need as a species. So I stopped that. And I was very confused for awhile, because I knew it was very important to me to be in connection with life somehow and to wake up, and I couldn't figure out what I was supposed to do — forestry? I was a nurse at the time. I was crazy for quite a while, I was very unhappy. I was trying to find my identity in the world and here's this part of me that's so important and it doesn't fit in.

Muriel stated: "I could let all of my education go, but I wouldn't *touch* my connection to nature. I'd rather die than have that removed from my being. It's been so important and such a long, continual big piece of my tapestry."

Charlotte said of her relationship to nature:

> At different stages I thought it was exciting and interesting and fun at the beginning. And then in college it became more something to prepare for a profession, so I had a more technical view of it, and so it

> was almost less enjoyable because there was so much to learn. And then I realized after working a while in education that it doesn't have to be that scientific.... So I think it's come full circle in a lot of ways. I learned the technical or scientific end and I rejected it.

Charlotte went on to describe how walks along the beach during college provided a therapeutic setting in which to contemplate changing the focus of her major from science to recreation. "I'm not sure the beach actually made me want to be less scientific in my relationship with nature, but I think that setting gave me the mental landscape." Charlotte describes what she does "all day long, every day" in her job at the nature center, as well as at home, as "coaching along kids to grow up just to appreciate natural things."

As Melody put it:

> My interest in the natural world never had to do with like labeling it and understanding what specific things were and what it was made up of. Doing the emotional work around earth connection was more what I felt that I could really contribute to the earth, as opposed to the scientific and environmental stuff. So I decided to go to graduate school for counseling because I had a lot of fear about encouraging people to get into their feelings without more training.... While I am learning to counsel people, I keep finding that what I really want to do is help people connect with the earth.... It's a great challenge for me to figure out how to stay focused on what I want to do with my life and figure out how to earn a living at it. It's kind of scary and a little lonely, actually.

Like Melody, Sylvia is trying to carve out a career in mental health which is based on the therapeutic value of appreciating the relationship between individual well-being and the state of the environment. Sylvia's ideas about psychotherapy emerged over the course of her own ongoing emotional healing, which she described as occurring at various levels.

> The third level feels like now I need to heal around what's going on with nature. It's not enough to just look at my immediate surrounding

> — my family — or my little bit bigger surrounding — my work, my friends — it goes much beyond that. It feels like a really developmental process of healing. I know there's more and I think that's why I'm getting to this place where it connects. I'm seeing the generational kind of stuff that goes on. Where does it originate from in the first place?

Sylvia has a "vision" of

> taking people out for weekends and hiking and things like that, maybe gatherings in the evening. I call it doing therapy, but you don't do therapy. Having therapy outdoors or after having experienced something like three days of being in nature and being with what is. I do expressive therapy, so I get to use the art, I get to use painting, I get to use movement. So why not use earth as a material? I really think nature has been my best art supplier in a sense, because my art work reflects what I do using nature elements. I have a very hard time thinking I will fit in any institution that's already out there, so I might as well try to build my own. Are there ways I can have some of my vision within what's already existing?

Alexis described the difficulty she had in adjusting to college:

> It was the first time since I was 10 years old that I didn't have my horse, and I didn't have my daily routine of being outside and riding and having to get up and feed and be outside in the weather no matter what. And when I went to school I really felt like part of me was missing; not even that, but I felt like I wasn't connected. I made a decision to leave school because I felt like, first of all I felt that maybe being a vet wasn't exactly what I wanted to do. I wanted not so much to be riding around in a truck, going from farm to farm treating sick animals, but I wanted to be more directly connected with the animals. And I think also being more directly connected with being outside. And that was a major decision that I made, based on my relationship with the environment or nature, as I see it, with the horses.

Alexis is "immersed in being outside and all" in her job as a farm manager, as well as in other aspects of life. "My experiences with nature have made me make decisions in my life, to choose to be as connected with nature on a daily basis as I can."

Leisure. Combined together, the nine participants described enjoying a range of leisure activities related to nature, including gardening, outdoor sports, walking, yoga and meditation, camping, environmental or natural history shows on television, "tracking" wild animals, feeding birds, political action, pets, art, and experiential workshops.

The significance of these leisure activities seemed to derive from the ability of the natural world to enhance individuals' sense of balance, relaxation, and well-being. Natural settings were perceived as offering a change of pace and scenery which provide an antidote to the fragmentation and demands of daily life in Western culture. Yvonne described getting "frustrated" and "tense" after being

> plugged into the city. And even though I'm in the garden it takes a while — it's a process of pulling those plugs out one by one — it takes a few pounds of manure and humus and digging to get that out of me.

Yvonne has a special affinity for her rural house and garden as a special place that is hers to care for and enjoy, after having lived in other people's houses.

> When I'm at my little house on the river, just living there is my leisure activity. And I'm right in the middle of everything. The river's in front of me, the garden's around me, the woods are out back. I have bird feeders all over the place with a variety of things. I make my own bird mixtures and things to attract different birds. So that's just part of my daily living.

During the week, Yvonne brings reports of her weekend idylls to her urban radio audience.

Georgia uses animals and walks in natural settings in her leisure time as a source of soothing and restoration to enhance her performance in other areas of functioning.

By the same token, participants' experience of nature was also perceived as fully integrated into all aspects of life, leading to a sense of continuity, cohesion, and connection. Charlotte, for whom nature is "really deeply part of everything," said, "Almost everything I've done for hobbies and outdoor exercise is almost always to get access to nature." Priscilla also finds her relationship to nature "just really essential to everything," referring especially to "the spiritual dimension that affects absolutely every aspect of my life, which pretty much touches on every process. I can find its integration in everything of my life, whether it's music, art, spirituality, or child-rearing, gardening, whatever." Alexis, of course, is "immersed in being outside and all," through recreational activities as well as her job. And Melody, who is thoroughly committed to her earth connection in every aspect of her life, attends ecologically oriented personal and political empowerment workshops and gatherings in her spare time. Looking ahead, Melody would like to further integrate music into her experience of the natural environment.

Muriel and Sylvia both mentioned sleeping outside when necessary for their well-being, and, like Priscilla, both use nature as a source of inspiration for their artwork.

Developmental Trends

An important aspect of participants' relationships to nature was the experience of continuity and change. References to family history, childhood memories, and expectations for the future, in addition to more contemporary events and all the transitions which connect them, suggests

the range of psychological time which is involved in participants' experiences of nature. Participants speculated about the future in different ways, even though the interview did not address the future specifically. For example, while Alexis wondered about life after the death of her beloved horse, Sylvia and Melody envisioned a nature-related psychotherapy, Lois lamented the political backlash against the environmental movement, and Priscilla and Muriel worried about the future of their children and humanity as a species.

The concept of "cycles" was a pervasive image as all nine women described changes in their relationship to nature over time. The psychological process of personal growth, synthesizing insight, vulnerability, empowerment, and self-realization is conveyed by Charlotte's description of feeling "opened up" during walks along the beach, and Sylvia's description of feeling nurtured by nature. After spending six weeks outdoors, during what she considered "the happiest time I've had lately in my adult life," Sylvia said, "I had just blossomed. I was radiating."

Keeping in mind these delicate images of growth, I will go on to discuss the developmental trends which emerged among the narratives of the nine participants as they discussed their relationship to nature.

Charlotte identified different stages in her lifelong appreciation of nature, from childhood fascination nurtured by the support of her parents, to her disappointment in scientific study in college, to her current interest in "coaching" children to feel engaged with the natural world in a comfortable and exciting way. Lois, the other environmental educator, described the continuity of her recreational interest in the natural

environment as it changed from a source of connection to siblings in childhood, to an escape from academics in college, to a compelling and viable vocational interest in graduate school and work. Like Charlotte, Lois considers empowering others to appreciate nature to be a most important aspect of her job, and puts herself and her work in the context of environmental trends in society.

Alexis described the pervasive significance of her lifelong interest in the natural environment as a source of connection throughout every aspect of her life, including interpersonal relationships, work, and philosophical convictions. Since her first friendship with a school chum and attachment to her pet horse, Alexis has grown from a child overwhelmed with family chaos into a competent and confident adult who has a clear sense of her place in this world and a sense of responsibility and respect for fellow beings. Her perspective on the pervasive interconnections among the natural environment and human beings is based on her keen observations and empathy, which developed in relation to her beloved horse and their mutual environment over many years.

Significant emotional, cognitive, spiritual, or interpersonal experiences were often triggered by developmental changes or dramatic external changes (in weather, location, relationships, or lifestyles, for example), which prompted participants to note internal and external contrasts and continuities in their experience of themselves, their perception of the environment, and their sense of perspective on the connections between self and environment. Often, although not always,

these changes seemed to be associated with a sense of emotional pain, particularly sadness and loss.

Muriel, Priscilla, and Yvonne described an early interest in nature which seemed to go underground in adolescence, and then resurfaced later in their lives in various ways, as a source of emotional healing, spiritual or philosophical inspiration, leisure activity, or educational interest, for example. Priscilla had perhaps the most dramatic period of transition in adolescence, beginning with her emotional illness and alienation, to her spiritual transformation and recovery in adulthood. Priscilla's personal process led her to make connections between her own sense of fragmentation and the alienation she locates in culture, and hopes to further establish her sense of personal cohesion in relation to nature with a solid sense of membership in the broader community. Muriel has used the lessons she learned through her lifelong relationship with nature to pursue her interest in Buddhist meditation. And Yvonne seems fairly stabilized in her balance of wilderness and city life, contemplating the change of seasons as leaves fall from 250-year-old trees along the river outside her house.

Oblivious in childhood to the special significance nature would hold for her later on in life, Melody reported becoming aware of nature in a new way after she returned to her hometown from college. Melody went on to associate the "evolutionary process" of her relationship to nature with developmental changes in her ability to acknowledge her feelings.

Georgia realized the importance of her need for a sense of attachment to place (i.e., to compensate for feeling like she and her family were "outsiders") through the emotional pain she felt after learning that the

woods in her childhood neighborhood had been destroyed. While Georgia remembered frightening experiences of nature from childhood, she now finds walks in the woods to be soothing and restorative.

Priscilla attributed her sensitivity toward nature to her family's frequent moves, which exposed her to a number of different lifestyles. Sylvia also experienced this cultural contrast through her upbringing in a European country and subsequent periods of living in both urban and wilderness settings. Alexis and Yvonne both mentioned having significant reactions to changes in the landscape which were a result of weather or seasonal changes. Alexis pointed out the variety of ways in which the forces of nature and humankind influence each other; most often, she seemed to observe, nature offers human beings a lesson in survival, while people take the opportunity to "divide and conquer."

Summary: Personal Growth and Perspective Through the Existential Experience of Change and Continuity in Relationship to Nature

The participants all described nature as an integral part of their life experience as a whole, significantly contributing to and influenced by their emotional, cognitive, and physical responses, spiritual and philosophical convictions, interpersonal relationships, and "worldly matters" such as education, work, and leisure activities. For these individuals, attending to nature often seemed to be a way of attending to themselves. Exploring their relationships to nature during the course of this interview, participants

were able to identify sources of developmental change and continuity over time, revealing significant psychological insight and personal growth.

According to these interview results, it seems that nature offered a range of experiences for these individuals over time, including the context and resources around which daily life revolves, as well as an alternative setting associated with recreation, spirituality, and freedom. Nature may stir feelings of safety, sadness, fear, or fascination, as well as offer solace and nurturance in an overstimulating and alienating world. Nature may inspire humility and vulnerability, as well as provide relaxation, empowerment, and a sense of spiritual harmony and physical well-being. Experiences in nature may also serve to forge connections among thoughts, feelings, and behavior within the individual, between people, and with the environment itself.

In conclusion, these participants experienced a psychological sense of change, continuity, and growth in relationship to nature. Their emotional, cognitive, and physical responses, spiritual and philosophical convictions, interpersonal relationships, and worldly activities were all informed by their experience of nature, contributing to a holistic and existential sense of meaning, cohesion, and perspective throughout development. Thoughts, feelings, and physical responses in relation to nature promoted a gratifying sense of personal integrity; existential convictions afforded a sense of human identity as members of a species in relation to the planet; and worldly involvement in nature-related activities connected individuals to other people through interpersonal relationships, education, work, and leisure activities.

CHAPTER FIVE
INTERPRETATION AND COMMENTARY

Beginning with a brief review of the results presented in Chapter 4, I will discuss how these findings may be interpreted to enrich our understanding of some psychological aspects of our relationship to nature. I will discuss the implications of my analysis and interpretation for the field of clinical psychology, with the goal of integrating some of the systemic political concepts of ecopsychology into more conventional practices in clinical psychology. I will then present important issues regarding method which have bearing on the validity and reliability of these results, concluding with some final thoughts and questions for further consideration.

Interpretation of Results: Nature, Culture, and Self

The participants in this study experienced a psychological sense of change, continuity, and growth in relationship to nature, a sense of perspective and existential meaning which enhanced their experience of personal integrity, human identity, and connection to others and the cultural and natural environment as a whole. This existential "consciousness-raising" aspect of participants' psychological experience in relationship to nature was a theme which ran throughout the nine narratives, highlighting connections among participants' developmental

experiences, including their cognitive, affective, and physical response to nature, their education, work and leisure activities, relationships with significant others, and spiritual or philosophical convictions. The heightened awareness of internal feelings, combined with the observation of events in the external world, appeared to enhance participants' "perspective" on their own place in the scheme of things, leading to a meaningful sense of "belonging."

The results of this qualitative study are in keeping with previous findings from the psychological literature regarding our relationship to nature, insofar as the majority of participants expressed a preference for natural settings, in which they experienced a number of personal benefits, from relaxation to spiritual inspiration (Driver, Nash, & Hass, 1985; Knopf cited in Stokols, 1987).

The existential experience of nature, what appears to be a holistic synthesis of important psychological processes, reflects the concept of "a shift in perceptual awareness" regarding the relationship between the individual and the natural world, a concept described by Talbot and Kaplan (Kaplan & Talbot, 1983; Talbot & Kaplan, 1986). Since this aspect of experience in relation to nature is at the core of my own interests and the heart of this study, I will illustrate the consistency between previous findings and my own with a quote from Kaplan and Talbot's work. Based on their studies of the psychological benefits of a structured wilderness program, Kaplan and Talbot (1983) concluded:

> The strongest connection between the wilderness experience and individuals' feelings about themselves is seen in the final cluster, Perceptual Changes. Individuals begin to notice small details in their surroundings — not necessarily anything new, but subtle

> relationships or elements they may never have appreciated before. They feel comfortable in their natural surroundings and are surprised at how easily this sense of belonging has developed. There is a growing sense of wonder and a complex awareness of spiritual meanings as individuals feel at one with nature, yet they are aware of the transience of individual concerns when seen against the background of enduring natural rhythms. Individuals also come to perceive themselves differently. They "enjoy finding out about" their own feelings, they think of their futures, and they feel more sure of who they are and what they want to do. (pp. 179–181)

Although the participants in this study were in various stages of discovery and satisfaction regarding their relationship to nature, the general process of consciousness-raising about the relationship between internal and external events is similar. Participants' systemic and ecocentric conceptions about humankind's self-conscious place in the cosmic system, based on their own psychological experience and existential convictions regarding the natural world, thus provide empirical evidence of the emergent ecological worldview (Elgin, 1993; Groff, 1988; Shaw-Jones, 1992; Worster, 1977).

The results of this study support ecopsychological theories that the relationship between human beings and nature in Western culture is influenced by cultural trends in complex ways (Roszak, 1992). While sparking respect and appreciation for psychological aspects of the relationship between individuals and our environment, the increased attention to global environmental issues in the context of cultural crisis has also triggered conflict and controversy.

Participants' reactions to talking about their relationships to nature during the course of this interview were illuminating in this regard. Many participants reported having felt awkward during the course of the

interview as they tried to integrate and articulate their emotional, cognitive, existential, and social experiences of nature, *despite having experienced nature as a significant aspect of their lives.* The discomfort and difficulty of talking about this issue, even among women who had given it some thought, suggests that there is a lack of social support for examining these issues.

On the other hand, the gratifying sense of "resonance" and confirmation described by some participants in response to talking about this issue suggests that connection to others regarding our relationship to nature is a powerful experience. Interestingly, although many of the participants described their relationship to nature as something they do not often "share" with others, it also appeared to be associated with interpersonal influences in many ways. For example, significant others had the interpersonal power to inspire interest in nature, and participants considered educating and inspiring others to be a highly valuable aspect of their experience of nature.

Almost all of the participants reported a sense of conflict between their nourishing personal experience of nature and their perception that North American cultural attitudes toward the environment in general are more destructive. Ecopsychological conceptions of the causes and consequences of our relationship to nature may help to explain why cultural confusion about environmental issues in the context of global crisis may engender anxiety in individuals, which would make talking about this issue in a personal way both difficult and yet rewarding.

Ecopsychological theory (Roszak, 1992) locates the source of this ambivalence in cultural trends such as individualism, mechanism, and dualism, which have resulted in our alienation from nature, destruction of the natural world, and denial and suppression of environmental problems and emotional pain. According to ecopsychologists, our maladaptive response to environmental issues may be attributed to an association with painful feelings (on the individual level) or threatening implications (on the cultural level) which have been triggered by our increased awareness of global environmental problems.

The participants in this research, who all experienced some sense of psychological, social, or existential conflict between their personal experience of nature and their perceptions of social expectations, seemed to fear that a personal commitment to appreciate nature would alienate them from mainstream society or significant others, while a separation from nature might leave them feeling alienated from themselves. Since neither of these alternatives would lead to a sense of personal integrity *and* membership in the human community at large, participants struggled alone to find some sort of compromise, often in the absence of adequate social support.

If conflicts regarding the natural environment in Western culture induce this experience of emotional conflict in individuals in general, we may feel paralyzed by the *threat of loss or disconnection:* By acknowledging the extent of our relationship to nature, we risk losing the approval of a society which is perceived as hostile to the concept of environmentalism, let alone deep ecology; but by ignoring our relationship to nature, we sacrifice

the experiential benefits of nature, the most important of which seems to be a sense of coherence and continuity between oneself and the surrounding environment. Contemplating our experience of nature in the absence of social support may thus evoke anxiety and denial about the loss of our natural or social environment.

On the simplest level, the range of typically unexplored feelings expressed (with difficulty) by participants in this study, supports arguments made by ecopsychologists (for example, Lifton, 1992; Macy, 1992) that people do in fact have a diverse mixture of feelings related to the natural environment, even though they may not always consciously acknowledge or articulate this.

Implications of Results for Clinical Psychology

My analysis and interpretation of the results of this study has implications for the field of clinical psychology, since it suggests that individuals may experience a relationship to nature which is related to other significant aspects of their lives, including emotional, cognitive, and physical responses, interpersonal relationships, existential convictions, and educational, work, and leisure activities.

The results of this research suggest that the individual experience of nature, at least among people who have given this subject some thought, seems to be related to cultural trends as well as to developmental trends and other significant aspects of life. This finding supports arguments made by advocates of social responsibility in the field of psychology (Staub &

Green, 1992) that clinicians must consider how cultural attitudes and values affect the personal experience of clients.

Although the participants in this study are special in that they acknowledged a personal relationship to nature, the cultural effects of the environmental crisis are so widespread that similar effects may exist for a wide range of individuals. In other words, the cultural controversy about environmental issues, over and above the problems themselves, may have a significant psychological impact on individuals in general.

For individuals who may be struggling with feelings of anxiety, conflict, powerlessness or alienation about their relationship to the natural environment, all of which make it difficult to talk about or resolve as an individual, ecopsychological interventions could thus provide a supportive forum in which to express and explore the emotional conflict which threatens to trigger a sense of loss or disconnection.

Clinical psychology is in a unique position to promote individual and collective mental health among people who may be confused or distressed about their relationship to the natural world in the context of the global environmental crisis. By expanding concepts about the interdependence and importance of our relationship to nature, clinical psychology could provide therapeutic consciousness-raising about the full extent of our relationship to nature, from practical issues like the quality of our breathing, to emotional and existential issues about death.

There is controversy about whether individual psychotherapy is an effective solution to human emotional distress, or simply a product of the individualism in Western culture which perpetuates our alienation from

nature and from other human beings (Albee, 1992; Hillman, 1992; Lerner, 1987; Prilleltensky, 1989). I agree that clinical psychologists have a responsibility to address psychological aspects of environmental issues in the public arena, through education and political action (Staub & Green, 1992). I am also an ardent advocate of psychotherapy groups, workshops, or other formal consciousness-raising gatherings which provide emotional support and solidarity among people. Like others (Conn, 1991; Gerber, 1992; Watkins, 1991) who incorporate environmental issues into more conventional clinical work with individuals and groups, however, I believe that it would be helpful to make explicit connections between personal experience and environmental events in this private forum, until supportive social outlets are more available.

This research, in which a small group of middle-aged, middle-class white women living on the east coast of America reported both difficulty and relief in talking about their relationship to nature, suggests that psychotherapy may offer permission and relief for individuals who might otherwise have difficulty acknowledging painful feelings in the context of the environmental crisis in Western culture. Discussions about these issues may very well serve as a source of illuminating insights or emotional connections among significant aspects of individuals' lives, including their thoughts, feelings, physical state, existential beliefs, interpersonal relationships, and worldly activities.

Evaluation of Method

The ways in which my method was both successful and flawed became apparent throughout the process of this research. In hindsight, I will review some of both.

Overall, I thought that the semi-structured qualitative interview was useful in eliciting information about psychological aspects of individuals' experience of nature. However, the interview had a somewhat implicit pull for clinical information without addressing psychotherapy explicitly, so participants' responses to talking about important personal issues and talking about nature may be somewhat confounded, and the implications of results rely heavily on my interpretation.

For the purpose of this small exploratory qualitative study, participant criteria were too loose, and the recruitment strategy too local, to obtain a quantity or diversity of participants which would permit generalizations. However, I believe that this homogeneous group of nine women described a rich mixture of both spontaneous ordinary experience and thoughtful consideration regarding their relationship to nature, which enriches our understanding of the psychological significance of this issue.

Breaking the interview into two structured questions and four follow-up questions had its merits and disadvantages. While I believe it offered participants the opportunity to provide spontaneous information as well as the structure and stimulation needed to discuss a neglected issue, I feel that the questions were contrived. I wonder if a more open-ended phenomenological approach in combination with a variety of probe

questions might have elicited a truer account of the most significant issues for each individual. However heavy-handed, I was generally pleased with the range of information the interview produced; the unsolicited reports of future goals and expectations were especially helpful in suggesting the theme of continuity so relevant to human development and natural cycles.

Final Thoughts and Questions for Consideration

Not surprisingly, this research raises as many questions as it answers. Most importantly, it does suggest that individuals' relationship to nature may be a highly significant aspect of developmental and emotional experience, and that this relationship is influenced by cultural trends, which may be a source of conflict in the context of the contemporary environmental crisis. As a contribution to the growing literature on ecopsychology, therefore, this research provides empirical support for further exploration and recognition of the relationship among individuals, culture, and nature in the field of clinical psychology.

Given the methodological limitations of my study (the selection of participants and the structured interview questions), it would be interesting to explore these issues with a different or bigger group of participants, for example, and/or a different instrument, either more open-ended, more objective, or less dependent on verbal responses (as DeMuth, cited in Berger Gould & DeMuth, 1994, suggested).

Since cultural attitudes toward the environment had such a pervasive influence on various aspects of participants' experience of nature, it would

be helpful to explore the impact of increasing cultural attention toward global environmental issues (including widespread information and controversy) on individuals' relationship to nature. Collective understanding and cooperation does seem to offer the major hope for resolution of our environmental problems, as Dumanoski (1992) argued in her discussion of "bottled water" solutions. It is thus important to examine the dynamics between cultural organizations and personal experience more directly and thoroughly.

The existential significance of the relationship between human beings and the environment as a source of continuity, connection, and change raises questions about individual and collective adaptation in the context of the environmental crisis. What makes some individuals aware of their relationship to nature, while others might not find it to be a significant issue? What are the effects, positive or negative, of talking about one's relationship to nature? On a practical level, will it in fact promote the well-being of individuals and better treatment of the environment?

On a philosophical level, what are the long-range implications of our increasingly global perspective in the context of contemporary environmental and social problems such as pollution, violent crime, and the "breakdown" of family ties, religious affiliation, and community solidarity? For example, how might increased investment in the natural world and the global community affect traditional patterns of bonding such as family, friendships, and religious affiliation? Clinical psychology could be as useful a resource for facilitating adaptive cultural change as it has been for facilitating therapeutic personal change.

It is crucial to acknowledge that awareness of our relationship to nature in the context of the environmental crisis is likely to involve emotional pain, existential turmoil, and worldly struggles, as the participants in this study experienced. However, if their experience of cohesion, continuity, and connection is any indication, it seems well worth the trouble. Meanwhile, the more clinical psychologists elicit and validate individuals' attempts to address the relationship between personal conflict and environmental problems, the easier it will become to talk about what we "know but do not know we know" — but need to know — about ourselves in relation to our natural environment, in order to improve the quality of life on earth.

Through heightened awareness about their personal relationship to nature in various realms of experience as individuals, these women expressed a sense of connection, integrity, and responsibility toward nature and others. Insofar as this individual experience may reflect the possibilities for increasing solidarity among the global community regarding the contemporary environmental crisis, there is a *tiny* bit of evidence that human society as a whole *can* learn, change, and grow into a more mature and adaptive relationship with our natural environment.

APPENDICES

APPENDIX A
RECRUITMENT LETTER

Dear [Colleague]:

I am writing to ask your help in recruiting participants for a qualitative study on how individuals experience their relationship to the natural environment. This research will fulfill a requirement for my doctoral degree in clinical psychology at the Massachusetts School of Professional Psychology.

I am recruiting adults, age 30 years or older, who have spent time considering their relationship to nature. This consideration may have occurred through any sort of vocational or leisure activity, such as reading, meditation, experiential programs, work, education, or recreation, for example.

Participants will be asked to provide brief demographic information about their backgrounds and to answer a few interview questions about their relationship to the natural world. Individual meetings will last for approximately 75 minutes.

I hope to gather information about psychological aspects of the relationship between individuals and the natural environment.

All information will be kept strictly anonymous; any disclosure of results of the study will maintain full anonymity of the participants.

If you know of anyone who might be interested in participating in this study or have any questions about the study, I would appreciate your calling

me. Potential participants may also call me directly or provide a number where I can call them.

Thank you very much for your attention and any referrals you may suggest.

Sincerely,

Karen A. Merkl, Ed.M.
Doctoral Student

APPENDIX B

INITIAL PHONE CONTACT/SCREENING SCRIPT

Hello, this is Karen (Merkl). Thank you for responding to my request for research participants. If you're still interested, I can explain a bit about the project.

I'm interested in finding out about how people experience their relationship with the natural world, a topic I'll ask participants to talk about during an interview which will last about 75 minutes. This research is one of the requirements for my doctoral degree in clinical psychology at the Massachusetts School of Professional Psychology in Boston.

I'm recruiting people who are at least 30 years old and who have spent time considering their relationship to nature. This personal exploration may have occurred through any type of formal or informal activity, such as reading or meditation, recreation, experiential and educational programs, or work, for example.

Participants will provide some brief general background information about themselves (for example, age, education, work, etc.), and then describe personal experiences with nature which they consider important. I will ask about how these experiences are related to other aspects of life. This research does not provide psychotherapy. The interview portion of the meeting will be audiotaped and transcribed, but participants will remain anonymous.

Do you have any questions about the procedure, or should I go on?

Are you interested in participating in this study?

(If not interested): Okay. Thank you for inquiring about the project, Goodbye.

(If interested): Okay. I just need to make sure you're over 30 and have spent time considering your relationship to nature in some formal or informal way. Are those two conditions true for you? (If yes): Great! Let's see if we can find a time and place to meet.

(Once arranged): If you'll spell out your name and address, I'll send a letter to confirm our appointment, along with a copy of the Informed Consent form which I'll ask you to sign when we meet. I'll also send a copy of the Demographic Questionnaire for you to look over and fill out ahead of time, if possible. Please bring these forms with you when we meet.

Do you have any questions you would like to talk about now?

Please feel free to call me at any time between now and the time of our appointment if you have any questions or concerns.

Thanks so much for your interest in my research. I have enjoyed talking to you and look forward to meeting you soon.

APPENDIX C

LETTER OF CONFIRMATION

Dear [participant's name]:

Thank you for agreeing to participate in my research on the relationship between individuals and the natural environment. I hope you will find the experience rewarding.

This is a reminder to confirm our appointment on

DATE: _____

TIME: _____

LOCATION: _____

I am sending along a copy of the Informed Consent form, which I will ask you to sign when we meet, and a copy of the Demographic Questionnaire to look over and fill out before our meeting, if possible.

If you have any questions or concerns about the study between now and our scheduled appointment, please feel free to call me at any time.

Thanks so much for your participation in my research. I look forward to meeting you soon.

Sincerely,

Karen Merkl, Ed.M.
Doctoral Student

APPENDIX D

INFORMED CONSENT FORM

#: _____

I understand that I am being asked to participate in a research project designed to explore how people experience their relationship to nature. I understand that this study is part of the requirements for Karen Merkl to complete her doctoral degree at the Massachusetts School of Professional Psychology in Boston, MA. Material from the study will be used only for that purpose, or for subsequent publication. I understand that only the investigator will have access to the demographic information and the interview tape and transcription, none of which will have my name, and that all material will remain anonymous.

I understand that during a 75-minute individual appointment, I will be asked to provide some general information about my background and to answer interview questions about my personal experience in relation to nature.

I understand that I will not be paid for my participation in this research, and that I may withdraw at any time. I may ask questions at any time, and I should expect help, support, or clarification from the investigator, Karen Merkl, Ed.M. The chair of this research project is Hilary Bender, Ph.D. If I complete the interview, I may request and receive a copy of the results of the study if I wish.

The purpose and procedure of this research project have been explained in enough detail for me to make an informed decision about whether to participate in the interview. I understand the purpose and procedure and agree to participate in the project.

Signature of Subject Date

Signature of Investigator Date

APPENDIX E

DEMOGRAPHIC QUESTIONNAIRE

#: _____

1. Age: _____
2. Sex: F ____ M ____
3. Ethnic/racial background(s) _____
4. Socioeconomic status:

   Working ____ Low Middle ____ Middle ____ Upper Middle ____
5. Religion(s) _____
6. Place of birth _____
7. Environmental setting(s) in which you grew up (check all that apply):

   Urban ____ Suburban ____ Rural ____
8. Setting(s) in which you currently reside (check all that apply):

   Urban ____ Suburban ____ Rural ____
9. Relational status and living situation:

   Live alone: Single ___ Separated ___ Divorced ___ Widowed ___

   Live with partner/spouse ____

   Live with parents, family, or roommate(s) other than partner ____

   Please describe: _____

   Do you live with children? If yes, please list age(s) and relation to you:

   _____

   Do you maintain pets, a garden, houseplants, or other special domestic elements of nature? Please describe: _____

   _____

10. Highest grade of education or degree _____
11. Occupation _____
12. Personal interests/activities _____

_____

13. Please describe the ways in which you have spent time considering your relationship to nature (for example, through reading, meditation, job, discussion, or experiential activities such as outdoor recreation, workshop or class, structured wilderness program, etc.): _____

_____

_____

_____

APPENDIX F

ORIENTING STATEMENT

As you know, I am interested in how people experience their personal relationship to the natural environment. So, I will ask you two general questions which you can take as long as you want to answer. When you have finished your response, I will ask you some follow-up questions. I will not interrupt your answers, respond to your remarks, or ask any other questions unless I don't understand something you've said and need clarification.

APPENDIX G
GENERAL QUESTIONS

Please tell me what you think of in response to the word "nature." This description doesn't need to be a formal definition; just try to outline your concept of nature so that I'll have a better understanding of what you will be going on to talk about later during our interview.

I would like to hear about any experiences related to the natural environment which have been personally significant and have affected your life in a memorable way. These can be either current or historical events, positive or negative, ongoing routines or single episodes, dramatic, disgusting, scary, delightful, simple, ordinary, emotional, or any combination of whatever characteristics seem important to you. Just tell me whatever occurs to you regarding your experience of the natural world which seems personally important.

APPENDIX H
FOLLOW-UP QUESTIONS

Q1: How has this experience — your experience of nature — been important to you?

Q2: How or why has the natural environment and your relationship to nature come to your attention throughout the course of your life?

Q3: Has your relationship to nature changed over the years, from childhood through adolescence and adulthood?

Q4: How is your relationship to nature related to your relationships with family, friends, and other important people in your life?

Q5: How is your relationship to nature related to other aspects of your life, such as school, work, leisure activities, and spiritual or philosophical convictions?

Q6: What's it like to talk about your relationship to nature?

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