FACTORS ASSOCIATED WITH THE DEVELOPMENT OF ENVIRONMENTAL VALUES THROUGH THE WILDERNESS EDUCATION ASSOCIATION PROGRAMS

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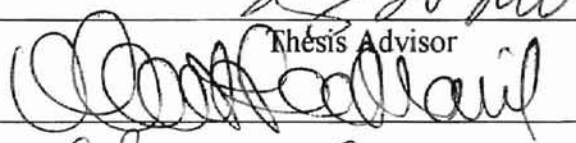

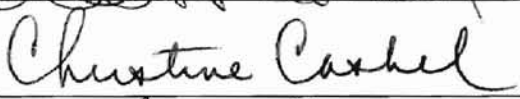

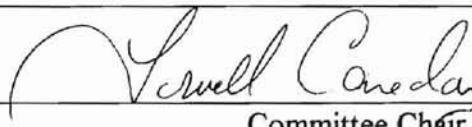

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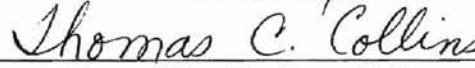

Dean of the Graduate College

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CHAPTER 1: INTRODUCTION

A qualitative pilot study was conducted in 1992 concerning the learning of environmental ethics on Wilderness Education Association courses. This study used the population of course participants who took part in the courses held at Philmont Boy Scout Ranch, Cimarron, New Mexico in 1992. The purpose of the pilot study was to identify participants' concepts and definitions of the environment, environmental ethics, and how elements of the course (learning low-impact camping skills, interactions with the group, and the role of nature) may have taught what is called "environmental ethics." The researcher's interest extended also to how these lessons may have extended to the respondents' daily life after their return home. This pilot study formed the basis of the quantitative research addressed here.

Part of the reason for the interest in this study was the researcher's participation in the course herself. Being told that one aspect of the course was to learn environmental ethics, the researcher's own ideas of what constituted environmental ethics and the perceived results were different. Questions that came to mind were: how far does the term "the environment" extend if one is to be responsible for her or his own environmental impact? How can learning how to cook in the outdoors with minimal impact be sufficient to being environmentally responsible when there are major environmental injustices all over the planet that need attention and concern?

The Wilderness Education Association (WEA) offers a variety of outdoor courses to train individuals in the proper use of backcountry areas. The original course was the 35-day National Standard Program created to certify outdoor leaders. Since the creation of this long course, other shorter courses have been created with an attempt to teach as much as possible in the shorter seven to nine day courses. The training in these shorter courses provides experiential lessons in all aspects of living and hiking safely in the out-of-doors for short periods of time.

One of the WEA's main principles is to minimize impact upon the land. This area of concern developed as a result of Paul Petzoldt's (WEA founder) early recognition of the negative impact even a few humans can inflict upon the land and other backcountry groups.

One of the curriculum objectives of WEA is to teach *environmental ethics.* The *Wilderness Education Association' Affiliate Handbook* (1995) outlines how this will take place in the following statement:

> Students will learn the practical and philosophical underpinnings of utilizing the wild outdoors with minimum impact. This area will be introduced and integrated with other curriculum points such as basic camping skills, cooking, equipment, natural history, and health and sanitation. Participants will be exposed to a basic environmental ethic by practicing skills and techniques that promote minimum impact on the environment. (p. A-3)

In an earlier publication, *The Wilderness Educator: The Wilderness Education Association Curriculum Guide (1991),* David Cockrell of the University of Southern Colorado and WEA board member described outcome goals for learning environmental

ethics. In his chapter "Environmental Ethics and Backcountry Conservation Practices," he states: " . . . appreciation of wild lands will ultimately generalize to an appreciation for all our natural resources and an awareness of the interconnectedness of life forms on the planet" (p.65). In Cockrell's opinion conservation practices taught on the course site are a "microcosm for the environmentally responsible lifestyles participants might strive for continuously after the course ends" (p.65).

Cockrell (1991) based his definition of environmental ethics on Aldo Leopold's land ethic: "A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends to do otherwise" (Leopold, 1949, p. 224-225). The methods of conveying this message include planning and decision-making, instructor modeling, formal classes, opportunity teaching, and thorough debriefing and follow-up. The ultimate goal is the transference of these lessons to other similar natural areas, dissimilar natural areas, and to daily life.

This goal of transference of environmental ethics to daily life is ideal, however, the setting and context is usually radically different than that of a course. Very obvious questions are: 1) Do stated ethics necessarily result in behavior? 2) What is environmentally responsible behavior? 3) What is the role of moral development studies? 4) What is the role of values as a basis of behavior? Many other questions could easily be asked as well.

More recently, collections of works on a new philosophical outlook have been emerging. This "new" perspective, called eco-psychology, looks to restore both the planet *and* the health and well being of individuals. Eco-psychology turns to ecological sciences for examining the "human psyche as an integral part of the web of nature . . . Out of this

rich mixture may arise a new, more effective, more philosophically grounded form of environmental politics" (Brown, 1995, xvi). Eco-psychology calls upon human spirituality, sensitivity, dedication, wholeness and health, as its means of healing.

Need for this Study

The founder of the Wilderness Education Association, Paul Petzoldt, formed this organization to teach the safe and efficient use of supplies and resources during an outdoor adventure as well as consideration for the backcountry surroundings (Petzoldt, 1984). Earlier, Petzoldt was affiliated with such outdoor adventure organizations such as Outward Bound, which concentrated on the personal achievements of individuals and the National Outdoor Leadership School (NOLS) which focused upon the development of outdoor skills. Because of the tremendous popularity for outdoor experiences, Petzoldt became aware for the need for conservative backcountry practices to minimize user impact. With this consideration, the Wilderness Education Association was born with the goal of training and certifying leaders to instruct others in proper backcountry use.

Among the 18 topics covered in the Wilderness Education Association curriculum is that of environmental ethics. Petzoldt's original intent may have been limited to behaviors and practices in the backcountry only, especially in light of the fact that the original name for the organization was to be Wilderness Use Education Association. In that case, a more appropriate name for this curriculum area might be "outdoor ethics." To fulfill the implications of the title of "environmental ethics" a broader application of these principles might be indicated.

During the life of this organization over the past twenty years, public awareness of environmental concerns and issues has grown tremendously. Where the original intent of

the curriculum goal of environmental ethics was understood to be essentially outdoor ethics, the natural progression and expansion of the Wilderness Education Association courses in light of increased environmental concerns may have lead the growth of environmental ethics to beyond the backcountry. This development could be idealistic. Or, it could be a reflection of the need for individuals to be more effective in their role of taking care of the environment whether in the backcountry or the most built environments. The exploration of the characteristics of the Wilderness Education Association courses that foster an individual to become more of an environmental steward can be one more building block so badly needed to improve the overall environment.

Problem Statement

The goal of this research is to examine the methods by which the main components of the WEA Stewardship courses teach what they refer to as environmental ethics. While the discussion in the Literature Review in Chapter 2 probes the meaning of ethics and whether an ethic itself has a necessarily associated behavioral outcome, the goal of this research has been to search out what experiences in the WEA courses may have influenced the participants to develop a better background for making decisions in their daily lives that contribute to the health and integrity of the planet.

Research Questions

The Literature Review suggests that values may be more closely associated with action than do ethics. As a result, the research questions have been rephrased to reflect this consideration. The research questions to guide this research are:

1. a) How does the learning of low-impact camping skills contribute to the development of environmental values?

b) How are these values associated with environmentally responsible behavior?

2. a) How does the experience with the group contribute to the development of environmental values?

   b) How are these values associated with environmentally responsible behavior?

3. a) How do close-to-nature experiences contribute to the development of environmental values?

   b) How are these values associated with environmentally responsible behavior?

Limitations:

The limitations of the study are in three general categories: 1) limitations of the population, 2) limitations of the survey instrument, 3) limitations of the administration of the survey.

1. Population limitations:
   - This research study was limited to the available population of individuals participating in the Wilderness Education Association's Outdoor Stewardship Courses or similar courses of the summer, fall, and winter of 1992-1993, lasting from seven to 14 days in length.
   - The number of respondents was relatively low, 40 out of a population of 88.
   - This population may have a bias toward outdoor recreation. As a result, the generalizability of this research may be limited since the values of outdoor

recreationists may not reflect the values of the American population in general.

- Another bias of this study is that of non-response. Of the 50 percent of individuals who did not return a questionnaire, it is not known if they held similar beliefs as those who did respond.
- This sample included the 25 individuals who participated in the pilot study.
- This study was conducted on Americans who may not be generalizable to other world cultures.

2. Limitations of the research instrument:
   - This research is exploratory and is based upon the research instrument developed by the researcher from a qualitative pilot study. Thus, this instrument can only be tested and refined on the study sample.
   - The large number of items on the research instrument may have affected the respondents' motivation to complete the instrument.
   - The research instrument was limited to the respondents' self-reported perceptions rather than direct measures of variables under study.
3. Limitations Related to Instrument Administration
   - The research instrument was administered in the beginning of the third week of April. Most of the population was affiliated with higher educational institutions and therefore may have had activities related to ending a semester and potentially interfered with completing and returning the survey instrument.

Delimitations

- This study includes a *selection* of behaviors considered to be environmentally responsible.
- Course leaders were not included in this study.

Assumptions

- Subjects' responses on the mail survey are their own and not that of other persons.
- Subjects understood the intended meaning of the survey instrument.

CHAPTER 2: LITERATURE REVIEW

Overview

Evolutionary ecology theories assert that the actions of organisms physically change their environment, just as their environment physically changes them. This statement is supported by such evolutionary ecology theories as coevolution, mimicry, population cycles, natural selection, and many others (Pianka, 1988).

Mostly these theories are thought of in terms of non-human organisms. Applying this concept and its implications to humans *is* important especially because humans have very unique characteristics which in turn affect the environment very differently than do other organisms. Wilkin (1994), a human ecologist, suggests that human values characteristically shape the landscape: "All [human] behavior is purposeful; all productive behavior reflects values. Our landscapes in particular reflect our values, after the fact."

In light of how humans in particular affect the environment, there is a need for a way for humans to develop values and behavior that lessen their impact upon the natural environment. Often, the approach to accomplish this goal is termed environmental ethics.

The above thought is central to all that will be covered in this literature review. The entire question of ethics is a consideration only in human terms. All the other organisms do not have an ethical code; simply a genetic code and strategies to ensure that it gets passed on to the next generation.

A thorough background is presented here to address the environmental ethics that

are taught in the Wilderness Education Association courses. The overall lineup of topics included here are various ethical theories, types of cultures, people in relationship with nature, individuals in relationship with themselves, groups of people, ways of knowing, education methods, ways of behaving, and others. As these are reviewed, a pattern emerges which is a theme of single-ness or narrowness in perspective versus wholeness. Upon this background is built a foundation upon which to consider how the Wilderness Education Association teaches environmental ethics.

At first glance, teaching environmental ethics should be a fairly simple proposition. All one would have to do is to spell out the following material to show its development from its earlier stances to a more "environmentally friendly" position. Of course, the following are presented from a typically Western point-of-view.

Spectra of Ethical Thought in Regard to the Environment

Generally, Western ethical reasoning developed to guide human action in social groups at both the individual and group level. Ethical reasoning is used to make legal judgments in deciding the result of individual acts against another. The judgment of these cases sets precedence in deciding legal cases that follow them.

Ethical thinking is also used to guide the application of economic theory in decisions of the rightness and wrongness in the distribution of wealth. Sometimes the way ethics are applied depends upon those groups or individuals who are in the position to decide the policy as to who will benefit the most.

Egocentrism, Homocentrism, and Ecocentrism

Egocentrism, homocentrism, and ecocentrism are an array of ethical orientations in regard to the environment (Merchant, 1990). Egocentrism is based upon the thinking that

individual good is the highest good and that the result of collective individual actions brings good to society. This theory is reflected in laissez faire economics which since the seventeenth century has been "the guiding ethic of private entrepreneurs and corporations whose primary goal is the maximization of profit from the development of natural resources" (p. 46). The "self" orientation of this philosophy precludes the environment because ecological effects are considered to be external to human economics and therefore "cannot be adjudicated."

Homocentric ethics direct human action such that individual actions should bring the most good to the most people. Merchant (1990) states that land stewardship in the interest of society is the expression of the homocentric ethic applied to the environment. She cites Gifford Pinchot's conservation ethic as an example of wise use, i.e. the greatest good for the greatest number [of people] for the longest time. Like egocentric ethics, the land is still considered a commodity rather than as biota.

The eco-centric ethic is the third paradigm Merchant (1990) examines. In this structure, "the whole environment including inanimate elements, rocks, and minerals along with animate plants and animals, is assigned intrinsic value" (p. 57). This ethical paradigm, first formulated by Aldo Leopold (1949) in his book A Sand County Almanac and Sketches Here and There extends the boundaries of human communities to include all aspects of what constitutes land: not only soil, but rocks, trees, plants, and wildlife.

Merchant (1990) lists five basic "rules" of eco-centric ethics. These include:

1. Everything is connected to everything else. "Ecologically, this has been illustrated by the idea that no part of an ecosystem can be removed without altering the dynamics of the cycle" (p. 59)

2. The whole is greater than the sum of the parts. ". . . Ecological systems experience synergy. . . " (p. 59)
3. Meaning is context dependent. (p. 59)
4. Process has primacy over parts. (p. 59)
5. Humans and nonhuman nature are one. (p. 59)

Nature's Masters and Nature's Children

Another way of presenting similar information would be to consider the Journal of Forestry's Land Ethic Political Test (Gregg, 1992). Coming from the discipline of sociology, this test categorizes the extent to which people are "close to" or "separated from" nature. Gregg cites the development of the belief system through the approaches of experience versus cognitive consideration and the role of language in the conveyance of these beliefs and values. The belief positions of the Gregg's Land Ethic Political Test can be found in Table 1.

TABLE 1:

JOURNAL OF FORESTRY'S LAND ETHIC POLITICAL TEST

LEFT Nature's Children Masters		CENTER		RIGHT Nature's
Navajo Leopold Muir	Behan/multiple value Rolston/ Coufal land ethic	New Forestry New Perspectives	Multiple Use Pinchot Stewards	"New World" colonists
Characteristics of Left: • Human and nature are one • Nature owns itself • Religion is nature-centered • No subject-object split			Characteristics of Right: • Human versus nature • Private ownership of land • Religion is human-centered • Subject-object, Cartesian split	

(Gregg, 1992)

Extreme Cornucopian to Deep Ecologist

A third way to show this material is in terms of the environmental ideologies presented by the resource economists Pearce and Turner (1990). Their spectrum of environmental outlook spans the perspectives of the technocratic position to that of the deep ecologist. The technocratic approach to economy and the environment (labeled "Extreme Cornucopian") is characterized by the unbridled use of natural resources so long as the economy continues to grow. This point-of-view developed out of the day of Adam Smith and laissez-faire economics. The next less extreme level is labeled "Accommodating." The most opposite extreme of Technocratic is that of the "Deep Ecologist" which reflects ecocentric values: all sacrifice must be made to preserve nature. Rigidity is also evident in this position as it is in the other extreme position. The more moderate ecocentric view is called "Communalist." Table 2 describes this range of economic and ecological views.

The above ethical theories provide a background of the various viewpoints of different social groups. If one were to just cover the topic of ethics, this overview should be sufficient. But, because the Wilderness Education Association deems an applied form of ethics as important, there are other components to this ethics puzzle.

Humans, Culture, and the Environment

It is fairly common knowledge that, among all the organisms on earth, humans have unique characteristics. These characteristics influence the kinds of impact humans have upon the natural environment.

The unique characteristics of humans include an ability to create, use, and mentally manipulate symbols (i.e. reason), reference the self, and create culture. These abilities may

TABLE 2:

ENVIRONMENTAL IDEOLOGIES

TECHNOCRATIC		ECOCENTRIC	
Extreme Cornucopian	Accommodating	Communalist	Deep Ecology
Resource exploitative, growth-oriented position	Resource conservationist and 'managerial' position	Resource preservationist position	Extreme preservationist position
Economic growth ethic in material value terms	Infinite substitution is not thought realistic but sustainable growth is a practicable option as long as certain resource management rules (e.g. for renewable resource sustainable yield management) are followed	Pre-emptive macro-environmental constraints on economic growth are required, because of physical and social limits	Minimum 'resource-take socio-economic system (e.g. based on organic agriculture and deindustrialisation)
Maximize Gross National Product			
It is taken as axiomatic that unfettered market mechanisms or central planning (depending on the ruling political ideology) in conjunction with technological innovation will ensure infinite substitution possibilities capable of mitigating resource scarcity		Decentralized socio-economic system is necessary for sustainability	Acceptance of bioethics (i.e. non-conventional ethical thinking which confers moral rights or interests on non-human species)
Instrumental value (i.e. of recognized value to humans) in nature	Instrumental value in nature	Instrumental and intrinsic value in nature (i.e. valuable in its own right regardless of human experience)	Intrinsic value in nature

(Pearce and Turner, 1995, p. 14)

have developed as a result of the inability of humans to run fast, hunt without using tools, or fly; or perhaps because they do not have protective fur, excellent night vision, or other such characteristics as do the other animals. Thus, the mental capability is the human adaptation as shaped by the natural environment.

While the mental tools have been useful in developing methods of protection from the sudden dangers of the natural environment, they do not provide sensory awareness of the dangers that occur slowly such as pollution, overpopulation, depletion of resources, and others (Ornstein and Erhlich, 1989). Perhaps that is also why nature can easily be taken for granted because of its appearance of seeming static.

Use of Symbols

Humans are unique among the earth's organisms because of their highly developed ability to create, use, and mentally manipulate symbols. Social interactionism is a sociological theory that helps explore this ability in humans and its implications. As humans use this symbolic system with themselves and each other, the shared meaning of these symbols cause humans to act as though the symbolic representation actually exists as an entity or physical object. Over time, various events test the meaning of these objects and thus cause changes in their meaning.

Since symbols can seem as though they are real, this quasi reality becomes, in a sense, "environment." In this fashion human can become very disconnected with the natural environment to the extent that the biological world around them or within them is secondary to this quasi reality. Drengson (1980) cites the wisdom of the Chinese philosopher Lao Tzu who stated that humans create trouble when they see themselves outside of the natural order.

The emotions and an awareness of the biological world generally offer a balance to a world that is mostly cognitive. In Western culture, however, the emotional life of individuals ". . . tends to be pathologized or truncated rather than validated, encouraged, and fully felt" (Conn, 1995, p. 163). Western society can be characterized as "autistic" (Metzner, 1995).

> Like autistic children, who do not seem to hear or see, or feel their mother's presence, we have become blind to the psychic presence of the living planet and deaf to its voices and stories, sources that nourished our ancestors in preindustrial societies. (p. 59).

Humans have the ability to reference their own existence as an entity as well and compare their actions with that of the culture. This self-referencing mechanism facilitates the formation and sustainability of social groups by aligning one's actions with the culture.

Individuality comes as the result of biological and experiential factors. The ability for humans to reference the self provides a way for individuals a way to assess their level of conformity to social norms. Unique personalities provide the basis for cultural change. Restrictive cultures work to minimize distinctive outlooks to maintain strict belief structures.

Effect of Culture on Individuals and the Environment

As culture advances and becomes more complex, humans rely less on their biological heritage and more on the surrounding culture to provide for the next generation (Hewitt, 1994). Culture provides a source of safety, services, and amenities.

The human ability to interact through the use of symbols, not just in present realities of finding food, shelter, and water, enables them to distance themselves from the

natural environment. To members of a culture, the culture psychologically *becomes* the environment as referenced through the symbology of that culture (Hewitt, 1994). Starrs (1984) states the relationship between humans and their environment as ". . . more accurately expressed as the relation between man-culture-nature. . . . " (p. 18).

The maintenance of the culture intergenerationally, the rules and values of the culture are carried in the personality of individuals. Early in life, individuals become indoctrinated with cultural values which are stored in the superego part of the personality structure (Hewitt, 1994). These internalized values become the behavioral "operating system" and determine the individual's behavior and actions.

As the collective actions of the individuals result in certain patterns that support the cultural values, these then get characteristically reflected on the landscape. Roszak (1992) gives one example. He refers to the official policy in the eighties of returning people of the Colombian Amazon to their native lands from which industrial interests had driven them. Through their religious practices, these people return the land to be more balanced ecologically. Some anthropologists have referred to this form of land management as "ritually regulated ecosystems." Campbell (1987) gives this reflection:

> The spirit is really the bouquet of life. It is not something breathed into life, it comes out of life. This is one of the glorious things about the mother-goddess religions, where the world is the body of the Goddess, divine in itself, and divinity isn't something ruling over and above a fallen nature. . . . However, our story of the Fall in the Garden sees nature as corrupt; and that myth corrupts the whole world for us. . . . You get a totally different civilization and a totally different way of living according to whether your myth

presents nature as fallen or whether nature is in itself a manifestation of divinity, and the spirit is the revelation of the divinity that is inherent in nature. (p. 99)

Community Types and Ranges of Environmental Thought

The array of environmental ethical thinking parallels the range depicted between organic communities and constructed communities. The ethics that support environmental health are those most aligned with an organic community structure. The ethical theories that neglect environmental ideals are more similar to contemporary community models.

Organic Communities

People of traditional communities are those most likely to incorporate nature and the landscape into their culture. Thus, they most closely portray Leopold's (1949) Land Ethic—that of being a member of the land community, not a conqueror of it. These traditional, or organic communities, provide individuals a sense of place due to close contact with the natural surroundings, and deep roots in the community norms and values (Hewitt, 1994).

An example of an organic community is familiar in its character and traditions: that of Native Americans. Perhaps the intimacy these people had with the unbuilt landscape provided ample experiences with which their symbology was solidly grounded. Cornell (1990) gives an abundant description of the kind of symbology Native American cultures used before modern times. Even though "Native American" refers to thousands of different cultures, the basic symbology was very similar. The earth has been referred to as "mother" since from the earth comes both physical and spiritual nourishment. "The relationship of Native peoples to the earth, their Mother, is a sacred bond with the

creation" (p. 3). In contrast, the sky and heavens have been thought of in masculine terms.

> The sun in particular often personifies masculine power. The relationship between the earth mother and sky father is perceived as a continuous love affair, in which Native peoples are allowed to witness and participate. The power of the sun and the rains that impregnate the earth mother provide the necessities of life for Native peoples. These products of love are sacred, and are to be respected and treated with great care. (p. 3)

> The cultural symbols of the Native peoples have been intimately linked with the natural landscape. The interrelatedness of ecological systems has been understood through experience, rather than scientific study. There has been no separation, "us versus it" mentality. Chief Seattle statement illustrates this perspective: " . . . for the dead are not powerless. Dead—did I say? There is no death. Only a change of worlds!" (Cornell, 1990, p. 5).

The qualities of the land upon which traditional communities live also affect the character of those people. The survival of the Bakhtiari in Persia is wholly dependent upon their sheep. Everything has to be mobile since everyday life is to travel to new pastures each day—the length of time to exhaust the high mountain pastures. The lives of these people are featureless; carrying any surplus is impossible. Likewise, there is no opportunity for innovation or specialization. The only goal is to get to another grazing site the next day. Tradition consists of resignation (Bronowski, 1973).

Where a more modern society may look at traditional communities as being backwards, traditional communities usually live more in balance with nature. They know that nature provides them their living, in a very direct way and they must have respect for that, which is reflected in their cultural symbols. "You find among hunting people all over the world a very intimate, appreciative relationship to the principal food animal. . . . These people thanked the animal. . . . It is thanking a friend for cooperating in a mutual relationship. And if you didn't thank him, the species would become offended." (Campbell, 1988).

Contemporary Communities

The greatest extent of contemporary communities is exemplified in urban centers today. Contemporary society is made up of many interrelated communities, which provide a huge amount of diversity. The down side is that individuals who form groups based upon similar interests find that commonality between and among the group members is limited to that single interest (Hewitt, 1994). This characteristic of urbanized society then contributes to a lack of connectedness with other humans as well as a more distant concept of the environment.

High diversity provides individuals many options such that the development of a self-identity has to be conscious and deliberate. The discontinuous nature of contemporary social networks however contributes to individual vulnerability, since there can be very little structure from which the individual identity is built. In contemporary culture individuals build symbolic meaning through mediated experience, potentially discontinuous relationships, artificially augmented appetites to help fulfill what Pinkola-Estés (1992) calls the starved soul. As a result, individuals are more easily influence by goals of mass media.

Durning (1992) states that there are five distinctly modern factors that play a role in cultivating particularly voracious consumer appetites: social pressures in mass societies, advertising, the shopping culture, various government policies, and the expansion of the mass market. These leaders in popular culture set standards for what it means to be successful. "Successful" individuals must always have the newest clothes, car, technology, house, and all the other basic and non-basic living amenities. Durning (1992) references Kevin Ventrudo, the chief financial officer of *LA Gear* as saying "If you talk about shoe performance, you only need one or two pairs. If you're talking fashion, you're talking endless pairs of shoes" (p. 96). Producing these large numbers of manufactured goods has environmental effects.

Mander (1978) discusses how the capitalistic system operates through the media to change symbolic meaning. The natural environment is converted into an artificial form and people are separated from the sources of survival such that everything then has a monetary value. In other words, the economic tinkerers impose artificial scarcity. As a result, many members of society have jobs that are not fulfilling. They then attempt to find ways to make life more satisfying. The media then can promote products that have high appeal to starving souls.

> Any collective act, from sharing washing machines to car-pooling to riding buses, is less productive to the wider system in the end than everyone functioning separately in nuclear family units and private homes. Isolation maximizes production. Human beings who are satisfied with natural experience, from sexuality to breast feeding to cycles of mood, are not as productive as the not-so-satisfied, who seek vaginal sprays, chemical and

artificial milk, drugs to smooth out emotional ups and downs, and commodities to substitute for experience. (p. 120)

Technocracy to Person-Planetary

Drengson (1980) offers a view of what a contemporary social system might move toward in becoming more in line with environmental and social consideration in his depiction of the contrast of a Technocratic society and the Person-Planetary approach. Drengson's model emphasizes the need for community and human interrelationships as based on Kant: consideration and respect for ecosystems and the biosphere.

From Stated Ethics to Environmental Actions

The adoption of a particular ethical code the discussion of it does not guarantee an individual will act in accordance to it. There can be a big difference between what an individual says and what she or he does—hence the expression "Actions speak louder than words."

Sia, *et al.* (1985) found eight variables that contributed to environmental action: level of environmental sensitivity, perceived knowledge of environmental action strategies perceived skill in using environmental action strategies, psychological sex role classification, individual locus of control group locus of control, and attitude toward pollution. They also found three major behavior predictors: perceived skill in and knowledge of environmental action strategies, and environmental sensitivity.

Their recommendations for environmental education were: 1) train students in environmental action problem-solving , 2) their application in daily life, and 3) engage in experiences that foster environmental sensitivity. These researchers cite Peterson (1982) as operationalizing the variables related to environmental sensitivity which is cultivated

TABLE 3:

TECHNOCRATIC AND PERSON-PLANETARY PARADIGMS

TECHNOCRATIC	PERSON-PLANETARY
Machine metaphor	Organic metaphor
Reductionist	Holistic
Linear	Multidimensional (hierarchical)
Nature as instrumental	Intrinsic value in things
Observer apart from nature	Participator-agent
Consciousness as epiphenomenal	Consciousness irreducible
Dead matter	Living matter-energy
Growth	Development
Quantitative	Qualitative (changes)
Discrete things	Fields and processes
Knowledge as power	Understanding and wisdom
No spiritual dimensions	Spiritual dimensions
Technology as power	Appropriate technology
Having	Being
Machine paradigms	Ecological paradigms
Master of nature from outside	Master of self
External relations	Internal relations
Subject-object separation	Subject-object reciprocity
Design as technique	Design as art
Specialism	Cultivation of the whole person
Training as skills alone	Education balanced
Anthropocentric	Transpersonal
Corporation	Community
Competition	Cooperation
Uniformity	Diversity and symbiosis
Science versus religion	Science and religion interact
Limited perspective	Open possibilities
Captive of its own mythology	Intentional myth

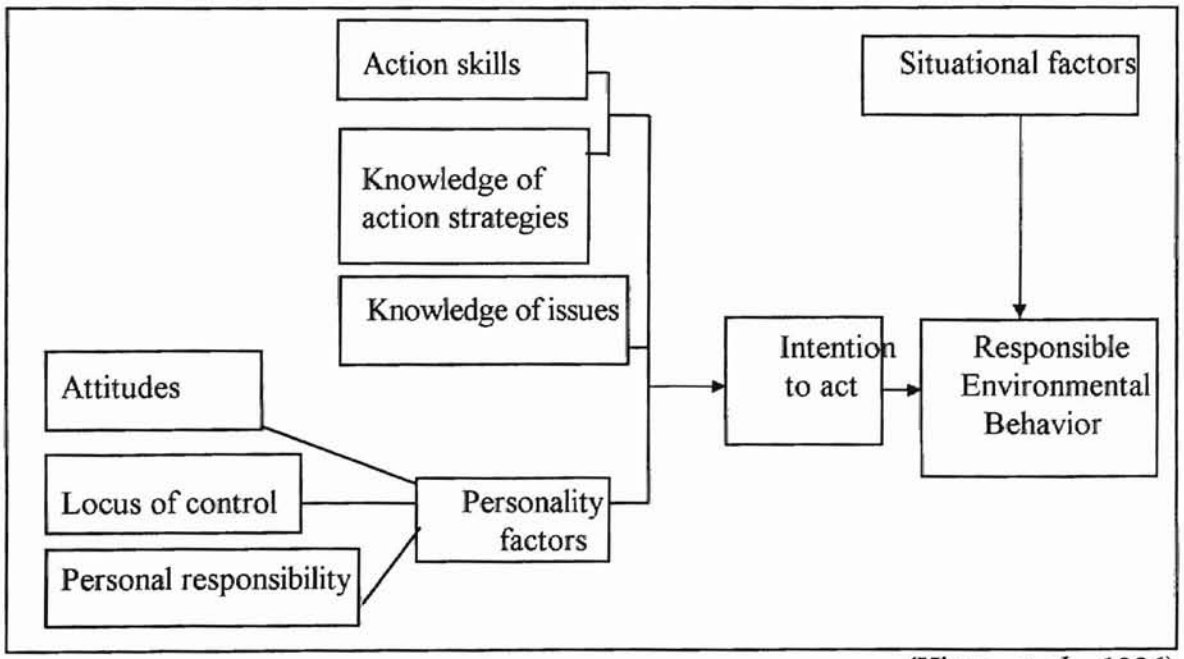
(Starrs, 1984)

through outdoor experiences on a continuous basis, time spent in a pristine environment, and being influenced by positive role models. Iozzi (1989) maintains that having the knowledge of how to implement environmental problem solving techniques does not necessarily mean that this knowledge is connected to any particular motivation or value.

Further research by Hines, *et al* (1986) further examines variables of responsible environmental behavior and their interrelationships. Through a metanalysis of 128 studies they found that variables relating to responsible environmental behavior were knowledge of issues, knowledge of action strategies, locus of control, attitudes, verbal commitment, and an individual's sense of responsibility. A later article by Hungerford and Volk (1990) concentrated on how responsible environmental behavior might be operationalized, using a model for behavior developed by Hines *et al*. They question the traditional thinking that increased knowledge leads to behavior or attitudes that then lead to behavior. They

FIGURE 1:

PROPOSED MODEL OF RESPONSIBLE ENVIRONMENTAL BEHAVIOR



(Hines, *et al.* , 1986)

suggest a host of variables contribute to or counteract responsible environmental behavior, not just one single variable acting in a linear fashion.

Argyris and Schön's (1974) theories of Espoused Theory and Theory-in-Use addresses the problems of a lack of congruity between what individuals say and what they do. Espoused theory of action is an individual's response if asked what she or he would do in a particular situation. The theory-in-use is what actually governs an individual's actions. Describing the difficulty in addressing this topic, they say:

> Integrating thought with action effectively has plagued philosophers, frustrated social scientists, and eluded professional practitioners for years. It is one of the most prevalent and least understood problems of our age. (p. 3)

Machlis (1987) parallels Argyris and Schön (1974) calling the two categories of ethics: proposed ethics and enacted ethics. He relates these to outdoor recreation. Proposed ethics, he says, are: ". . . organized sets of moral principles offered to us by religions and philosophers. . . . The major concern is how people *ought* to conduct their lives; the methods of philosophy are used to determine what is most worthy of human effort" (p. 11).

One must ask what causes behavior that aligns with the stated "code?" Finding more information about this human phenomenon could imply changing the approach WEA takes toward establishing an "environmental ethic."

Actions as a Result of Values

While Kohlberg's Moral Development theory has often been used as a basis for the development of environmental ethics, some researchers believe that it falls very short in this application. Beringer (1990) notes that several educators use Kohlberg's Theory of

Moral Development as a basis for environmental ethics education, but she does not endorse its suitability for this purpose. Beringer cites Gilligan's (1982) research on gender-related moral reasoning. The moral decisions of females tend to be based upon principles of fairness and reciprocity (ethic of care). Males tend to make decisions based upon principles of fairness and reciprocity (ethic of justice). Beringer states:

> . . . Women's moral development is distinct from but parallel to that of men. These findings are intriguing to environmental educators, especially if one argues that the ethic of care may be more suitable than the concept of justice to protect the diversity of life on this planet . . . . (p. 30)

Using these theories and relating them to the environment is one avenue of research that has been explored. Beringer observes, however, that the original intent of these theories did not include their application to environmental concern and actions.

Mergandoller (1989) found four studies that had positive correlations between resistance of situational pressure and high moral reasoning scores. Another study left the former results open to question. This study reported that individuals reasoning at both low and high levels of moral reasoning participated in the same actions of civil disobedience.

After starting with Kohlberg's theory, Mergandoller (1989) later gave it up as he found that moral behavior was *not* acted out at every opportunity. Citing Blasi (1984), he found that moral behavior was a result of a moral identity of an individual—identity being the collective psychological characteristics and constructs that make an individual unique. Rather than a hierarchy of morality to which one might refer, Mergendoller describes the moral self as " . . . prescriptive; it expresses and defines good will, enabling individuals to conceive good behavior, and to experience guilt and remorse. Specific rules for living,

however, are not its mainstay" (p. 131). As an illustration, one of the participants in Mergendoller's study supported his conclusions:

> Bill Towne, the most thoughtful and articulate of the participants, was mindful of the philosophical foundation of pacifism and the ethical issues realized by the Vietnam War. At the same time he was adamant his actions were based not on philosophical analysis but upon his human response to a situation and his sense of moral identity. . . "I don't know how to describe justice, but I know what's not right. I think you have to develop some emotional response to it. It's not a cold, calculating thing." (p. 137)

This point-of-view brings in a deeper basis for the support of actual actions. Beringer's (1990) position is that there is much more than a cognitive component in moral behavior:

> From a psychological perspective, morality is three dimensional, consisting of moral thoughts (cognition), feelings (emotion), and behaviors. The dynamic interplay of the cognitive, affective, and behavioral aspects of morality constitutes moral experience. (p. 29)

Separate Knowing and Connected Knowing

Enns (1993) relates this separate versus wholeness approach in terms of how humans know. She calls it separate knowing and connected knowing. Separate knowing is characterized by critical thinking, objective observation, abstract analysis, and the comprehension of great ideas and is considered in this culture to be essential components of learning, thinking, and conceptualizing within academic institutions. From a Western

historical perspective, separate knowing partly stems from a cultural trend based on Descartes sanctification intellect as the ultimate source of "pure" knowledge (Wojiechowski, 1975). Separate knowing is associated with the form of learning associated with most educational institutions and is "most consistent with many men's experiences in western culture" (Enns, 1993).

Connected knowing is characterized by subjective reactions, active exploration, and consciousness-raising and is less identified with traditional educational methods. This form of learning is "linked with many women's socialization experiences" (p. 7). This perspective would provide for an ecological approach to considering behavior. Table 4 summarizes the two sets of characteristics of connected and separate knowing. Interestingly, these lists have similar characteristics to the Technocratic/Person-Planetary list and the others above.

In a similar fashion, Resnick (1987) in her 1987 Presidential Address to the American Education Research Association compared and contrasted learning effectiveness both inside and outside the classroom. Her reflections are based upon a body of research by cognitive anthropologists, sociologists, and psychologists about the differences of in-school learning and other learning. The areas of focus were: 1) individual cognition in school versus shared cognition outside; 2) pure mentation in school versus tool manipulation outside; 3) generalized learning in school versus situation-specific competencies outside; and, 4) symbol manipulation in school versus contextualized reasoning outside school. Resnick comments:

> Extensive use of tools is only one of the ways that out-of-school thinking engages the physical world more than in-school thinking. Outside

TABLE 4:

SEPARATE AND CONNECTED KNOWING

SEPARATE KNOWING	CONNECTED KNOWING
Objective observation	Subjective responses
Abstract analysis	Personal application
Distinguishing fact from opinion	Awareness and consciousness-raising
Evaluating and critiquing	Empathizing
Debating	Active listening
Individual and competitive learning	Cooperative and collaborative learning
Understanding great ideas	Growth through claiming personal, inner knowledge
Individualistic goals	Mutual goals
Practical, fair application of principles	Sensitivity to individual differences
Empowerment through proving oneself	Empowerment through confirmation
Defining problems accurately, clarifying theoretical models	Applying knowledge to new situations
Teacher as knowledge source	Teacher as role model

(Enns, 1993, p. 8)

school, actions are intimately connected with objects and events; people often use the objects and events directly in their reasoning, without necessarily using symbols to represent them. School learning, by contrast, is mostly symbol-based; indeed, connections to the events and objects symbolized are often lost. (p. 14)

In regard to the research on responsible environmental behavior and what factors have formative effects on its development, Hines, Hungerford, and Tomera (1986) conducted a meta-analysis. The factors they identified were: knowledge of issues, beliefs concerning issues, individual values, individual attitudes, locus of control, environmental sensitivity, knowledge of and skill in the use of environmental action strategies, and ecological concepts.

The integrated nature of experiential education techniques has the potential to bring about grounded learning experiences. Horwood (1991) supports linking the values of deep ecology with experiential education as a teaching technique. He notes the philosophical shift that is inherent in each:

> In the case of deep ecology, it parts from mainstream thought by shifting the centre of its concern from human beings to the biosphere. . . . Deep ecology also goes beyond science as the best, or only, way of knowing. Thought is taken to include feelings and spirituality, the entire range of
>
> mentality. Experiential education, likewise, shifts concern from what teachers can teach from their experiences to what the students could learn from their experiences; in short, a shift in the centre of concern from the

teacher to student. Like deep ecology, experiential education tries to see things whole. (p. 23)

As alluded to above, the movement from separate knowing, or a mostly cognitive form of ethics, to behavior aligned with sensitivity to and consideration of the environment there is the implication of deeper elements that guide action. Conn (1995) cites Kant in reference to actions that come out of beingness. Instead of moral duty to do what is right, individuals then engage in "beautiful acts" rather than "moral acts."

There has to be a way to get to connected knowing such that the reality of experience and the reality of individual unique people and nature are enhanced, acknowledged, and respected. Getting to connected knowing may be in developing connection with the "inner wilderness," or the soul, since that is the essence of what individuals actually can bring back with them to their home environments.

Change Through Individuals

Since one of the goals of the Wilderness Education Association courses is for course participants to carry out their environmental ethics both during and after the courses, additional details must be considered. One is the sense of powerlessness to do something about what seem like monumental problems. Macy (1995) calls this circumstance environmental despair. She notes that in the past the community provided a cushion to make hardship and failures bearable. A lack of community in contemporary cultures further decreases the sense individuals could have to take action.

Alaimo and Doran (1980) found that as students acquired more environmental knowledge, they became more pessimistic about the environment and environmental quality. Schaefer (1992) agrees:

> An undue emphasis on global benefits may discourage rather than reinforce individual action . . . . the global focus can be disheartening because the impact on an individual's lifestyle pales when placed in a global context. Also, the global benefit of individual action is often perceived to be lost in the tragedy of the commons where individuals do not take adequate responsibility for a community resource . . . . the phrase "think globally, act locally" may not by itself convey the correct message for stimulating and maintaining individual responsibility and action. (p. 5)

Social interaction theory states that individuals *can* effect social change and it is through individuals that social change occurs. Belief in their own personal power is the element that individuals need to feel that they can change the system. By retaining their individuality in the face of social pressures they can reframe situations according to their own belief and value system. The resulting social interactions create new symbols or change the meaning of symbols. In this way social change is implemented. Roszak (1992) comments on the great importance of this personal power of the individual and its significance to the recovery of the social system and the environment:

> Industrialization demands massification for its extraordinary power over nature: mass production, mass media, mass marketing. Our complex global economy is built upon millions of small, private acts of psychological surrender, the willingness of people to acquiesce in playing their assigned cogs in the great social machine that encompasses all other machines. They must shape themselves to the prefabricated identities that make efficient coordination possible. If Gaia is to moderate the planet-punishing thrust

of world industrialism, that capacity for self-enslavement must be broken. And the rock on which it founders is self discovery, your conviction and mine that we are each a remarkable, unrepeatable event in the universe, a life shaped around an idea that happens only once and never again. (p. 316-317)

Integrated Approaches

Obviously, there is a need for a more integrated approach gaining a way of being or personal values that support environmental actions. Connection with the "inner wilderness," or the soul, may provide a more solid ground for sound action.

Participatory Ethics

Skolimowski's (1994) Participatory Philosophy takes the concept of ethics to a more integrated level, echoing Mergandoller (1989), Beringer (1990), and Enns (1993). He sees the extent for the need for philosophy only to the extent as to provide a support structure for life. Beyond that, he does not see its importance. He cautions against getting involved in analytical philosophy that is not connected to spirit. Reflecting upon those who put philosophy into practice, he says "In the lives of the illustrious ones, philosophy is *transcended* in favour of living in effortless grace" (p. 355).

The essential component of Skolimowski's (1994) philosophy is the integrated self, built through what he calls positive construction. The key to this process is participation. Avoidance of the rat race, he states, does not contribute to the integrated self. Rather, the ideal image of the integrated self is one that strives for meaningful participation in the social self and the universal self.

Finally, Skolimowski (1994) states that participatory ethics take place on three levels: interpersonal, interspecies, and cosmic. At the interpersonal level, he encourages individuals to recognize the role and bond of participation. With this bond comes empathy, reverence, and responsibility for other persons *and their well being*. "Genuinely to partake in the meaning of our humanness is to act out the bond of empathy with the other" (p. 372).

At the interspecies level, participatory ethics which goes beyond traditional ecological ethics because of the reverential element. First, traditional ecological ethics proposes species egalitarianism, to which Skolimowski (1994) disagrees. He asserts that if there is no reverence, one should not kill another species even if that species is equal. With reverence, all species have regard and consideration.

Skolimowski (1994) further postulates that participatory ethics do not support nor oppose anthropocentrism. He critiques the Deep Ecology movement for its anti-anthropocentristic interests. Citing Leopold's suggestion that we learn to think like a mountain, he points out that this statement still is anthropocentric since thinking like a mountain comes through the agency of the human mind. While in sympathy with what Leopold wanted to say, he disagrees with what Leopold did say:

> Unfortunately, we cannot think like a mountain; nor can we even assume that the mountain would like to *think*; like a mountain, or otherwise. While we ponder the matter in some depth, we realize that the idea of thinking like a mountain sets for us a dreadful anthropocentric trap. If we are careful enough, the most we can say is that we should *mountain* like a mountain,. . .

> The idea that we should mountain like a mountain is an appealing one, except that we don't exactly know what it means! (p. 376)

Skolimowski (1994) also asks who makes the claims for equality on behalf of all the other species since the human predicament is to care. These claims on behalf of the biotic community are filtered through the values and sensitivities of humans: ". . . *all these claims are deeply and profoundly embedded in our anthropocentrism*, whether we care to recognize this or not." While there is much about humanity that is destructive, Skolimowski asserts that the practice of deep participation is to:

> . . . identify with the well being of other beings [such] that. . . empathy becomes an act of reverence. This reverence stemming from the idea of participation becomes an assured ethical path of tolerance, of protection, of preservation, of care and of love. (p. 377)

Skolimowski (1994) does not condemn humans. Instead, he presents the paradox: humans can be sublime as well as despicable.

> Our reverential consciousness is a part of our anthropocentric legacy. We should be proud of it. The very meaning of the term anthropos is intricately complex. For who is the anthropos? A bio-machine? An egotistic, selfish, greedy, parasitic individual? Or the Buddha?. . . . If we articulate our consciousness in the image of the Buddha, we can be proud of the anthropos in us. (p. 377)

Ecopsychology

Ecopsychology is a newly developing branch of psychology that brings together health of the planet and the health of individuals. While initially this may sound strange, a deeper examination shows how this connection is possible. Through this perspective, all the pieces of educating on behalf of the environment all come together.

This powerful perspective opens up an integrated pathway that encompasses health of individuals (physical, mental, emotional, and spiritual) as well as the health of the natural environment and urban-industrial society. Conn (1995) defines ecopsychology and the goals of the Center for Psychology and Social Change at the Harvard Medical School as:

> . . . sustainable, mutually enhancing relationships among humans and between humans and the more-than-human natural world. The goal of the center is a transformation of consciousness in order to integrate body and mind, ecology and psychology, soul and spirit. (p. 160)

As mentioned above, specifying particular acts to "save the earth" is still a case of separate actions. In terms of symbolic interactionism this approach is one that attaches labels to reality instead of connecting with reality itself. Another way of expressing this concept is individuals become "human doings" instead of "human beings." Getting individuals to connect with and experience a sense of being can help them to redefine "environment" from one of the built environment to one that is not only ecological but spiritual as well.

This connection is also inclusive and supportive of the individual as well. With this connection in place, motivation for taking action can come out of the richness of being and

knowing one's place on the planet. This connection comes out of making the journey into the inner wilderness as well as the one without.

> When we are truly willing to step into the looking glass of nature and contact wilderness, we uncover a wisdom much larger than our small everyday selves do. . . . Our relationship with nature is more one of being than having. We are nature; we do not have nature. (Harper, 1995, p. 183)

Development of Ecological Beingness

The eco-psychologists are finding ways to develop a perspective that gets away from contingency actions, separate knowing, and living in the world of symbols. Conn's (1995) motive is "to contribute to the development of an ecologically responsible focus on the self-world connection." Her four-part model consist of developing: awareness (especially of one's place in the larger whole), emotional responsiveness, understanding, and action, which she emphasizes are interrelated and interdependent.

Sewall (1995) identified five perceptual practices in the development of the skills of ecological perception:

1. Learning to attend , i.e. focus one's attention and awareness. Perceiving the relationships in everything. (As with connected knowing, Sewall states that our culture tends to see *things* rather than the relationships. From this perspective comes our insensitivity.
2. Perceptual flexibility.
3. Reperceiving depth. This skill is like communion: in this case it is "communion with the nonhuman natural world and may be

experienced as a spiritual practice. We experience reverence, simply by looking" (p. 213).

4. Redevelopment of the imaginal self. This frees humans to develop a new worldview.

Potential of WEA's Environmental Ethics Goal

The current basis for the Wilderness Education Association to accomplish its goals of teaching individuals environmental ethics is through the course experiences of being close to nature, building of community through group development, and experiential education in the capacity of learning low-impact camping skills. The main theme that continues to repeat in the literature is that of readjusting one's perspective from being the center of the "world" to being a part of something bigger. Leopold (1949) stated that humans need to shift from being a conqueror of the natural community to being a citizen of it. When people get in touch with a sense of spirituality or are immersed in the immensity of nature, they gain a feeling of being "at home" in the universe, so to speak, because of the experience they are a part of something much larger than themselves. The experience of the stages of group process also can give this same level of state-of-being as the group begins to function as a group instead of a collection of individuals thinking only of themselves. Transformation occurs when the individuals begin to be concerned about the group as a whole. All of these areas can conceivably be incorporated and emphasized in a multitude of ways in outdoor programs.

Depth of Experience as Teacher

In terms of social interactionism, the process of going into a very new physical or cultural environment challenges the strength of individuals to give up a familiar symbol

system and to take on another. The Wilderness Education Association does offer this possibility especially through possible experiences of being close to nature and community building. Both Skolimowski (1994) and Kraft (1992) give background as to how significant experiences can support social change.

"S-Experiences"

Skolimowski (1994) uses the term S-experiences (significant experiences) to describe those that change one's being and understanding, which therefore can help to transform the culture through new understandings. In addition he states that deterministic and mechanistic systems, such as science, are contrary to new significant experiences. Ultimately, significant experiences are available to those who let themselves be vulnerable and open:

> Courting an S-experience is a creative act. The creative act requires courage, openness and vulnerability. Those are the very attributes and also preconditions of new experiences. Playing for safety does not lead to new experiences. On the contrary, it leads to stale forms of life— dull, repetitious, and predictable. No risks— no S-experience. (p. 352)

Culture Shock

Kraft (1992) asserts that experiences strengthen an individual's character and moral courage. A redefinition process occurs as while participants interact with the new physical world to get their needs met.

Kraft (1992) refers to Adler's Five Stage Theory of Culture-Shock Development, Oberg's Aspects of Culture Shock, and the Outward Bound Process as three models of the acculturation process. Adler's stages of Culture-Shock Development are contact,

TABLE 5:

ADLER'S FIVE STAGE THEORY OF CULTURE-SHOCK DEVELOPMENT

Stage	Perception	Emotional Range	Behavior
Contact	Differences are intriguing Perceptions are screened and selected	Excitement Stimulation Euphoria Playfulness Discovery	Curiosity Interest Assured Impressionistic
Disintegration	Differences are impactful Contrasted cultural reality cannot be screened out	Confusion Disorientation Loss Apathy	Depression Withdrawal
Reintegration	Differences are rejected	Anger Rage Nervousness Anxiety Frustration	Rebellion Suspicion Rejection Hostility Exclusive Opinionated
Autonomy	Differences and similarities are legitimized	Self-assured Relaxed Warm Empathic	Assured Controlled Independent "Old Hand" Confident
Independence	Similarities are valued and significant	Trust Humor Love Full range of previous emotions	Expressive Creative Actualizing

(Kraft, 1992, p. 13)

disintegration, reintegration, autonomy, and independence. Perceptual changes begin as being intrigued with the differences of the other culture, but as the different culture can no longer be held at a distance, impact is felt which lead to rejection of the differences.

Finally, differences and similarities are legitimized, valued, and significant. Oberg's six components of culture shock are strain, sense of loss and feelings of deprivation, rejection, confusion in role expectations, values, feelings and self-identity; surprise, anxiety, and disgust and indignation upon awareness of cultural differences, and feelings of impotence due to not being able to cope with the new environment.

While these theories mostly apply to other cultures, they could be useful in considering becoming acculturated to the land community as well. In these experiences is the chance for greater reverence—the basis of the development of sensitivity and values.

Expanding Reality Shock

What Kraft (1992) calls "culture shock," Harper (1995) calls "expanding-reality shock" and also notes that one's usual programming has to change to fit the new setting. He states that "It is the shock that reverberates through the whole body-mind system when we suddenly realize that reality may be larger than our familiar scope—and very different. This shift is made every time we enter an internal or external wilderness" (p. 192).

Greenway (1995) and Harper (1995) formalize the transition into the inner and outer wilderness areas with ritual. Harper's most common ritual for entering the wilderness is from Shintoism (two claps and a bow with palms together in front of the face). The ritual is useful to begin the development of reverence for nature. Greenway emphasizes the use of ritual even before the trip begins:

> As much as possible, everything prior to and during a trip would be ritualized—driving to the trailhead, dividing the food, weighing the packs, distributing community equipment, then later every such as ways of walking or

cooking. Special attention would be paid to crossing the boundary into wilderness, often in the form of a river or stream. Within a few days, participants would speak of being "home," and I would know that we had crossed into wilderness psychologically and well as physically. (p. 124)

Best Length of Time

Some critics may suggest that ten days or two weeks is not enough time for any serious change to take place significant enough to be carried beyond the course site, i.e. this amount of time cannot overcome a lifetime of values programming by the dominant culture into specific kinds of stimulus-response patterns through television, family interactions and values. Asserting one's new lessons may be difficult (Simpson, 1985).

The ideal length of time for these experiences to take place has to do with the process of acculturation of the individual and the group with each other as well as to nature. Kraft (1992) mentions the ideal length of time is the amount of time it takes for individuals to go through the stages of culture shock (he also acknowledges that many never do) to emerge as autonomous individuals in the new culture or setting. Harper (1995) concurs with Kraft:

> The optimum length of the stay is that which allows people to achieve a certain feeling of belonging where we have come—a sense that we are not strangers here. For this to happen, there should be enough time for individuals to undergo the "midcourse blues," a period of boredom and depression in which our romanticized idea of being in nature is world down. Once the group has gone through this transition, interesting things begin to happen. We find

that we no longer feel like outsiders or visitors; we feel at home in wild nature. (p. 187)

Ewert (1991) examined the effects of length and type of course upon group development. He found that courses of nine days or longer were no more effective in group development than were shorter courses. However, the longer courses had a longer conflict stage. Ewert asserts that this study provided evidence that experiential education programs can be effective in group development.

Influence of Nature

It is no secret that humans for thousands of years have been going into wilderness (or backcountry) areas to "find themselves," be closer to God, to relieve stress, and to reflect. All of this is work with the soul, the inner self, and the inner wilderness. Since the human concept of "me" does not occur in a vacuum, one's surroundings can affect the way individuals experience their world. In response to his own question "Is there an alternative to scare tactics and guilt trips that will lend ecological necessity both intelligence and passion?" Rozsak (1992) continues:

> There is. It is the concern that arises from shared identity: two lives that become one. Where that identity is experienced deeply, we call it love. More coolly and distantly felt, it is called compassion. This is the link between ourselves and the planet is what that gives us life and is that which we must find. (p. 39)

Individuals often report similar kinds of experiences if they stay in a backcountry area long enough for a reorientation process to take place. The kinds of changes that take

place initially are a greatly heightened sense of awareness, what is also referred to as mindfulness; and an enhancement of the functioning of the five senses (Harper, 1995). Kaplan and Talbot (1983) found three categories of benefits: voluntary attention, increase in self-confidence and a feeling of tranquillity, and increased capacity for contemplation because of the "compatibility among environmental patterns, the individual's inclinations, and the actions required by the environment" (p. 190).

Psychological Benefits of Nature

Kaplan and Talbot's (1983) research focused on the psychological benefits of nature. The first of these is the response of effortless attention to the physical environment or what is also termed "fascination." They reflect that daily stresses increase the amount of effort required for keeping attention focused. Another benefit is that individuals find that they relinquish the need to control their surroundings which increases their experience self-confidence and tranquillity. Thirdly, Kaplan and Talbot state that individuals in nature benefit from the high degree of three components: environmental patterns, the individual's inclinations, and the actions required by the environment.

As a result of new states of awareness, individuals gain a sense of a new spiritual dimension resulting in increased awareness of their place in something (spiritual) that is larger than they are, emphasized by the longer time scale that is apparent. This awareness tends to become "enormously important" (Kaplan and Talbot, 1983, p. 195).

Solo Experiences

A more extreme example of the kind of inner wilderness work and spirituality that can be accomplished in nature comes from Sacred Passage. This organization is dedicated to working with individuals who wish to journey in this fashion; John Milton is the

founder. This program provides a gentler but similar experience to a vision quest, a tradition of some Native American peoples. Head (1990) completed a 10-day program in 1986 which entailed two days of preparation and instruction in active attention and meditation, six days in an isolated remote area essentially in one spot, and two days for processing and re-entry. The characteristics of her experience were highly profound: an intimate knowing of interdependence of natural systems, the vulnerability and integrity of nature, and a development of humility upon numerous realizations about both the inner and outer nature.

Some wilderness/outdoor programs are designed for the rehabilitation of youth and other individuals seeking healing and restoration through adventure experiences. The natural setting is thought to help with keeping individuals on task since there are fewer distractions (Smith, 1984). Sensory awareness is increased due to a much different setting than everyday lives. The adventure experiences are designed to challenge individuals past their area of comfort and familiarity without going too far beyond that as to create an anxiety and stress response. The interactions with the group members helps individuals learn interdependency, understanding and respecting differences, cooperation, and other aspects of group development (Smith). Greenway (1995) questions the use of wilderness for programs whose focus is on "empowerment:"

> Many "empowerment" types of wilderness programs. . . are not experiencing wilderness on its own terms but are using wilderness to develop skills dictated as "useful" or "empowering" by our culture. There is nothing wrong with empowerment or adjustment per se, but if the culture to which we are adjusting is destructive of nature, then we have a problem. This may be yet another example of

exploiting wilderness to serve the voracious needs of a culture increasingly attempting to distance itself from nature. (p. 133)

Brown (1989) critiques the emphasis on "hard skills" instruction as well. He proposes that learning "hard skills" knowledge is associated with left-brain functioning: "logic, reason, analysis, attention to the external world, and linguistic ability" (p. 50). Right brain functioning supports receptiveness, music, symbolic and imaginative functions, and thus are connected to a more spiritual approaches. Brown suggests stimulating a full range of psychological faculties for the greatest benefits. Greenway (1995) synthesizes these considerations quite simply:

> I have found it useful to posit a gradient between the polarity of culture and wilderness—a gradient of the "wilderness effect:—ranging from "none" (non effect) to a complete blowout of one's usual programs for processing reality. Somewhere along this gradient is a transition point, where one's mode of information processing switches from culture-dominated (which in the case of our culture would be dualism-producing) to nature-dominated (which presumably would be something closer to what would be called a "systemic communion"). Thus, this change point along the gradient is the *psychological* wilderness boundary, and it is my perception that some may not cross it. (p. 132)

Solo Experience: Journeying Within

Milton's (1992) program encompasses a very long journey of individuals in what is essentially physically located in one place. Reports of these journeys show an extreme

intimacy with nature. This type of experience may overlook benefits of individuals connecting with a group, which is cited as being an extremely important aspect of these programs (Stringer and McAvoy, 1992; Shapiro, 1995; Greenway, 1995). In addition, connecting with others in a program may help facilitate cultural change upon the return to the urban environment.

The preparations for encouraging a deep wilderness experience essentially is a process of taking away the usual cultural "symbols" and their identities and exposing participants to a new experiences upon which to build a new symbolic structure— one that may include the value of nature at a deeper level. Besides experiences of intimacy with nature, practitioners also advocate the use of ritual which uses more of right brain functioning and promotes the establishment of meanings more deeply into one's psyche (Brown, 1989). Common elements practitioners use include:

- Leave behind cultural "props" to disengage from habitual patterns:
- no watches, journals, books, musical instruments, alcohol, cigarettes, drugs, cameras, writing paper; food is limited to "just enough" (Brown 1989; Head, 1990; Greenway, 1995; Harper, 1995) Experience nature intimately in "alone" time: 92 percent of participants in Greenway's (1995) research of 1,380 people stated "alone" time the most important experience of the trip. Other sources: (Brown 1989; Head, 1990; Milton, 1992; Duston, 1992; Stringer and McAvoy, 1992; Harper, 1995)
- Effective processing experience and preparation for re-entry into culture: lack of time to process experiences cited as an inhibitory factor (Brown 1989; Head, 1990;

Milton, 1992; Stringer and McAvoy, 1992; Greenway, 1995; Harper, 1995; Shapiro, 1995;)

- Use of ritual: Aids in deeper meanings, sets aside culture, focuses attention, brings about perspective of reverence (Adams, 1987; Brown 1989; Head, 1990; Horwood, 1991; Milton, 1992; Greenway, 1995; Harper, 1995)

Adams (1987) states that rituals foster an intimate, caring relationship with one's 'place,' as well as helping develop a sense of community within a group" (p. 36). Horwood (1991) uses celebratory events to "emphasize relationships and kinships. There needs to be sensitive and respectful living in the place, not accidentally, but with deliberate intention to know it in a new way" p. 25. Other sources: (Brown 1989; Head, 1990; Milton, 1992; Greenway, 1995; Harper, 1995)

Group Development/Community Building

One of the most valuable features of outdoor programs is the experience of the group (Duston, 1992; Stringer and McAvoy, 1992; Greenway, 1995; Shapiro, 1995). The group interacts at a number of levels and serves to both teach and be taught by individuals.

Not every collection of individuals necessarily makes up a group. Typically, groups pass through characteristic stages of interactions which influences the group's cohesiveness and behavior as a result. A variety of researchers have formulated differing numbers of stages and generally identified similar characteristics (Bales, 1950; Mills, 1964; Tuckman, 1965; Peck, 1987).

Groups themselves can differ according to their purpose and level of formality. They can be influenced by individuality, leadership, norms, and degree of cohesiveness (White and Bednar, 1986).

Peck (1987) concentrates on group functioning in terms of community development. His formulation of the group development stages and their function is found in Table 6.

Community formation has at least two potential benefits. The first of these is an avenue to overcome the social programming of blatant individualism. The second is the potential for realizing community not only in terms of other humans, but also as a part of an ecological community as well.

Individualism, while a major facet of American character, has its drawbacks. Peck (1989) cites the Frenchman Alexis de Tocqueville's 1835 observations and concerns: while he found this characteristic appealing, he projected that it would lead to fragmentation and isolation if not balanced with other habits. Another critique of

TABLE 6:

PECK'S STAGES OF COMMUNITY MAKING

Name	Description
Pseudo community	Conflict-avoiding (p. 87) which results in oppression of individuality, intimacy, and honesty (p. 89); ignores individual differences through generalizations (p. 89)
Chaos	Differences are recognized and attempts are made to obliterate them (p. 91); fighting over norm selection for group (p. 91); not painless p. 93); better than pretense of pseudocommunity (p. 94).
Emptiness	Most crucial stage: the bridge from chaos to community. Process of emptying of barriers to communication (p. 95). Emotional surrender of group (p. 102).
Community	Quietness and peace (p. 103). Group is capable of full range of emotion. Similar to falling in love (p. 105)

(Peck, 1989)

individualism comes from Bellah, *et al.* (1985) who identify some of the consequences of rampant individualism—isolation, loneliness, and fragmentation of spirit, and social structure.

Peck (1989) differentiates between the individualism that is exclusive of others, i.e., "rugged individualism," and the kind of individualism that *is* connected with community, which he calls "soft individualism." He makes clear that community is inclusive of differences; thus individualism is needed for enrichment and is not suppressed or repressed. Peck also states that another American value, competition, also works against community due to its exclusive nature. Comparatively, community is always inclusive (p. 74).

Knapp (1988) suggests that within community "individual difference is accepted and often celebrated." Other characteristics that support intentional community include rapport, members feeling a sense of power and influence, support for goals and methods, open communication, and shared responsibility to improve the community (p. 4).

Relatedness of Group and Nature Experience as Land Ethic

A number of characteristics of a group moving into community formation as the fourth stage of group development have the potential of supporting the experience of being a part of an ecological community as well. When humans have a meaningful experience with nature, some of the basic characteristics are that the experience brings a realization of the sacred, a knowing of both the softness and the power, a sense of humility with knowing that one is a part of something bigger, interconnectedness, mysteriousness, mystical, and acceptance of all diversity.

Knapp (1988) notes the Native American perspective on community and nature in which "nature meant all things, including people. They did not see people as separate from the rest of the world. Some tribes referred to certain animals as mice-people, elk-people, and buffalo-people" (p. 17). He emphasizes the need for people to make meaningful connections with nature.

These adjectives and descriptions are also those Peck (1989) uses to describe the fourth stage of group development as well. Within community, individuals have to learn to function as members of the group, not just as individuals. With this "soft individualism" humility develops. Individualism is balanced with commitment. There is a sense of caring and being cared for. Tyranny cannot exist because of the contribution of and respect for individual differences. The entire spectrum of emotion is supported and shared and is possible when members are willing to let themselves be vulnerable. When true community emerges from the stage of emptiness, of letting go of the attachment to one's own symbology, i.e., transcendence, something more emerges:

> And there are certain questions about electricity, despite its known physical laws, that even the most advanced electrical engineer cannot answer. That is because electricity is something larger than we are. . . . Community is another such phenomenon. Like electricity, it is profoundly lawful. Yet there remains something about it that is inherently mysterious, miraculous, unfathomable. . . . Community is something more than the sum of its parts, its individual members. What is this "something more?" Even to begin to answer that, we enter a realm that is not so much abstract as

almost mystical. It is a realm where words are never fully suitable and language itself falls short. (p. 59-60)

Integration of Experience

Learning the lessons of regard for inner and outer wilderness through experience outdoor programs is foundational toward the development of a perspective that stimulates energy that heals both people and the planet. The integration of the sacredness experienced through nature, community, and practiced through low-impact camping is essential toward building strength to support future actions.

The concern for "right action" initiated by feelings of needing to comply with external rules is replaced with the ability to consider the "other" (other people, something larger than oneself such as nature, etc.) and to regard the "other" with reverence. Through some of the experiences that outdoor programs can provide, individuals can redefine their symbology of their world as they pass through the stages of "culture shock" and community building. With proper coaching there is the possibly for them to integrate their internal symbology to reflect deeper meanings, regard, and purpose on behalf of the natural systems that ultimately govern the lives of all human and non-human species.

Challenges of Re-entry

Re-entry into the dominant culture, which appears to be relatively unenlightened, can be quite challenging. After just a short time learning a new way of looking at the world and interacting with it, then the return to urban life can be another culture shock. The urban culture may easily replace all the lessons learned.

Most often individuals experience feelings of depression, grief, sadness, within two days of their return (Greenway, 1995). With increased awareness and connection with environmental insights, these is also the possibility of individuals participating in what Macy (1995) describes as environmental despair, if preparations to prevent a downward slide are not taken. In terms of community building, Peck (1989) states:

> For those who have experienced community it can be very lonely to return to a society where there is precious little, if any, community. Thus it is the responsibility of community-building leaders to see to it that people are as well prepared as possible to return from the mountaintop to the narrow valleys still governed and confined by very different rules. No amount of preparation may completely solve the difficulty. . . .

Peck (1989) continues and quotes a chaplain's statement at the conclusion of a five-day community-building workshop of over four hundred people:

> And those people back home are not only going to misunderstand you; they are not even going to want to hear about it. While you have been here they have been keeping the home together, they have been making the money, they have been minding the children, mowing the lawn, and cooking the meals. Instead they are going to want to talk about what they have been doing, the problems that they have had, the sacrifices that they have made. It is important that you be prepared as you leave here to love those people at home. (p. 135)

These factors of transition can be obstacles for the insights and lessons of an outdoor program to be lost—thus partly defeating the purposes of the program. The

culture shock experience can occur once again, but toward the dominant culture. Thus, emphasis upon some model or defined image may be helpful.

Peck (1989) describes such a model: "The individual journey through the stages of spiritual development is also a journey into and out of culture" (p. 202). Similar to the stages of community development, he remarks that the fourth stage of the spiritual journey brings individuals to the point of reaching "the notion of world community and the possibility of either transcending culture or . . . belonging to a planetary culture" (p. 202).

> I continue today no longer to belong anywhere in terms of what is usually thought of as culture. But I am far from being alone. . . . [This is] not a miserable affair, like the poor "man without a country" who was doomed forever to roam the seas in a narrow sailing vessel. To the contrary, we were far more free than most to move throughout the nations of the world, no longer bound by cultural conventions. . . . None of us would go back, even if we could, but we do from time to time experience a certain poignant sadness that, as perpetual pilgrims, we "can't go home again" (p. 203)

Techniques

A number of levels for transition exist from working to ameliorating feelings to development of personal perspective and ultimately to channel one's efforts and energies into actions. Individuals have to have a sense of their own power to be effective: understanding their role in creating societal change is essential.

Retention and Maintenance of Perspective

Retaining perspective upon return may not at first seem possible. A number of current practitioners (Greenway, 1995; Harper, 1995; Shapiro, 1995; Sewall, 1995) as

well as ancient ones recommend practices to continue maintenance of being without becoming lost in the urban setting. Most of these practices put individuals in touch with inner wilderness and one's own relationship to spirit and place.

Greenway (1995) recommends meditation practices, yoga, and movement exercises to bring about the same non-egoic states often experienced in nature. Greenway also found during, and after the courses, dysfunctional behaviors associated with returning to the dominant culture were drastically reduced. Milton (1992) teaches these practices as preparation for solo journeys in nature. Greenway (1995) also recommends group support when possible, and making the transition very slowly, such as taking a few extra days in something like a "halfway house."

Another way to keep perspective is elucidated by Norris (1995) who focuses on how individuals can learn to live fully at home by making it one's sanctuary. Part of this process is that of learning to hear, feel, sense, and see for its own sake, which is the basis of being home. This way of being is analogous with meditative practices and experiencing nature fully, with one's senses being very aware. Learning to attend in every moment is what gives energy and meaning to life such that individuals who cultivate this state of mind do not have so much need to incessantly buy items as a substitute for life.

To live life fully at home, Norris (1995) states the need to understand that sanctuary is *not* refuge, *not* away from, but participation with. This awareness brings considered questions, once one slows down enough to really see how one lives. Norris notes that in a runaway society most people want to "check out" because of the rush and tension they feel. In response, she states that "checking out" is not attending or being life, but "checking in is."

Conn (1995) recommends a more formulated way of going about balance of perspective: development of awareness, emotional responsiveness, understanding, and action. Sewall (1995) developed what she calls "The Skill of Ecological Perception." Again, the first step is learning to attend to the present. The remaining parts of this process are to perceive the relationships between and among all of our culture and nature, developing perceptual flexibility, and reperceiving depth (similar to a state of reverence).

A plethora of essays in *The Dharma Gaia* (Badiner, 1990) is an earlier stage in the emergence of eco-psychology and a spiritual philosophy that has lower detrimental effects upon the earth than does the urban-industrial society. Again, the focus is upon the development of mindfulness. Roberts (1990) states:

> Prominent in the Buddha's teachings is the recognition that sorrow is inherent in the ceaseless change of the human condition. However for the Buddhist, this problem of sorrow is not solved by altering or escaping from the conditions of life. It is to be accomplished by the practice of mindfulness, of deep awareness . . . . Rather than seeking release from the limitations and pain of the phenomenal world, we enter into the deepest rhythms of all natural phenomena, becoming a functional co-creator of the universe. (p. 148)

Action

Again, the result of becoming aware and learning how to maintain this awareness wherever one may be, does not prescribe any certain actions one *must* do in order to be environmentally correct. Actions arise on a number of levels, whichever is the best use of an individual's talents.

Shapiro (1995), a Gestalt therapist and eco-psychologist, takes an applied approach to make the person-nature connection real. Rozsak (1995) reflects that this is a case of practicing reciprocity, which: ". . . is integral to the rituals and customs of all native peoples, but it runs directly counter to notions of private ownership of the land and natural resources" (p. 224). Shapiro directs people to get involved in restoration projects, of which he believes may be as much or more healing than wilderness journeys, without the accompanying depression that follows upon return to "normal" life. He sees restoration projects as having cultural effects as well. The basic practice underlying the restoration he directs is that of (again) learning to attend to one's actions, breathing, and the world around her or him. He teaches learning how to live in a relational way instead of the usual compartmentalized way (similar to connected versus separate knowing). He overlays the restoration of nature with the restoration of individuals.

> Each time we embrace our fragments *and* our integrity . . . we are helping to reweave the tattered fabric of our souls. Each time we open to the quality of our present connection, we become bridges between cultures and between species, between a rootless, reckless society and one that lives by cycles that nurture and abide. (p. 238 - 239)

Conclusion

This literature review has covered a great deal of territory pertaining to the teaching of environmental ethics and encouraging their associated behaviors after the Wilderness Education Association courses. As a result, main features suggest that perhaps the term environmental ethics is a misnomer to the actual desired goal, since ethics as we know them in Western culture is something that should be done but is not

necessarily acted upon. Even a recounting of specific kinds of behaviors can characteristically come out of Western approaches—the cultural trends of individual independence and separateness; ways of knowing in a separate fashion rather than connected knowing; ways of staying in a symbolic world with no recognized connection to the natural environment.

Ultimately and simply put, the person who is acting out of her or his environmental values *is* one as described by Leopold (1949); one that is a citizen of the land community rather than one who takes a stance if being a conqueror of it. But the world today cannot be put into such simplistic terms, since the Western culture supports and shapes its members to have a "conquering" or dominating point-of-view—if not of nature directly, but of all that is presented to them on a daily basis.

As shown in the work of building community (Peck, 1989), or contact with nature (Kaplan & Talbot, 1983), or the eco-psychologists, the state of mind achieved when connection to the inner and the outer wilderness is one that is not fixated on cognitive maneuvering, but rather in one in which the these mental meanderings are stilled. This state of mind is also achieved and experienced through spiritual states of being such as through meditation and other means. This also is the state of being that can be carried away from the course and practiced in any type of environment and one that nourishes not only the post-course participant but also the surrounding community. Granted, environmentally responsible behavior in terms of more action taking may take further consideration and definition, but the underlying foundation for acting out the behavior may reside in the connection humans have when their minds and spirits have the stillness and connection with their biological and spiritual natures.

CHAPTER III: METHODS AND PROCEDURES

Overview

The purpose of this exploratory study was to look for key characteristics of the Wilderness Education Association's program experiences associated with environmentally responsible behavior. While WEA states this goal in terms of environmental ethics, the main goal is for participants to act on what they learn from the course whether in similar settings in the outdoors, dissimilar settings (desert versus a forested area), or at home where there may be huge differences in surroundings and group support.

Questionnaire Development

The main point of the literature review was that learning what WEA call ethics is better served in terms of environmental values development because values are more integral to the part of an individual which governs actions. In Skolimowski's (1994) words, it is participatory ethics; another term is ecopsychology. In short, the basis for action bypasses the talk about what *should* be done.

Upon this basis is the recognition that lessons taught have to go deep enough to effect change, i.e. change the meanings individuals have of their everyday lives and actions and how they define themselves. The three possible areas the researcher decided to examine were experiences with nature, the group, and learning low-impact camping methods.

In nature individuals have reported heightened awareness and enhancement of the functioning of the senses (Harper, 1995); voluntary attention, increased self-confidence, tranquillity, and capacity for contemplation (Kaplan and Talbot, 1983). Group process can bring people to a similar level of awareness as the group progresses through the typical four stages to where the group reaches high functionality (Peck, 1989). Part of the process of learning low-impact camping skills is to bring about a change in focus from being centered mostly on self to that of becoming aware of and considerate of that which is outside of oneself. This can be accomplished through meeting daily needs in the backcountry while managing the methods in which these tasks are accomplished such that harm to landscape is minimized.

The questionnaire was developed from the qualitative data gathered in the pilot study (Duston, 1992), a review of which can be found in Appendix A. In this study, several themes emerged: the significance of beauty as a motivator for changing one's behavior, the role of informal communication as to how learning took place, enthusiasm for low-impact camping methods, experiential learning, the role of group norms in the learning process for reinforcement, the experience of group process stages, increased sensitivity to nature, the desire to have solo experiences in nature, and others.

As a result of the pilot study, a quantitative questionnaire was developed from the qualitative data. Denzin (1978) recommends using more than one method for investigating a research question for increased accuracy and suggests that at least two out of three methods should yield similar results. Ideally, three methods are used for triangulation: two qualitative and one quantitative, however, this study actually utilizes only two methods: the in-depth interviews and the quantitative survey. The researcher

did gain insight into the WEA course through her participation in a course, but it cannot officially be considered a research method because it was not prescribed, planned, and executed as a research technique.

Qualitative Data

One of the main benefits of qualitative studies in general is that subtlety, underlying themes, and other topics can emerge which might not otherwise be brought to light. The downside of this method is the huge amount of data that can be gathered since it can become quite unwieldy, which puts completion of a project more at risk.

One example of additional unexpected insights coming forth in this research was that pertaining to group experiences. The researcher's first thought was that interpretations of "group experience" would be easily fit into the heading "group development" and a discussion of the four foundational stages found in the literature. What was uncovered, however, was how informal interactions of the group were elemental in conveying information about how to put low-impact camping skills into practice as well as environmental values.

Question Design

As a result of the in-depth interviews, the researcher designed several questions to address some of the issues that emerged. Some of the questions were nearly direct quotations from what individuals stated about their course experiences.

The research literature was also consulted to find supporting guidelines for the development of the survey items. Sia's (1984) work yielded themes concerning consumerism, physical intervention, persuasion, legal action, and political action. Items

Sia used for support of these actions were used in the questionnaire, but not in the final data analysis because of the limited pool of responses.

The work of Hungerford and Volk's (1990) work on the predictors of environmentally responsible behavior seemed more useful than that of Sia. Their variables seemed more foundational toward developing or having a particular outlook that would be conducive to environmentally-conscious decisions in everyday life, rather than a list of "right" behaviors in which some that are beneficial are not included on the list or the list is misinterpreted such that individuals do not do the environment good when engaging in them (such as using more gasoline driving to a recycling drop-off area than the recycling itself warrants).

Question Development

As found in the Problem Statement in Chapter 1, the focus of this research is to find the characteristics of the experiences on the WEA outdoor courses that may influence an individual to make environmentally conscious decisions and actions in her or his everyday life.

Scoring

The scoring system of the first section of the instrument was a Likert-like scale of five levels of agreement: the poles ranged from strongly disagree to strongly agree. The second section had seven possible descriptive items from which the respondents could choose to best indicate their behavior as a result of the WEA course. The range of these items were from a positive behavior such as taking action for the first time or having reinforcement or increase of environmental action activities to a decrease or cessation of activity as a result of the course.

The Physical Development of Instrument

Appearance, economy, and efficiency influenced the physical development of the survey booklet. This booklet consisted of three sheets of 8 ½ by 11 inch sheets of white paper folded in half to create a booklet 4.25 inches wide by 5.5 inches tall. The cover design consisted of a picture of a tent and a campfire. The title, "A Survey of Environmental Ethics in Selected Wilderness Education Association: Courses of 1992-93" was located above the picture. Below the picture was the identification of the researcher. (A copy of the instrument is provided in Appendix A).

An additional sheet of paper, turquoise blue in color, was attached in the same way as the cover. This outer cover acted as the mailer to the respondent. A rectangular outline to the left of the respondent's address enclosed a statement to the respondent. In this statement the booklet's contents were described and an appeal was made for participation. Instructions directed the respondent to remove the blue outside cover upon completion of the survey.

This action then revealed the actual survey cover. The back of this survey cover became the return mailer since it was printed with the researcher's address and a first-class postage stamp was attached. The respondent was also directed to use the enclosed adhesive tabs to secure the mailer. These tabs were taped inside the survey booklet at the end of the questionnaire. The use of these outside covers as the mailers cut down on the weight of the survey, which conserved on the cost of envelopes and postage.

Coding

Code numbers were written in green ink on the lower left corner of the inside of the back cover. The code number was recoded using corresponding letters: A = 1, B = 2,

etc. Zero was indicated with the letter "O." Coding is often used by researchers to manage second notices requesting responses. This researcher's experience has been that some respondents destroy number coding. This system was used to ameliorate this potential problem since the codes appeared to be anachronism or words.

Title Page

The title page presented the introduction to the survey instrument in the form of a letter to the respondent. The researcher signed it in green ink to help to personalize the survey. Following standard survey cover letter convention, the cover letter introduced the survey, appealed for participation in order to increase the knowledge base concerning environmental ethics and outdoor leadership training. The respondent was assured about confidentiality, informed about time the survey required, and given appreciation.

Instrument Administration.

A panel of experts, five former participants of WEA courses as students and/or leaders, critiqued the survey instrument before it was distributed to the target population. This action was taken in lieu of a pilot test of the instrument itself due to the limited number of available individuals who could participate in a test run of the instrument.

Upon approval by the Internal Review Board of Oklahoma State University, the survey was distributed to a population of 88 potential respondents. A request was submitted to several WEA board members to obtain the names, addresses, and phone numbers of potential respondents who had participated in courses during the summer, fall, and winter of 1992 and 1993. The original pool of participants consisted of a variety of courses and age groups. Courses in which the participants were high school students under the age of 18 were not considered due to the need to get special authorization to

administer the questionnaire to minors (or in the case of the pilot study, interview minors). This decision eliminated 71 potential respondents.

After the final decision on an appropriate population, 88 potential respondents remained. In order to get a large enough pool of possible respondents, more variation in the types of courses was allowed. Course lengths ranged from seven to 14 days. The content of the courses were similar; variations included actual class time for two months prior to going into the backcountry (13 participants), and a seven-day Pro course (seven participants) made up of individuals who had already been on one WEA course.

Data Analysis

While the response rate was fairly good (50 percent), the actual number of questionnaire respondents was too low to conduct a regular factor analysis on the data. This condition on the research required a creative approach to working with the data.

Since this research was exploratory, many of the questionnaire questions were used for gaining viable information, but they had not been tested for their efficiency in doing so. As a result, a correlation matrix was administered on the data to determine which items were indeed viable and which were not. At first, any item that had a correlation of .5 or greater was considered for further analysis, but the high volume of data necessitated an even higher level of grading. Using .55 as the minimum correlation level yielded a workable group of items.

These items were then assigned to possible factor groups pertaining to the interests of this research. This process of assigning the items to the groups was based on insight gained in the pilot study (Duston, 1992) and the researcher's participation in a Wilderness Education Association Stewardship course. Since some items never got past the

correlation matrix, additional processing was necessary. This activity entailed both a sense of intuition on the part of the researcher as well as many iterations of testing the groups through additional factorings. The groups were developed out of the items that tended to have the most affinity for each other in addition to the consideration given to whether the items in a group made practical sense. Some items tended to "fit" in many groups (as interpreted by their loading within the group as well as their effect upon the reliability). In these cases, a "place" for these items was determined by the best fit as well as their contribution to an overall meaning of the factor group. Items that did not "fit" were like renegades in the factor analysis processes—usually were single items that sifted out of one or two main groups that were cohesive. The determination of the meaning of the groups required a certain amount of intuitive work as well.

No more than seven items were allowed in any one group to accommodate the usefulness of the limited data available. After factor analyzing these groups a determination was made according to the results if these groups cohesively targeted a particular research concern. In the cases where items did not "fit," the data groups were examined to see if there would be a better fit of an item with another group either by conjecture or through the use once again of a correlation function.

As the groups of items became more stable, a Cronbach's reliability test was then conducted to affirm this stability, if any. At this point, these item groups were assigned to a specific label so that the separate items together became a particular identity. From these clustered secondary groups, a secondary factoring was completed to determine the overall cohesiveness of these secondary items.

One large group of items was eliminated because of low correlation with the other items and the limitations of the research methods, i.e., this research design was not set up to show cause and effect. These items were developed from the work of Sia (1984) who proposed a set of behaviors that were considered environmentally responsible, and like other such lists there were limitations as to what could be considered environmentally responsible behavior.

Factor Groups

The individual factor groups were made up as a result of a combination of looking at their numerical correlations and their meaningfulness as a group. For example, two items may have a very good correlation, but not have a cohesive meaning in terms of this study when together. Adjusting the arrangements of items in each group came as a result of examining their initial correlations, their factor scores for these small groups (most of which did not rotate), looking at their reliability, and considering their meaning as a group. Some items could easily fit into several groups; others seemed to have a very specific place. One or two items had some "renegade" characteristics: loners that tended to upset the reliability of other groups. The first of all the groups, the one describing informal communication characteristics, stayed together and remained reliable through all the adjustments. Ultimately, some patterns finally emerged to where making reasonable adjustments to the arrangements did not change the ordering of the secondary factoring to any great degree.

These groups were formed by arranging the individual items according to their meaning and their correlation to one another. Upon finding possible groups, a factor

analysis and a reliability test was run on each group. Then a decision was made as to their soundness as a group, and adjusted accordingly if necessary.

For the secondary analysis, the groups' factor scores were added to make a single value to represent each group of three to five items. These secondary values were then factor analyzed (secondary analysis). The result of this analysis was two main factor groups to which a varimax rotation process was applied.

CHAPTER IV: RESULTS

The goal of this research was to gather quantitative information about the role of learning low-impact camping skills, the group experience, and experience with nature as to how individuals might environmental ethics (i.e. environmental values, participatory ethics, or ecopsychology). Consideration was given to the role of learning low-impact camping skills to bring about a change in focus that is aligned with Leopold's (1949) Land Ethic: from concentration on the wants and desires of self to looking to what is around one's self and responding accordingly.

Group process also contributes to this perceptual orientation: as a group progresses through the typical four stages to where the group reaches high functionality, the group members are no longer thinking only of themselves (Peck, 1989). Close contact with nature also can provide these experiences when individuals begin to get a sense of being part of something bigger than themselves through experiencing the vastness, beauty, power of nature (Duston, 1992). With this background, the research questions became as follows:

1. a) How does the learning of low-impact camping skills contribute to the development of environmental values?

   b) How are these values associated with environmentally responsible behavior?

2. a) How does the experience with the group contribute to the development of environmental values?

   b) How are these values associated with environmentally responsible behavior?

3. a) How do close-to-nature experiences contribute to the development of environmental values?

   b) How are these values associated with environmentally responsible behavior?

Description of Respondents

The sample included 25 individuals who also participated in the pilot study. Of this sample of 40 respondents, there were 21 males and 19 females; the mean age was 26 years. Twenty-three individuals were in the 20 to 25 years of age group.

Occupationally, the group consisted of 23 students; other occupations included recreation manager (3), park ranger (2), clergy (2), outdoor educator (2), professor (1), wilderness instructor (1), sales (1), flight dispatcher (1), outdoor instructor (1), and park supervisor (1). Majors among the students included biology, geology, physical education, land planning, recreation, zoology, engineering, park and recreation, environmental management, and English.

The Individual Factor Groups

Each of these individual factor groups portray a particular aspect of the course experience as related to the development of awareness and consideration of the environment, whether the location is in a relatively pristine area or in the built environment of cities. This connection is a huge mental jump to make, but this exploratory study is for

the purposes of ascertaining possible components that may be associated with the encouragement of this perspective.

Informal Communication

The three items for this first group were drawn from the qualitative data from the pilot study (see Table 7). They focus upon the informal ways participants learned from one another. The first one appeared originally when the researcher asked about what was learned from

the interactions with others in the group. The second item also came about in this way but as a teaching method it is substantiated through studies of modeling appropriate behaviors (Wagstaff, 1988). The third item also arose initially as a part of the pilot study, but Tappan and Brown (1989) also uphold the value of telling about one's own experiences in regard to a particular question or issue as a path toward moral development. Throughout the process of working with the factor groups, these three items held together and remained the strongest of the possible groupings.

TABLE 7:

INFORMAL COMMUNICATION

Item	Factor loading
My respect for the natural environment grew through talking informally with others.	.883
I learned about how to treat natural areas with care by watching other people.	.883
I learned to appreciate the natural environment more by listening to others talk of their love and affection for it.	.858

Reliability (Cronbach's Alpha) = .84

Formal Group Discussions

The basis for developing these items was to ascertain the role of the formal discussions, especially in light of how individuals in the pilot study emphasized the role of informal discussions as a way of gaining knowledge. What perhaps is lacking in these items is *what* made the formal discussions effective or ineffective.

The perceived effectiveness may have been positively influenced by the experiential-oriented low-impact camping lessons given by the course leaders in comparison to the lessons that were more like straight lecture. The educational techniques were not part of this study. Some participants, however, reflected in the pilot study that they did not feel that the formal discussions were effective in getting across a message of how one might carry out what they learned on the course, which was the basis for the fourth item.

Another item was developed along this line to try to help determine a similar perspective to the fourth item. It stated: "A few minutes here and there formally discussing what we could do in our home areas would have helped me do more now." This item did not factor strongly with the other groups. Perhaps the fourth item as a part of this factor group suggests that individuals developed their own sense of how to apply these lessons *along with* what they learned in a formal group. The presence of the last two items does make this group a much stronger component in the secondary factoring process (see Table 8).

TABLE 8:

FORMAL GROUP DISCUSSIONS

Item	Factor loading
My respect for the natural environment increased due to our formal group discussions.	.854
I have more appreciation for the natural environment because of our formal discussions.	.800
We formally talked about how the course site and cities and all the other places in the world were all a part of the total environment of which we were members.	.771
In our formal discussions, we talked about what we could do after we returned home that would help the larger environment.	.672

Reliability (Cronbach's Alpha) = .77

Post-Course Changes in Perception and Sensitivity Development

The combination of the items found in Table 9 show an association of the meaningfulness of the outdoor experience with a sensitivity to nature arising after a return to the built environment. While this group suggests that individuals do have more reason for acting on behalf of the environment as a result of the outdoor experience, it does not necessarily state which components of the outdoor experience were the most significant. The associated items here are a development of sensitivity to nature *after* returning to the home front when the negative conditions of city life offers sharp contrast to the recent outdoor experience (Graber, 1976).

The first item in this group was designed to find out if participants' experience increased the meaningfulness of why they should engage in actions that promote environmental good. This item was designed from statements made in the pilot study to encompass the range of involvement in environmental action before the course.

The second and third items in this group are partly drawn from the work of Graber (1976) who found that the interpretation of the outdoor experiences tend to change four to six weeks after returning to the home setting. Both these items also reflect a reoccurring theme that arose in the pilot study: a sense of magnificence of the beauty of nature and the accompanying sense of its vulnerability.

TABLE 9:

CONTRAST OF NATURE SENSITIVITY WITH BUILT ENVIRONMENT

Item	Factor loading
Since the course, I have more reason for recycling and engaging in other environmentally responsible behaviors.	.907
My appreciation for the beauty of nature has increased since I have come back from the course.	.895
Since the trip, I have become even more aware of the vulnerability of nature as I compare nature with the more human-made areas I am in everyday.	.860

Reliability (Cronbach's Alpha) = .86

Nature Sensitivity Through Low-impact Camping Skills

Learning low-impact camping skills seems the most integrative of all the experiences in the outdoor courses. Most participants interviewed in the pilot study could easily recite a lengthy list of activities in which they learned the "proper" way of carrying out the many daily chores and personal hygiene tasks in the outdoors. These same activities often are taken for granted in a built environment where the non-beneficial results of not being careful with resources and one's actions is not immediately apparent. The experiential element engages the whole person. As individuals psychologically adjust to the natural setting, they move from being a "tourist" to being a "traveler" as Kraft

(1992) suggests, sensitivity to the fragility of nature is part of the process in which meaning and significance is associated with daily activities especially when consequences for non-aware actions are more immediately apparent. The scale items in Table 10 suggest that individuals may extrapolate this experience to the larger global scale.

TABLE 10:

NATURE SENSITIVITY THROUGH LOW-IMPACT CAMPING SKILLS

Item	Factor Loading
I gained or increased my awareness of how my everyday actions impact the global environment through learning low-impact camping methods.	.914
Learning low-impact skills helped me to have greater respect for the natural environment.	.910
Learning low-impact camping skills helped me to appreciate how fragile the natural environment really is.	.881

Reliability (Cronbach's Alpha) = .88

Reciprocating Individual and Group Influences

The collection of items found in Table 11 highlights the role the group played in forming awareness about one's personal impact on the course. This item associates with two other items that show that individuals would carry on their lessons by also working through groups. What this group of items appears to be indicating is that the support from the group helps to build the strength in the individual, or locus of control, such that participants feel they can go back to their everyday built environments or on another venture into the backcountry and assert what they learned on the course.

TABLE 11:

RECIPROCATING INDIVIDUAL AND GROUP INFLUENCES

Items	Factor Loading
Because of what I learned on the course, I am more likely to try to influence my friends to be more environmentally responsible.	.875
Being careful about my personal impact upon the local environment was made easier	.852
If in the future I go camping with friends who were not aware of low-impact methods, I would try to teach them.	.744

Reliability (Cronbach's Alpha) = .64

Metaphoric Transfer

The group of items in Table 12 is made up of components that suggest metaphoric transfer (Cockrell, 1991). Two items were for the purpose of checking whether individuals did make a connection between the land upon which the course took place and their home "turf." Generally these two settings would be vastly different One individual did make the statement that "what we learned was for out there only," thus providing the basis for this particular item. Some of the items illustrating possible modes of environmental action taking correlated with the other items in this group. In addition, the item that focuses on beauty as a motivator also associated with the other items in this group. The suggestion here may be that there is more consideration of the environment in one's daily life as a result of the courses, and beauty is part of what makes that connection and awareness possible.

Importance of Solo Experience

This group of associated items, found in Table 13, suggests that the solo experience is an important part of the outdoor experience, especially in terms of gaining a

TABLE 12:

METAPHORIC TRANSFER

Items	Factor Loading
Since the course, I am more careful about the use of water.	.740
What we were taught was for the outdoors only. It had nothing to do with what we did when we got back.	.682*
Since the course, simplifying my life materially has become important (or continues to be important).	.678
I find it hard to relate what I learned on the course to my home area.	.572*
The beauty of nature is instrumental in my developing a sense of personal responsibility in taking care of the environment in general.	.567

Reliability (Cronbach's Alpha) = .64

better sensitivity to nature. While the group has its role in the outdoor course, the solo experience seems to be a significant factor as well.

Many individuals in the pilot study stated that they did not have much time to just stay quiet and be alone in nature. Individuals in a particular group that did get one hour of time explicitly for the purpose of being with nature reported that this short period was quite important to them. Interestingly, this "assignment" came at a highly conflicted point in the group's development. Having the time to themselves in nature helped several individuals supersede the conflict. After that point, the group moved into the stage that Peck (1987) defines as "community." Perhaps instead of the feeling of group community extending to nature, it was the nature community extending to the group.

* Reversed coding

TABLE 13:

IMPORTANCE OF SOLO EXPERIENCE

Item	Factor loading
On the course, I hardly ever felt close to nature because I was so busy walking and being with the group.	.809
Usually, I can be just as in touch with nature while I am with a group of people as I can when I am by myself.	.797*
I am more likely to be in touch with a sense of sacredness in nature if I am by myself.	.690
I am most likely to notice the details in nature when I am alone.	.656

Reliability (Cronbach's Alpha) = .71

Internalization, Commitment

This group of items follows the topic of the solo experience and focuses on commitment to action in spite of the actions of others, whether anyone else may be watching, or to use what is learned in a future outdoor trip (see Table 14). The first item is written in a negative form to gain agreement through disagreeing (reversed coding was used in the data analysis). This item describes the ultimate of inaction in regard to helping take care of the environment.

As for places where an individual would take action, the second and third items reflect settings similar or somewhat similar to the course site (specific and non-specific transfer). The third item references Leopold's (1949) internalized ethic or "intrinsic code of conduct" (Simpson, 1993). This code of conduct charges individuals to act in accordance with environmental values despite the lack of an audience. The fourth item

TABLE 14:

INTERNALIZATION, COMMITMENT

ITEMS	Factor loading
Since I have been back home, I don't really go out of my way to participate in environmentally responsible behavior.	.800*
I feel a responsibility to practice my low-impact camping skills in future backcountry trips.	.777
If no one were around to watch how I did things, I probably wouldn't bother with low-impact camping methods.	.682
Because of the course, I actively engage in doing things on behalf of the environment, whether or not other around me do the same.	.673

Reliability (Cronbach's Alpha) =.68

introduces the component of internal locus of control such that an individual acts in accordance to her or his values even if those actions are different than those in a common group.

Group and Nature Community

These items (shown in Table 15) were based on Leopold's (1949) perspective of humans as citizens and participants in nature, not conquerors. Apparently, the use of the word "ecological" rang most strongly in the respondents' minds since the item containing that word ranks first in this group. The second and third items were geared toward the group experience only. This scale may indicate the inclusion of the nature community to that experience of community that is found in stage four of group development.

Secondary Factoring

The secondary factoring process yielded two main factor groups. These two groups resulted from factoring the composite scores of the nine scales discussed above.

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* Reversed coding

TABLE 15:

GROUP AND NATURE COMMUNITY

Item	Factor Loading
I felt a sense of community in the group, which extended my awareness to being a part of the ecological community as well.	.819
Toward the end of the course, I felt a sense of harmony with my group.	.766
At some point, everyone became very cooperative.	.753
Being a part of the group as a community helped me experience being a part of the community in nature.	.752

Reliability (Cronbach's Alpha) = .76

The first of these factor loadings was headed by a group that depicts informal ways of learning about the environment, i.e. through informal talking, watching how others did things, and by listening to the stories of the other participants. In descending order, the other topics represented were formal communication, experiential learning of low-impact camping skills, components of meaningfulness, and action taking in the form of influencing of the second factor loading was headed by an item group depicting characteristics of the solo experience. This group causes the greatest drop in reliability of these eight groups. In descending order, the other topics in this second factor were: items of metaphoric transfer, and associating the experience of community in both the group and as a part of the ecological community.

* Reversed coding

TABLE 16:

SECONDARY FACTORING:

LEARNING METHODS AND PERSONALIZATION

Factor Group Name	Learning methods	Personal-ization
Group 1:		
Informal Interactions	.840	.032
Formal Discussions	.781	.393
Nature Sensitivity and Built Environment	.755	.403
Reciprocating Individual and Group Influences	.747	.397
Nature Sensitivity Through Low-Impact Camping Skills	.740	.136
Metaphoric Transfer	.638	.240
Group 2:		
Solo Experience	.009	.893
Internalization/Commitment	.482	.771
Group and Nature Community	.440	.637

Reliability (Cronbach's Alpha) = .89 (All Factors)

CHAPTER V: DISCUSSION

As the goal of this exploratory research was to find characteristics of the Wilderness Education Association (WEA) courses that may be instrumental in the development or reinforcement of an individual's values for the natural environment by which her or his actions are guided. The research questions were stated in the following manner:

1. a) How does the learning of low-impact camping skills contribute to the development of environmental values?

   b) How are these values associated with environmentally responsible behavior?

2. a) How does the experience with the group contribute to the development of environmental values?

   b) How are these values associated with environmentally responsible behavior?

3. a) How do close-to-nature experiences contribute to the development of environmental values?

   b) How are these values associated with environmentally responsible behavior?

The data resulting from these questions has been gathered. The next step is to determine their practicality and applicability for use by the Wilderness Education Association or other applications such as environmental education.

The first six groups appear to be associated with how an individual learns and applies those lessons at the social level, i.e., interaction with others. The informal learning processes would be a place where individuals gain meaning through the interactions of and with others, thus gaining strength in the environmental values because the group is supporting careful action through what they do and the personal accounts they give. There is no pretense (usually) in informal exchange so an element of integrity could be present, thus adding credence to the individual accounts. When an individual watches other people, the careful actions stand to verify the words.

The second group, those items making up formal group discussions, also apparently promotes consideration of adopting environmental values. There could be more need for further research to differentiate the types of formal presentations and the content as to the most effective methods for gaining an increase in environmental values. The formerly cited research in Chapter 2 suggests that straight lecturing is not as effective as something more experiential, such as participating in demonstrations (Resnick, 1987), which parallels the themes mentioned throughout the literature review: separate knowing is not as grounded as connected knowing—the kind of knowing as connected to experiences and being integrated within oneself.

The third group, nature sensitivity and the built environment, is about that experience of the cognitive dissonance upon arriving into everyday life, usually in a built environment. No longer are there large expanses free of cement and asphalt. The bits of

pieces of nature have to be deliberately sought out if conscious contact is to be made. It is no longer in such abundance as during the course where the sounds and smells and textures of the local ecosystem flood the senses. Instead the senses are greeted by the sound of tires moving on pavement, horns, machinery, the buzz even coming from the fluorescent lighting. But, this dissonant period is reported to make people think harder about their course experience and the beauty and vulnerability of nature become more precious in the process.

Low-impact camping skills also contribute to this building of sensitivity to nature (Scale 4: Nature Sensitivity Through Low-Impact Camping) . Perhaps it is empowering to find that even in such a small way, individuals *can* do something to protect the environment. As Schaeffer (1994) and Macy 1995) point out, discouragement about how one can feel like she or he can make a difference can become very difficult when the problems with the global environment seem so overwhelming. Perhaps low-impact camping skills teach action even in a small way. Sometimes just learning to one's own life in order is a big step in minimizing impact even in every day life.

Scale 5 addressed how individuals learned from the group and how they felt able to influence others (Reciprocating Individual and Group Influences). In this sense, the group supported the norms of minimizing impact, thus teaching and reinforcing that element carried by the individual. Because of this experience of support, the individual gained the strength to carry what she or he learned to other social groups after the course.

Scale 6 indicates that there is some metaphoric transfer made by the individual. In this specific question, these responsible environmental behaviors (simplifying life materially and being more careful about the use of water) may not be hugely significant in positive

contributions to the environment, but it does indicate a starting place of the transference of what is learned on the course. Most of all, it perhaps begins to indicate the development of values in that participants would start to consider how they use water at home, etc.

While the former item scales deal with the interactions with other people and what is outside of one's self, scales 7, 8, and 9 are centered more around the more personal intuitive level of experience. In Scale 7, Importance of the Solo Experience, the first item (On the course, I hardly ever felt close to nature because I was so busy walking and being with the group.) suggests that individuals need more time to enjoy and connect with nature. Greenway's (1995) research greatly supports the use of solo time: 92 percent of 1380 people found this to be the most important experience on his courses. Another item of this group touches on the connection with a spiritual aspect in relationship to having "one-on-one" time in nature. These experiences provide individuals time away from cultural programming of any kind, thus giving many people the time to be open to "programming" from nature itself. That kind of "socialization" may be significant in developing a greater value for the environment and the attendant behaviors that speak of this value system.

Internalization and commitment are the theme of Scale 8. The items here speak of more than transferring the lessons from the course site to the home front. These items bring in the sense of duty to act, the responsibility to act, and some inner locus of control in acting considerately in terms of the environment. These items may not (at this point in the research) be tied to a specific course experience, but rather be a result of the cluster of experiences. As stated by Hungerford & Volk (1990), getting behavioral results comes about as a result of many factors, not a simple one-to-one linear relationship.

The goal of Scale 9, Group and Nature Community, was to check whether course participants became aware of their part of the ecological community through their experience of the fourth stage of group process. The fourth stage is what Peck (1989) labels "community," and characterized by quietness, peace, full range of emotion capability by the whole group, and is similar to falling in love. This orientation could be a very positive one should all the components (group goes through the development process) all come together. There is also the possibility that one would have a close to nature experience with similar results in terms of state of being and then bring that experience back to the group. More study needs to be done to find how this kind of experience affects the development of an individual's value system in terms of environmental concern and responsible actions.

Limitations

The main limitation of this study was the low number of respondents to the survey, which limited the methods by which to treat the data. Having a more appropriate number of respondents would have made possible a more traditional factor analysis. Also, since 25 of the 40 respondents were the subjects of the pilot study, the results here would have to be tested further to gain additional validity.

Validity

The validity of this study results from the in-depth interviews of the pilot study (Duston, 1992) upon which the questionnaire for this study was designed. Validity may be increased even further by conducting participant-observation studies and more interviews with participants from more courses.

Generalizability

The generalizability of this study to the overall American populous as a possible research group is probably limited since the sample in this study were mostly people who already love outdoor recreational activities, even though that does not guarantee that this sample is environmentally concerned. Jackson (1986) found that even among outdoor recreational "types," those people involved in consumptive activities (snowmobiling, trail biking, hunting, fishing) did not hold as strong environmental views as did those individuals who engaged in appreciative activities (cross-country skiing, hiking, etc.). He also found that outdoor recreationists held stronger environmental positions about the issues related to those parts of the environment necessary for pursuing their sport.

Personality factors also play a part in finding the extent of the generalizability of this study. Borden and Francis (1978) attempted to identify personality factors as they relate to environmental concern. They gave 530 university students the Maloney, Ward, and Braucht's (1975) Environmental Attitude and Knowledge Test. From this group they selected the 50 lowest and 50 highest scorers and gave them the California Psychological Inventory (Gough, 1957). The largest differences were on nine of the 18 subscales that included responsibility, dominance, capacity for status, and good impression. Additional significant differences were realized on the subscales of sociability, sense of Well-being, communality, achievement via conformance, and intellectual efficiency subscales. Borden and Francis found that the environmentally concerned respondents generally showed overall elevated profiles.

Recommendations for Further Research

This study has produced an abundance of topics that warrant further research. The most pertinent of these include the following:

- The role of the solo experience in the development of environmental values
- The role of the experience of group development and its potential to increase understanding of seeing oneself as part of a community which includes the non-human community as well
- The kinds of experiences that bring about the development of a perspective of being a part of something larger, including the attendant behaviors such as the development of reverence for that which is around oneself
- The kinds of experiences that could bring about an ecological perspective in individuals who have personality factors that do not lend the individual to an ecological perspective
- The most effective formal teaching methods for gaining integration of environmental values and transference
- The characteristics of the transition time back to everyday life how that adjustment plays out in terms of increasing (or decreasing) the deepening of environmental values
- The development of empowerment toward environmental action through learning low-impact camping skills
- The development of empowerment toward promoting environmental value to people in the participant's local communities as a result of the experience of

the group experience (that of realizing supported norms within the group on the course as well as group process)

- The extent to which metaphoric transfer takes place as a result of various teaching methods and experiences

Recommendations for the Wilderness Education Association Courses

A number of recommendations can be made as a result of this research in regards to the goal of the development of environmental values and the appropriate behavioral outcomes. In order for these recommendations to align with the goals of the Wilderness Education Association, there may need to be an examination of the mission of this organization as to whether the main focus is for educating the participants primarily for leadership roles in groups going into the outdoors or if perhaps there is a potential additional mission having to do with environmental values development. In the first case, perhaps what is essentially being taught is outdoor ethics—keeping one's impact minimal upon the site where the course is taking place. In that case, there is little need to be concerned if the lessons carry over to influence consciousness and behavior in the urban areas. The whole question of transference is essentially unnecessary. However, if a greater goal that would more formally encompass this aim were to develop, then these recommendations should be most useful.

- The main goal should be to recognize and emphasize opportunities in which individuals begin to look beyond their own personal "drama" in life and to be concerned with and involved in the systems outside of themselves: the social system of the group, the ecological system with nature. The goal should be to develop an attitude of mindfulness and reverence for what is outside of one's

own person, as well as the self. Learning to appreciate the beauty in one's surroundings and experiences may help to bring about this transformation.

- Take some time for individuals to have a solo experience, "one-on-one" time with nature. Debriefing this experience could include how one might see oneself in terms of the larger picture of being a part of an ecological community.
- Take some time toward the end of the course after the group has reached the fourth stage of group development to discuss how that experience might also be opened up to take in the ecological community as a part of this community experience. This process may also help to develop the attitude of reverence.
- Discuss how one's own home in the city or wherever can have the similar qualities of the experience of the course. This state can be reached through the same development of perspective of reverence and awareness of each moment, and the development of a caring approach to the world. (Caring is perhaps the essential element being learned in low-impact camping methods.) In these activities as well as meditation, can keep the intent of environmental values alive, since the mind and body are more calm and healthier. These attitudes will align with an innately healthy lifestyle, since inner cravings cannot then be as rampant, thus minimizing consumption of material goods.
- Develop and use informal communication methods for learning from and strengthening the values of self and others in terms of integrating environmental concern and sensitivity. An after course extension would be to keep in touch with group members through e-mail, a list serve, or other

electronic means, since this is also an important form of informal communication.

- During the course, use the formal discussion times for talking about how low-impact methods can be extended and meaning in use for after the course. Participants could get very creative and make lists of possibilities (riding a bicycle rather than driving, simplifying their lives materially, etc.).
- Have participants consider how they are getting along materially on the course (usually, the back pack will be as light as possible) and talk about how these experiences are metaphors as to how life can be lived after the course. (Example: how much do I really need to carry with me in life? Where do I store what is meaningful—does it have to be in terms of material goods?)
- Assuming that beauty is a factor that is motivational, time should be taken for finding a place to take in the beauty nature and the other participants in the group have to offer. Perhaps after a period of doing an exercise such as this, the experience could be shared verbally. In addition, as a "take home" reminder, a time for making a mandala of some kind (like a dream catcher, a special rock, etc.) that speaks to the individual of the meaning of her or his experience in learning environmental values on the course. Perhaps the group as a whole could also do this together. The mandala could act as a reminder of these values after the course and could formalize the lessons.

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APPENDIX A:

Quantitative Questionnaire

The table that follows lists the questions that were used in the questionnaire: "A Survey of Environmental Ethics in Selected Wilderness Education Association Courses of 1992-93. The second column contains labels of which questions gained a high enough correlation as to be used in the factor analysis process. The labels indicate which group and the item's position within that group.

A Survey of Environmental Ethics in

Selected Wilderness Education Association Courses of 1992-93.

A Study Conducted in Cooperation with WEA by Teresa Duston-Wikel,

Graduate Student, Oklahoma State University

April 15, 1993

Hello to a fellow WEA course participant!

What do you remember about your Wilderness Education Association course experience? I am working on this study about the environmental ethics part of the WEA curriculum, and would like your particular views of what you learned, how it was taught, etc.

This first part of this study has already included 25 in-depth interviews—some of you have already participated in these (thanks again!). These interviews made up the basis for this survey that I have developed to finish this study.

After approval from the WEA research committee, your name was selected because of your participation in a course that was approximately ten days in length and covered at least the equivalent to the "shake down" Stewardship course. **Since there will be only about 75 respondents, your completing and returning the survey is very important!**

Would you please devote about 20 minutes of your time to think about your WEA experiences and complete this survey? You can help make a difference in future courses!

When you finish with the survey, please tear off the outer cover and affix the "dots" the edges of the booklet to keep it closed. Then, just drop it in the mail. Your responses will be held in strictest confidence.

If you would like a copy of the results, please mark the box on the last page. Your time, interest, and participation are very much appreciated!

Sincerely yours,

Teresa J. Duston-Wikel

Graduate student

Department of Health, Physical Education, and Leisure

Oklahoma State University

PLEASE CHECK WHICH OF THE FOLLOWING WOULD BEST DESCRIBE YOUR CONCEPT OF "ENVIRONMENT":

- ☐ Ideally, the environment is nature untouched by humans.
- ☐ The world I live in: my home, community, my friends, — my world.
- ☐ A total system having as its major component a natural system upon which are imposed the social, political, and economic systems.

PLEASE DO NOT CHANGE YOUR ANSWER!

Please note your agreement or disagreement to the following statements by marking the appropriate box:

SD = Strongly Disagree
D = Disagree
N = Neutral
A = Agree
SA = Strongly Agree

My group was assigned a solo experience in nature.	
Before WEA, I had been by myself in nature very few times, if any.	
We were always watching each other. If somebody dropped a piece of food, we would point it out.	
I am most likely to notice the details in nature when I am alone.	Importance of solo experience (4)
As my appreciation for nature increases, so does my respect for it.	
I am more likely to be in touch with a sense of sacredness in nature if I am by myself.	Importance of solo experience (3)

Because of the course, I actively engage in doing things on behalf of the environment whether or not others around me do the same.	Internalization, commitment (4)
The beauty of nature is instrumental in my developing a sense of personal responsibility in taking care of the environment in general.	Metaphoric transfer (5)
Learning low-impact skills helped me to have greater respect for the natural environment.	Nature sensitivity through low-impact camping skills (2)
My respect for the natural environment increased due to our formal group discussions.	Formal group discussion (1)
My group, as a whole, went through conflict.	
What we were taught was for the outdoors only. It had noting to do with what we did when we got back.	Metaphoric transfer (2)
I find it difficult to carry out environmentally responsible behavior when people around me don't care about it like I do.	
Feeling close to nature makes me more protective of it.	
If no one were around to watch how I did things, I probably wouldn't bother with low-impact camping methods.	Internalization, commitment (3)
I have more appreciation for the natural environment because of our formal discussions.	Formal group discussion (2)
Group reinforcement played a part in my learning to treat the natural environment with care.	
We rarely had an opportunity to be off by ourselves.	
I gained or increased my awareness of how my everyday actions impact the global environment through learning low-impact camping methods.	Nature sensitivity through low-impact camping skills (1)
I felt less able to do anything about the world environment after I got home — it seemed so overwhelming how just one person could make a difference.	

My respect for the natural environment grew through talking informally with others.	Informal communication (1)
I learned about how to treat natural areas with care by watching other people.	Informal communication (2)
The group conflict was resolved while we were still out in the field.	
On the course, I felt close to nature the entire time.	
When I am in a city surrounded by buildings, I do not feel a connection with the environment.	
I believe that community spirit plays a part of maintaining an environmental standard.	
If in the future I go camping with friends who were not aware of low-impact methods, I would try to teach them.	Reciprocating individual and group influences (3)
I learned about the natural environment from one or more group members who were particularly knowledgeable.	
At some point, everyone became very cooperative.	Group and nature community (3)
Usually, I can be just as in touch with nature while I am with a group of people as I can when I am by myself.	Importance of solo experience (2)
I find it hard to relate what I learned on the course to my home area.	
I haven't really changed the way I think about the trip since I have been back.	
If I went camping in an area very different from my WEA course site, I would find out how I should adjust my low-impact camping skills to fit that particular area.	
Seeing wildlife increases my appreciation for nature.	

Since the course, simplifying my life materially has become important (or continues to be important).	Metaphoric transfer (3)
Where I live, I am a member of a group of people who are working on environmental concerns.	
On my own, I made a connection between what I learned on the course and how it applied to my being environmentally responsible at home.	
When I got frustrated with others, I was less likely to care about the effect of my personal actions upon the environment.	
We formally discussed such things as the impact of the manufacture of our clothing, tents, and other equipment on a place in the world which was probably just as beautiful at one time as the pristine setting we were in.	
I find it hard to relate my feelings of respect for the natural environment to the global environment.	Metaphoric transfer (4)
If in the future I go camping with people who do not care about their impact on the local environment, I would try to get them to use low-impact methods.	
Since the course, I have more reason for recycling and engaging in other environmentally responsible behaviors.	Contrast of nature sensitivity with built environment (1)
My appreciation for the beauty of nature has increased since I have come back from the course.	Contrast of nature sensitivity with built environment (2)
I feel the responsibility to practice my low-impact camping skills in future backcountry trips.	Internalization, commitment (1)
Being careful about my personal impact upon the local environment was made easier because most everyone else in the group cared too.	Reciprocating individual and group influences (2)
On the course, I hardly ever felt close to nature because I was so busy walking and being with the group.	Importance of solo experience (1)

Being careful about my personal impact upon the local environment was made easier because most everyone else in the group cared too.	
Because of the course, I feel very empowered to do as much as I could in my own little area of the world to make a difference.	
My interpretation of the trip has changed slowly and gradually since I have been back.	
People have already trashed up the city environment, so one more little piece of trash is not going to hurt.	
I gained or increased my appreciation of how my everyday actions impact the global environment through our formal discussions.	
My appreciation for nature grows because of its beauty.	
A few minutes here and there formally discussing what we could do in our home areas would have helped me do more now.	
Toward the end of the course, I felt a sense of harmony with my group.	Group and nature community (2)
Since the course, I am more careful about the use of water.	Metaphoric transfer (1)
I would have liked to have had more time to experience nature alone without having to do anything else.	
Since the course, I have been quite active and enthusiastic about what I can do about the overall environment.	
Since the trip, I have become even more aware of the vulnerability of nature as I compare nature with the more human-made areas I am in everyday.	Contrast of nature sensitivity with built environment (3)
I learned to appreciate the natural environment more by listening to others talk of their love and affection for it.	Informal communication (3)
I felt a sense of community in the group, which extended my awareness to being a part of the ecological community as well.	Group and nature community (1)
When I feel close to the earth, I get in touch with a sense of continuity, which tends to be missing in modern life.	

Since I have been back home, I don't really go out of my way to participate in environmentally responsible behavior.	Internalization, commitment (1)
Learning low-impact camping skills helped me to appreciate how fragile the natural environment really is.	Nature sensitivity through low-impact camping skills (3)
I felt really small while I was in nature because of the miles and miles of scenery around me.	
I already had a lot of appreciation for the natural environment before I went on the course.	
I think back to those situations when I was corrected whenever I start to do something that could be environmentally harmful.	
Because weather can change my plans when I am in nature, that kind of experience helps me to realize how I am a part of nature.	
The spirituality I experience in nature makes me what to protect nature.	
I would feel better about doing something about the world environment if I had others around me who thought like I did.	
We formally talked about how the course site and cities and all the other places in the world were all a part of the total environment of which we were members.	Formal group discussion (3)
Being a part of the group as a community helped me experience being a part of the community in nature.	Group and nature community (4)
Being close to nature is important to my personal spiritual peace.	
Because of what I learned on the course, I am more likely to try to influence my friends to be more environmentally responsible.	Reciprocating individual and group influences (1)
In our formal discussions, we talked about what we could do after we returned home that would help the larger environment.	Formal group discussion (4)

APPENDIX B:

Institutional Review Board Approval Form

OKLAHOMA STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD
FOR HUMAN SUBJECTS RESEARCH

Date: 04-07-93 **IRB#:** ED-93-079

Proposal Title: TEACHING ENVIRONMENTAL ETHICS THROUGH OUTDOOR ETHICS: CAN IT BE SUCCESSFUL

Principal Investigator(s): Christine Cashel, Teresa J. Duston-Wikel

Reviewed and Processed as: Exempt

Approval Status Recommended by Reviewer(s): Approved

APPROVAL STATUS SUBJECT TO REVIEW BY FULL INSTITUTIONAL REVIEW BOARD AT NEXT MEETING.
APPROVAL STATUS PERIOD VALID FOR ONE CALENDAR YEAR AFTER WHICH A CONTINUATION OR RENEWAL REQUEST IS REQUIRED TO BE SUBMITTED FOR BOARD APPROVAL. ANY MODIFICATIONS TO APPROVED PROJECT MUST ALSO BE SUBMITTED FOR APPROVAL.

Comments, Modifications/Conditions for Approval or Reasons for Deferral or Disapproval are as follows:

Signature: Marcia K. Tilley Date: April 7, 1993
Chair of Institutional Review Board

APPENDIX C:

Pilot Study

The purpose of this study was to ascertain whether students of the Wilderness Education Association Stewardship (WEA) courses develop a personal understanding of environmental ethics as suggested by the teaching guidelines for WEA instructors. In addition, the task was to learn whether the participants applied what they learned to their daily lives after returning from the course.

The population of this study consisted of the 26 participants of the WEA Stewardship courses that took place May 15th through May 24th, 1992 at Philmont Boy Scout Ranch, in Cimarron, New Mexico. The course instructors were not a part of the population of interest.

In-depth interviews were used as a means of finding this information. The interview questions consisted of the following:

1. What in life is most important to you?
2. What comes to mind when you think of the concept of the environment?
3. What aspects, if any, of the instructions or lessons given to you contributed to your learning about the environment while at the course site?
4. Have these lessons helped you build a sense of being a part of a larger environmental community within which all living and non-living things are connected? How?

5. What aspects, if any, of your group's interactions have contributed to your learning about the environment while at the course site?
6. Have these lessons helped you build a sense of being a part of a larger environmental community within which all living and non-living things are connected? How?
7. What aspects, if any, of your being close to nature when at Philmont contributed to your learning about the environment while at the course site?
8. Have these lessons helped you build a sense of being a part of a larger environmental community within which all living and non-living things are connected? How? If not, why not?
9. Has what you learned translated into doing things in a more environmentally conscious way in your daily life now? How? If not, why not?
10. Has your return to your daily life affected your interpretation of what you learned? How? If not, why not?
11. What is your definition of environmental ethics?

Explanation of Questions; Responses

Question One: Ecological Orientation

The first question asked was "What in life is most important to you? The reason for this question was to determine the respondents' predisposition toward being ecologically concerned individuals as considered by Borden (1985) who found that individuals who were highly ecologically concerned were more values oriented than materially oriented as a focus of their life efforts. They found that values-oriented people tend to answer this question in terms such as "happiness," "freedom," or something similar. Materially-oriented people are more likely to cite things such as a new car, boat, house, or other material item. All of this pilot study's participants made statements that would categorize them as being ecologically oriented.

Question Two: Concept of the Environment

This question ("What comes to mind when you think of the concept of the environment?") was posed to learn more about the respondents' perception of what "the environment" is. About half of the group who identified the environment as the interrelated systems between and among living and nonliving things. Descriptive phrases and words were " . . . flora and fauna . . . that together form the chain . . . they are all related," "the earth . . . communities that fit together," "ecology," "eco-systems," with the word "everything" as being the word most repeated throughout these descriptions.

One quarter of the group identified the environment as personal and immediate surroundings with mild but distant recognition of a much larger natural system. The remaining individuals described the environment as a natural setting with no humans touching in any way ("cities are not a part," "people are not a part") distinct separation

between cities and natural areas: "In the city I don't feel like I am part of the environment." Several of these respondents began their description with qualifying statements: "I guess . . . " and "I should . . ." suggesting difficulty with getting a grasp on this larger system within which we all live.

Question Three: Instruction Methods and Lessons

This question was: "What aspects, if any, of the instructions or lessons given to you contributed to your learning about the environment while at the course site? Have these lessons helped you build a sense of being a part of a larger environmental community within which all living and non-living things are connected? How?"

The information that resulted was about specific skills, new awarenesses, and teaching methods. Also, insight was gained about how the environmental perspective of the students prior to the course affected what messages were brought away from the experience.

Skills

The main environmental ethic goal of WEA is to instill the principles of low-impact camping skills so that the participants would adopt those practices and apply them to future camping expeditions. This study shows that this goal was met very well. The students for whom this experience was a new one were often the most able to recite long lists of specific skills learned. These elements included: care in using water resources (proper distance from streams for bathing, how to treat water for drinking, etc.), cooking and cleaning techniques (avoidance of leaving food on the ground, cleaning of dishes without soap using pine cones and dirt with a sterilization process), locating tents to avoid disturbing local ecology, limiting the amount of time one leaves tent in one place, care to

"fluff the grass" after tent use, use of fuel, packing out trash instead of burying it, use of sumps, avoidance of fragrant body lotions, use of "cat-holes" for human waste disposal, building of a fire pit and sump, use of bear bags (a method for protecting equipment and supplies and to prevent wild animals from eating items not native to them), not feeding or leaving food for animals, etc.

The instructors of both groups covered most of these points. However, there were some differences between the two groups. The instructors for the group of fourteen students consisted of two females and one male. One of the women was an instructor in training. They carefully instructed through a demonstration of how to dig a cat-hole and firepit. The male instructor also gave the speech about feminine hygiene and how to pack out the non-biodegradable items. These points were related with a note that this information was important to *both* males and females since either gender could be in outdoor leadership positions in the future and would need to give this information to other outdoor groups.

The instructors of the group of twelve students consisted of two women. This group received verbal instructions on how to dig a cat-hole, but did not mention any methods for taking care of feminine hygiene concerns.

In regard to presenting a deeper ecological perspective, the instructor in training talked about how "things as large as trees and small as blades of grass" can be effected by the neglect of campers. This speech was to impress the ecological effect of where a fire was built. "You don't even want to scar the rock, or burn it because of the living organisms on it. Even when you build a fire on the ground, the soil organisms are killed." An additional example of the establishment of perspective: "The reason for the pit toilet

being a certain distance form a water source introduces how people are a part of a system."

Teaching methods

Respondents remarked upon the teaching techniques used. While somewhat traditional lectures communicated information, the methods cited as most effective overall were demonstration and an experiential approach. Simple verbal instructions given with a demonstration were successful because students were given reasons *why* a technique or procedure was important.

Demonstration and experiential education were techniques cited as excellent teaching methods. "They explained the bathing technique. They were especially good because they started out by the stream, and asked why that might not be a good place, then we all physically moved away from the stream." Another respondent stated " . . . it becomes much more personal when you have the opportunity to experience it . . .We probably covered a lot of material in reality, but not by sitting down and talking about it."

When experiential techniques should have been used, those opportunities when they were not used were also noticed. One respondent from the smaller group, who received only verbal instructions about how to dig a cat-hole, responded from his environmental concern. He thought that if each individual had to actually dig and use a cat-hole at least once, the lesson of human impact might have been more effective.

The effectiveness of the teaching methods were evident in statement made by students such as: "I will go through the trouble instead of taking the easy way out [when camping in the future]," "It reinforced ideas that I had been lazy about employing," "I know how to take care of the environment and not destroy it while I am out there."

Extension of lessons beyond the course site

The respondents had different reactions as to whether the lessons learned on the course helped them to feel that they were a member of the overall environmental community—a knowing of their place in the eco-system. The division in the responses followed the lines of their personal definitions of the environment. Individuals who defined the environment in a very personal way or as a natural setting devoid of any humans, were of the opinion that what was taught in the course was about low-impact camping *only*. They generally felt able to make a specific or non-specific transference of knowledge and skills to other campsites of a similar types of natural settings, and some felt able to consider the peculiarities of other natural settings (deserts, beaches). They did not see the reason these skills could or should transfer to urban or suburban settings. "Everything we did was based upon what we did in the wilderness and it had *nothing* to do with what we did when we got back," "The whole point of the course was to that it was a basic course for going out into the woods . . ." or "I could take what I learned back to the environment I live in— but the two are so different, I find it hard to relate."

The respondents who viewed the environment as interacting ecosystems on their own associated the course lessons with the larger overall environment, based on previous knowledge. Because of the antecedent knowledge, they did make metaphorical transference of what they learned in the field to it being, as one respondent put it, "microcosm of the whole planet." Several of these students pointed out that specific teaching was close to getting to what the overall environment was, but it was not specifically taught. One student said: "I made the connection myself—no matter how small or how large, every living organism is dependent on everything else. The more it is

violated or interrupted, it depends on us and the ecology of the area that you are talking about. It interacts more codependently than people realize." Another student cited a prime opportunity for teaching about the systems view of the ecology of the area, which he felt, was not done:

> On the sixth day, they gave everyone an object (plant material to identify and learn about and then share with the group). They were a really good technique. They didn't just point out what the trees were, but made us find out on our own . . . They didn't, though give us a sense of how things interact with each other . . . They did not deal with the system . . . They could have (if studying systems) introduced not only the Ponderosa pine, but the fungus that lives on it, the seed that arises, then the hummingbird. All of these are integral to the system. If you take out one piece, the cycle disappears. They just introduced little pieces. (Duston, 1992)

Question Four: Effect of the Group

The fourth question considers the effect the group has upon the individual's sensitivity to, awareness and consciousness of the environment. It does so by asking "What aspects, if any, of your group's interactions have contributed to your learning about the environment while at the course site?"

The respondents took "Group interactions" as many different things: group discussions, information exchange group process, and group norms. Information exchanges between group members occurred in a variety of ways: through watching and listening to others, casual talking while involved in other activities such as making meals, and by learning from an informal knowledgeable leader.

Group discussions

Group discussions were the primary format for lecture-type material and for discussing differing points-of-view. Group members felt the freest to air opinions to an audience who may not agree but would give respect to the differing view in this setting. People concerned about environmental issues were able to share their perspectives. In one such discussion, a group member brought out how people only seem to do what is obvious in their response to the environment, but overlook everyday actions:

> That's one thing that bothers me a lot, especially when people act so environmentally conscious and all this and are so green and whatever. They do all these obvious things which we take as pro-environment . . . and they don't ever realize the fact the clothes they got on came form somewhere and do as much damage as all the other things . . . I said just looking around here I see all these tents, and boots, and how that makes me sad in a way because that is not part of this world here, its where it doesn't belong. (Duston, 1992)

Informal information exchange

Other valuable channels of communication for learning about the local environment were through informal exchanges between group members. Day-to-day interactions during meal preparations, in the tent before going to sleep, or preparing to hike out, during hikes and other ways were all methods in which people learned about the environment. Group members who were more knowledgeable about the local environment became informal leaders and authorities and greatly enriched other group members' knowledge base and experience.

Another way people learned from others (information was not technically exchanged, but gleaned from the experience) was by watching and listening to others. This passive method of learning about the environment provided an avenue to people who did not prefer to interact much with others. What became especially important was watching other people with more experience, and watching "how other people valued certain ways of doing things." Alternatively, one participant watched those less experienced and got an appreciation just how uncomfortable the experience was for them. To gain information about the overall environment, one person stated:

> . . . some people had some strong environmental views and talked about them such as clear cutting. For me, I just sat and listened. Up until then I was ignorant about the environmental things. Seeing other people's views enlightened me. They had a lot of good arguments. (Duston, 1992)

Group norms

Many people spoke about the formation of group norms as having an impact upon their behavior at the course site. The groups carried out the low-impact lessons by acting them out with fellow group members. This method of learning environmentally correct behaviors was a strong one.

- Because this group was real aware of doing the right thing, that helped then. I wouldn't want to go camping with people who didn't know about it. That would be really irritating to be around people who threw their stuff on the ground.
- If I had done something harmful, the group would have shown me that I had to do something very different.

- Everybody else was as conscious as you were about trash and using soap. So it's kind of a community or group thing, it made it a little easier. Instead of you being the only one being environmental conscious, everyone was. (Duston, 1992)

Group process

The group process of going through the five stages of group growth did leave an impression on a few individuals as to how the interworkings of the group itself could teach a sense of community. From that experience, these few individuals associated this sense of community with being a part of the natural ecological community as well. These individuals also were part of the group whose "environmental view" (as opposed to worldview) was the wider perspective of interacting ecosystems that included humans.

The experience of community at the group as well as the land community level, however, was not an overall trend amongst all participants. Most did experience community at the group level. This aspect was noted by comments of how individuals were very selfish at first about sharing food and other items. As the group moved into a community stage everyone supported everyone else, all food was in common, as shown in the following examples:

- You begin to realize how trivial so many things are: who get a bigger piece of cake, eats the most cheese, or carries the heavier pack . . . All that seems completely unnecessary when you are out there and the group begins to come together emotionally and psychologically as a group . . . you felt like it was a simultaneous or mutual appreciation for each other and the ecology and the environment surrounding it. (Duston, 1992)

- . . .We made it through the bonding stage the last three days or so, in the sense that it helped with the overall . . . there was harmony within the group . . . we felt more at ease with our surroundings with the environment, more at peace with everything . . . We didn't have to concentrate—or you didn't have all these other people distracting you because you were all sort of together. So you were able to notice the birds and all the different things around you . . . (Duston, 1992)

Question Five: Effect of Close to Nature Experiences

Since nature is central and integral to this experience, the obvious question was to consider the effect of nature upon the participants learning about the environment. The inquiry was as follows: "What aspects, if any, of your being close to nature contributed to your learning about the environment while at the course site? Have these lessons helped you build a sense of being a part of a larger environmental community within which all living and non-living things are connected? How?"

The participants of this course talked about their experiences with nature in many descriptive terms. Those terms that were most common were beautiful, harmony, peaceful, quiet, clean, fresh, pretty, vast, enthralling, magnitude, and massive. The beauty of nature was mentioned several times as an aspect that caused individuals to rethink their actions. In some cases it brought about a reason to change behaviors upon returning home: "There was some serious beauty there. That was the basis of my changing my views" (Duston, 1992). The psychological relationship of the vastness of nature compared to being very small brought out a sense of wonder and a feeling a part of nature.

The participants who had the best close-to-nature experiences had specific time to sit quietly for a period of time and observe the reality of nature before them. Some mentioned the lack of specific time to experience being in nature. "I wish we had more time to go off because we did not have that much time at all. I remember people griping about that" (Duston, 1992). Some participants felt that the experience for the entire time was with nature.

Participants keyed into several dichotomies of nature: the incredible nourishing qualities versus the power to destroy. Another was feeling very close versus very distant in the respect of having a close relationship to nature at Philmont but feeling distanced by way of thinking about returning to living in buildings which served as barriers to that connection.

Not a great deal was actually learned about the environment specifically, although the experience with nature engendered feelings of respect and appreciation. Participants noticed how it was much easier to trash up a city environment because of the lack of enthralling beauty, versus never trashing the natural setting.

Question Six: Resulting Changes

This question dealt with whether any or all of the course experiences caused the participants to take their insights and new awarenesses (if any) and apply them to the settings at home. It was asked in the following manner: "Has what you learned translated into doing things in a more environmentally conscious way in your daily life now? How?"

Apparently, the knowledge and the feelings about the trip stood to bring participants' behavior more in line with what is environmentally sound. About half of the

respondents did not change much in these behaviors (because they already were actively acting upon their values for the environment). They did say that they got reinforcement.

Question Seven: Return to Daily Life

This question dealt with the effects of the return to urban life. The responses to this question showed that about half of the respondents put more effort into being environmentally responsible in their day-to-day habits. Most mentioned, though, that they had already at least dabbled with recycling and other common "environmentally conscious" behaviors before the trip.

The emphasis for about a third of them was that now they had become much more enthusiastic because they had a significant reason why it was important to them. The course helped them attach meaning to these actions.

About a quarter of the group seemed to undergo a form of a conversion process. They began to teach their friends the importance of taking care of the environment.

Question Eight: Participants' Definition of Environmental Ethics

This question was asked in order to the respondent's interpretation of environmental ethics and if the course affected that interpretation. The form of this asking was simply "What is your definition of environmental ethics?"

The results of this study show that at the level of the natural setting, the participants learned a code of environmental ethics as it applies to low-impact camping. Some felt able to extend this behavioral code to other (dissimilar) natural areas, accounting for the differences in the local ecological systems.

The Wilderness Education Association assumes that students can metaphorically transfer what they learned to their home environments and have a sense of how they are

connected to the overall environment through these experiences. Since the course members of this particular course were divided into how they defined the environment, this goal is difficult to fully achieve. Those students (about half) who define the environment as personal surroundings and/or specifically the natural setting did not appear to be able to extend the essence of the course experience to their lives on a daily basis in a (usually) built setting.

VITA

Teresa Jeanne Duston

Candidate for the Degree of

Master of Science

Thesis: FACTORS ASSOCIATED WITH THE DEVELOPMENT OF ENVIRONMENTAL VALUES THROUGH THE WILDERNESS EDUCATION ASSOCIATION PROGRAMS

Major Field: Environmental Science

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Experience: Owned and operated small farm in rural Arkansas for 11 years before commencing work on a bachelor degree in business administration. Upon entering Oklahoma State University, research assistantships in the School of Health, Physical Education and Leisure provided experience with the research process in the topics of visitor uses of a local lake and sustainable rural tourism. Administration experience of a multidisciplinary program was gained through three years as the Coordinator of the Environmental Science Graduate Program at Oklahoma State University. Additional practical experience was gained in working for the Agronomy Department for one year.

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Institution: Oklahoma State University Location: Stillwater, Oklahoma

Title of Study: FACTORS ASSOCIATED WITH THE DEVELOPMENT OF ENVIRONMENTAL VALUES THROUGH THE WILDERNESS EDUCATION ASSOCIATION PROGRAMS

Pages in Study: 128 Candidate for the Degree of Master of Science

Major Field: Environmental Science-Leisure Studies

Scope and Method of Study: The aim of this research was to identify possible factors associated with the development of environmental values and responsibility as a result of participating in a Wilderness Education Association (WEA) 10-day course in the previous year. A qualitative pilot study provided the basis for questions that considered the association of low-impact camping methods, the group, and nature with environmental values. The number of respondents (n=40; 50 percent response rate) relative to the high number of items required using a correlation matrix to find the most usable items. Small thematic groups were formed and each were factor analyzed for cohesiveness. A secondary factor analysis was run using the composite scores of the nine scales.

Findings and Conclusions: Nine scales were found; a secondary factoring process resulted in two factor loadings indicating themes of learning methods at the social level and personalization and integration of lessons, reliability = .89. The scales in the learning methods section included (1) informal communication (talking, watching, and listening), reliability =. 84; (2) formal group discussion allied with respect and appreciation and awareness of the overall environment, reliability =. 77; (3) increased regard for the beauty and vulnerability of nature in post-course adjustment and played a role in motivation for engaging in responsible environmental behaviors, reliability =. 86; (4) low-impact camping skills associated with nature sensitivity development, reliability =. 88; (5) group development experiences in the backcountry supported individual initiatives for influencing friends' behavior at home and in future backcountry excursions, reliability =. 64; (6) transfer of principles to daily life occurred in terms of simplifying life materially and care in water usage, reliability =. 64. The last three scales took a more personal turn. These scales included: (1) the importance of the solo experience to gain increased awareness and sense of sanctity toward nature, reliability =. 71; (2) internalization of experiences associated with a sense of commitment, reliability =. 68; (3) sense of community in latter stage of group development linked with awareness of inclusion in the eco-community, reliability = .76.

ADVISER'S APPROVAL: _____