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Ecology of the Heart: Understanding How People Experience Natural Environments

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Ecology is defined as the science that studies relationships between organisms and their environments. There are many different perspectives from which these relationships can be viewed. As a natural science, ecology focuses on understanding the physical, chemical and biological interactions that take place between organisms and environments. When the organisms in question include human beings, however, there are many other kinds of interactions that must be considered as well.

Here is a description of an interaction between two people and a forest environment, taken from a survey in which people were asked to describe peak aesthetic experiences that they had had in outdoor environments (Chenoweth and Gobster 1990):

A good friend had recently lost a loved one and was feeling extremely depressed. It was about 4:00 p.m. on a warm and sunny Autumn day. Being familiar with the Morton Arboretum and with its beauty at this time of the year, I felt that a drive through the Arboretum could be both pleasant and therapeutic. ... It was almost peak fall color. While riding, we talked freely of our feelings and her present situation. As we approached the Forest area, I chose a road with no other cars or people in sight. We were able to drive slowly and soon came to the densest part of the forest where the sugar maples had turned brilliant colors of yellow and orange. Mingled in with the maples were tall green spruces; the Virginia creeper with its fall red coloring dappled the other colors. It was as if, suddenly, we were inside a large cathedral with stained-glass windows. The feeling was magnificent and awe-inspiring. Almost automatically my car came to a stop. All conversation came to a stop. The "peak" aesthetic experience occurred as the presence of a Supreme Being

seemed to engulf us. The beauty of the environment and the solitude of the forest made us become "one." We were quiet and motionless for several minutes. A few tears rolled down the cheek of my friend. Quietly, she said, "Thank you, I feel better—I can face anything now." It was a profound experience for both of us. (Quoted in Dwyer et al. 1991: 277-278)

The setting for this experience includes the biological environment: a dense forest in fall color. It also includes the social environment of the two people: the history of their relationship as friends and the recent tragic loss of a loved one. A variety of psychological processes occur throughout the episode, including memory, choice, perception, imagination and emotion. As the two friends drive through the arboretum, the surrounding forest with its varied colors suddenly becomes like a cathedral with stained-glass windows. This image brings with it strong feelings of awe and magnificence. The experience takes on a spiritual dimension, described as "the presence of a Supreme Being." There follows a sense of oneness, a feeling of relief and a renewed ability to face the tragic situation. All the physical, biological, psychological and social elements that comprise this experience are interwoven in a story that has great significance for these two people.

If we want to understand how people are related to environments such as forests, then we need to understand how people experience these environments. This includes the kinds of emotional, imaginative and inspirational experiences that are reflected in the previous quote. In other words, if our perspective is going to include people as a part of ecosystems, then we must recognize that experiences such as this are a part of ecosystems as well. We need to think about ecology as a matter of the heart as well as of science.

One question we can ask regarding the ecology of human experience is, how are different kinds of experiences related to the characteristics of physical and biological environments? From the previous quote we can see how the experience emerges from and depends on certain features of the environment. The speaker identifies two environmental features in particular: beauty and solitude. Solitude seems to be essential for this kind of experience to occur. It is doubtful whether this experience could have taken place if there had been other cars on the road behind these two people, perhaps honking at them for driving too slowly and blocking the road.

The beauty of the environment includes the colors of the vegetation, which are described in great detail. The awe-inspiring image of the cathedral with stained-glass windows emerges directly from these colors. If the experience had taken place in a different season perhaps the emotions would have been similar, but the specific imagery might have been quite different.

Certain environments seem to provide "critical habitat" for sustaining certain kinds of experiences. This idea is reflected in the following passage from the

newsletter of a volunteer group that is working to restore the Nachusa Grasslands ecosystem in northern Illinois.

This euphoric wilderness speaks out to all who will listen and presents itself as a place where the natural rhythms of fire, wind and other climatic influences function to shape the land. It provides its arms to surround the "wilderness within the human spirit" which—if too crowded—becomes frustrated, fades, and dies. (Anonymous 1993b)

For these people, wilderness is found within the human spirit as well as in the landscape. The experience of inner wilderness is embraced and sustained by the ecosystem, and there is a sense that the experience is fragile and threatened. George L. Godfrey, a native American biologist, expressed a similar feeling in a recent essay in the *Illinois Steward*.

The natural environment is a panorama of art, music, history, biological and physical resources, and ecological processes intertwined with spirituality and human relationships. ... Research to save the environment is increasingly being channeled into systems ecology, flow charts, and data bases to detect critical trends. But where are the eyes and where are the ears to see and hear the environment's diminishing art and music? (Godfrey 1993)

This biologist views the natural environment not only in terms of scientific data but also in terms of art and music, which he fears are fading away while we focus on our flow charts and data bases.

The threatened loss of the environment's music has motivated at least one musician to take action. The *Timber Producers' Bulletin* describes a recent appeal of a National Forest timber sale by a nearby resident.

The appellant, who described himself as a "musician and visual artist," expressed concern that the sale will not adequately protect cultural resources, since "there is a source for his music in each of the potentially affected trees ... [and] that there is a similar resource in the forest overall which will be terminated not only by the sounds of harvest ... but by the final harvest itself...." (Anonymous 1993a)

The musician feels that his inspiration is dependent on the environment, on the trees and the forest near his home. He experiences the timber harvest as a threat to that inspiration.

Restoring and Sustaining People's Experiences of Ecosystems

Like many plant and animal species, fragile experiences that depend on solitude, silence and beauty are increasingly threatened by expanding development, crowding and resource utilization. At a conference several years ago, Rick

Chenoweth of the University of Wisconsin commented that we should be concerned about "endangered experiences", as well as endangered species. If that is so, then the concepts of ecosystem restoration and sustainability need to be extended to include people's experiences of ecosystems. How can we restore fragile, endangered experiences; and how can we sustain those experiences in the face of increasing demands for forest products and commodities?

To restore and sustain such experiences, we obviously must pay attention to what happens in the physical and biological environment. But in addition to that, there are other less tangible factors to consider. For example, the concepts and attitudes that we employ in thinking and speaking about natural environments can have a big effect on how we and others experience these environments.

Our experience depends on how we conceptualize the world—that is, on our world-view. The world-view of our society has been greatly influenced by science. This is especially so in the resource professions, where many people have been trained in scientific disciplines. Scientists tend to be suspicious of emotion, imagination and intuitive experience. It regards these experiences as subjective and therefore less valid and less real than objective knowledge that can be tested by the scientific method. Therefore, when people speak passionately about the art and music of the environment, they are conveying an experience that is somewhat foreign to the rational domain of science, economics and planning. It is difficult to translate these expressions of concern into issues that can fit into a scientifically based forest plan. In an intellectual climate that emphasizes science, emotional and imaginative experiences often seem out of place.

The following description of an experience of the natural environment is from a presentation that the author gave at a conference of social scientists several years ago.

At times, I seem to sense that there is something behind or beneath my immediate experience of a natural landscape. There's something there that I can feel; but I can't see, or touch, or define it in any precise, logical terms. It feels like there is a kind of enchantment or magic that hides behind the visible landscape—in the silence of a forest, or in the sound of a flowing stream. I want to follow that enchantment, to catch it and to hold onto it, but it's always just out of reach, somewhere out on the edge of awareness. It's as if I were standing on a threshold, looking across into another world, but not able to actually cross over. (Schroeder 1992)

This is an accurate description of a personally important experience, but to speak about it in front of an audience of professional colleagues was not an easy or comfortable thing to do.

We need to be aware of how the scientific attitude we project in our language affects our interactions with the public. Science is of course a very important and necessary part of resource management. But when we emphasize a scientific and objective attitude to the exclusion of all else, we create an environment in which

it is difficult for people to speak about intuitive and emotional experiences, and in which it is difficult for us to hear or understand them when they do. Our work requires us to have the best scientific information available about ecosystems, but we also need to consider the kinds of experiences that are expressed through art, music and poetry. Otherwise we are leaving out a very important part of what makes us human. Part of restoring and sustaining experiences of ecosystems, then, is simply to recognize that these kinds of experiences are real and that they matter.

This recognition is already taking place in the field of ecological restoration. Programs for restoring endangered ecosystems are drawing on the efforts of large numbers of volunteers, and matters of the heart have been recognized as an integral part of the restoration process.

Large and small tracts of publicly held land are being restored to health, and managed with loving care by citizens for whom this work has deep meaning. ... The work here has become a model for citizen participation. It is widely emulated because it connects people to the land in the process of preserving it. (Ross 1992)

Through Earthkeeping, we will also be exploring the idea of restoration as a performing art—that is an act that is expressive as well as effective—and also as a kind of alchemy, through which the initiate struggles to change dross into gold and in the process brings about deep-seated transformations in himself or herself. (Jordan 1990)

Restoration is the bringing back together of people and land in a close working relationship to ensure the health and survival of both. ... We want to restore the living and sacred relationship between the people and the earth. We want to restore our spirits as we restore the land. ... We want to restore ourselves. (Rogers-Martinez 1992)

In these quotes, the theme of restoration is applied to both the biological ecosystem and to the human experience of the ecosystem. The process of ecosystem restoration includes restoring the human experience of relationship to the ecosystem. Thousands of volunteers are involved in these ecosystem restoration projects in the Chicago metropolitan area and elsewhere. Their activity can be considered a form of leisure, but it goes far beyond recreation in the usual sense in which we use this word. Actually, it comes closer to the original meaning of "recreation", that is, a "re-creation" of the human spirit.

Restorationists have also been exploring the integration of art, philosophy and science in environmental education. The Society for Ecosystem Restoration has proposed that project managers for ecosystem restoration efforts should be trained not only in the scientific aspects of restoration, but also in the artistic, literary and philosophical dimensions of this work. The Mighty Acorns, an educational program for elementary school children, has been established by the Nature Conservancy in the Chicago area. In this program, inner city children learn about

ecosystems by exploring them first-hand and engaging in hands-on restoration activities. Parents and teachers involved in this program are recognizing the important role of emotion in these children's experience of the environment.

This experience has to be handled so that it becomes relevant to the children. Otherwise it is just another program. There should be fun and joy in it. First comes the emotion. You must begin with the feelings. When the kids feel the joy in this place, they will want to take care of it. (Michael Howard, parent; quoted in Gehrie 1993)

Whether they're from the city or the suburbs all children need to experience a passion for the land. They need experiences that they can feel—the poetry and emotion. Kids today have none of this, and they badly need it. (Katy Beck, 5th grade teacher; quoted in Gehrie 1993)

Value, Emotion and Motivation

The importance of emotion in the human experience of environments has implications for natural resource planning as well. It is now widely recognized that people's values must be included in the forest planning process. But what exactly do we mean by "value"; how do we understand or conceptualize this term? Often, we think of value as a quantity and try to understand it in terms of numbers and data. We look for ways to measure value, to analyze it, aggregate it and maximize it. To the extent that we can do this, it becomes easier to deal with values in a scientific and objective manner. But if we look at value only in this way, something important may be missed.

What is the value of an experience such as the one that was described at the beginning of this chapter? We could say that the time the two people spent in the Morton Arboretum amounts to two recreation visitor days. We could multiply that by a certain number of dollars per day and say that the resulting figure represents the value of their experience. Alternatively, we could assign the landscape a number (probably a "10") on a scenic beauty rating scale and say that this represents the scenic value that they experienced. Or we could use information about the entry fees that they and others paid and the distance they traveled to estimate a demand curve and willingness to pay. These are all very useful approaches, and they provide good information for many kinds of decisions. But for the particular kind of experience we are looking at here, turning value into a number seems to miss the whole point.

As an alternative to thinking of value as a quantity or a number, we could think of value as a kind of experience. We could ask, in what way does value appear in a person's immediate experience of an environment? When we look at value in the context of actual experiences, we can see that there is a very close connection between value, emotion and motivation. This connection is reflected in the origins of these three words. "Emotion" and "motivation" both come from a root word that

means "to move". "Value" comes from a root that means "to be strong". So, to say that something has value is to say that it has the strength to move us, that is to arouse our emotions and motivate or push us into action.

This is illustrated in the following statement, which accompanied a painting by Scott Zupanc in an exhibit at the Chicago Botanic Garden.

Frequently, during visits to Beaver Lake, I have been stopped by an almost magnetic attraction for an object, space or scene. On the edge of this awareness, one becomes conscious of a greater presence. It's something one can feel but can't quite comprehend. For me, this sublime apprehension brings about faith rather than fear. (Zupanc 1992)

The value of a scene or place is felt by this painter as a "magnetic attraction," a force pulling him toward a specific feature or part of the landscape.

The connection between emotion and motivation is also reflected in the following quote by Sandra Coveny, from the newsletter of an environmental activist group called Preserving Appalachian Wilderness (PAW).

I feel the nurturing instinct burning a hole in my heart. The call for help is so loud from the Earth that I can only assume it is deafening to those who act as though they cannot hear it. ... I want to enjoy [this planet], not worry about it. I am disgusted by the fact that I will never be able to do that without feeling like there is work to be done so other beings can merely survive. So, if I can't wander wilderness in peace, look another creature in the eye without shame for our species, then the people who can't hear the pleas are not going to have a minute of rest. ... The part of the brain that motivates us to action is the emotional part, not the part that is objective, and scientific. We must be motivated by love, connection, and passion for the trees, bugs, birds and fungi to work toward letting ecosystems regain their original dignity and integrity. Once we have found that motivation, we must channel that energy into action. (Coveny 1993)

This quote illustrates how a person can feel compelled and pushed into action by emotions that will not let her rest.

Value and emotion are inseparable. Any time we are dealing with people's values, we are faced with emotion; and whenever we are confronted with strong emotions, we can be sure that something of value is at stake. There is simply no way to avoid emotions when making important resource management decisions.

Emotions tell us about the condition of our relationships to people, places and things. They are one important way in which we experience these relationships. This is another reason why ecology, as a science of relationships, must also be seen as a matter of the heart. A wide range of emotions can arise in relationships, and many of these are reflected in the last quote above. The attraction to valued things and places is felt as love or passion. When these values are threatened there are emotions of anger and fear, and when they are lost, there is grief. Phyllis Windle,

an ecologist, has written of the grief that some biologists feel when a species that they have been studying becomes extinct (Windle 1992).

But this whole level of experience is left behind when we turn value into abstract numbers. We end up with information and data that we can manipulate, but we don't gain an understanding or appreciation for the experiences and emotions that lie behind the data. Information is a good thing; we need the kind of quantitative data about people's values that we can get from surveys and other research methods. But we need more than that. We also need understanding, and this requires us to do more than just compile data.

Understanding and Communicating Across Worldviews

To gain this understanding we must look back to the experiences in which people's values originate. We must listen to people speak in their own words about their experiences, and try to grasp what those experiences are like for them. This kind of understanding is not always easy to gain. Different people experience their worlds in very different terms, relying on very different concepts and assumptions. Each of us has a world-view, which consists of a set of metaphors that we use to structure our experience of the world (Lakoff and Johnson 1980). The world-view of science relies heavily on the metaphor, "nature is a machine" (Abram 1991). But not everyone experiences nature according to this particular metaphor. Artists, poets and environmentalists often draw on a different metaphor: "nature is a person". The quotes above taken from the Nachusa Grasslands and PAW newsletters both reflect this second metaphor. They speak of nature as having a voice that can be heard by people who will listen. The two metaphors, "nature is a machine" and "nature is a person", lead to radically different ways of understanding, experiencing and behaving toward the natural world.

People with different world-views may have a very hard time understanding each other. They may have little or no common ground of experience, and the words of one may make little sense to the other. Different world-views, based on different metaphors, lead people to have different experiences—actually to live in different realities. Here is part of a conversation that took place in the Taos Pueblo of New Mexico in 1924. Carl Jung, a Swiss psychologist visiting the U.S., was speaking with Mountain Lake, an American Indian. Jung was curious to know what impression the native Americans had of the white people. Mountain Lake's response is recorded in Jung's memoirs.

"... Their eyes have a staring expression; they are always seeking something. What are they seeking? The whites always want something; they are always uneasy and restless. We do not know what they want. We do not understand them. We think that they are mad."

I asked him why he thought the whites were all mad.

"They say that they think with their heads," he replied.

"Why of course. What do you think with?" I asked him in surprise.

"We think here," he said, indicating his heart. (Jung 1989)

It had never occurred to Jung that one would think with anything but one's head. But to Mountain Lake, this belief was a sign of insanity. The point is not that one of them was right and the other wrong. The point is that when two people from different worlds encounter each other for the first time, each may appear crazy to the other. It is perhaps not so surprising to see this happen between people of very different cultures. But the same thing also happens between people holding different viewpoints within the "majority" culture of the U.S.

For Sandra Coveny of PAW (previously quoted), the "voice of the earth" is not just a figure of speech. It is a very immediate and compelling experience. She hears a voice and is astonished to realize that there are people who cannot hear it. She assumes that those who cannot hear the voice must be "deaf". The quotes by Coveny and Jung both reflect a very common and natural tendency that we have when confronted with someone who sees the world very differently than we do. The tendency is to assume that there is something wrong with the other person—that they are insane, or deaf, or stupid, or otherwise deficient in some way. This is a natural reaction, but it gets in the way of understanding other people and presents a serious obstacle to communication.

How is it possible to communicate across the gap of differing world-views? George Lakoff and Mark Johnson, in their book *Metaphors We Live By*, offer these suggestions:

When people who are talking don't share the same culture, knowledge, values, and assumptions, mutual understanding can be especially difficult. Such understanding is possible through the negotiation of meaning. To negotiate meaning with someone, you have to become aware of and respect both the differences in your backgrounds and when these differences are important. You need enough diversity of cultural and personal experience to be aware that divergent world views exist and what they might be like. You also need patience, a certain flexibility in world view, and a generous tolerance for mistakes ... Metaphorical imagination is a crucial skill in creating rapport and in communicating the nature of unshared experience. This skill consists, in large measure, of the ability to bend your world view and adjust the way you categorize your experience. When the chips are down, meaning is negotiated: you slowly figure out what you have in common, what it is safe to talk about, how you can communicate unshared experience or create a shared vision. With enough flexibility in bending your world view and with luck and skill and charity, you may achieve some mutual understanding. (Lakoff and Johnson 1980)

There are no formulas or cookbooks for making this work. It demands personal involvement and commitment to the process of communicating and reaching understanding. An example of how this process can begin is provided by a recent

Memorandum of Understanding (MOU) between the Chequamegon National Forest and the Lac du Flambeau, Bad River, Red Cliff and La Courte Oreilles Bands of the Lake Superior Chippewa. In this MOU, the National Forest and the Chippewa Indians each lay out their viewpoint in a series of statements. The National Forest viewpoint is stated in the language of ecology, multiple use, biodiversity and ecosystem management. The Chippewa present a strikingly different view of the National Forest:

WHEREAS, the forest and waters that make up the Chequamegon National Forest have provided for the spiritual and physical needs of the Potawatomi, Cree, Winnebago, Lakota (Sioux), and the Anishinabe (Chippewa or Ojibwe) people for thousands of years.

WHEREAS, the original people believe all life is sacred and the woods are filled with consciousness, Anishinabe elders relate that the Great Spirit, Gitche Manitou, created the four orders of the earth;

WHEREAS, from rock, water, fire, and wind the Physical World was created. Fire held the power of light and heat, the earth provided growth and healing, water possessed purity and renewal, and the wind carried music and the breath of life;

WHEREAS, animals are sacrificed for food, clothing and tools. Animal Beings receive the greatest respect for their ability to sense the future and for the characteristics of the inner beings they represent. The Eagle possesses courage and pre-knowledge, loons fidelity, and beaver resourcefulness;

WHEREAS, plants are used for food, shelter, and healing and possess powerful spirits when joined with other Plant Beings. Consider the spirit of the forest...each plant creates the forest's spirit as well as its own. When balance of the plant world is disturbed the quality of life declines as well;

WHEREAS, last, the Great Spirit created the Human Beings. Like the physical, plant, and animal beings, humans have a spirit. What sets this final order apart is the ability to dream. Since people are dependent upon all creation, we must live with, and respect the earth and all living things. (Chequamegon National Forest and Lac du Flambeau, Bad River, Red Cliff, and La Courte Oreilles Bands of Lake Superior Chippewa, 1993)

The Chippewa describe a world in which the woods are filled with consciousness, the wind carries music, animals represent inner beings with personal qualities, plants possess spirits and the entire forest has a spirit as well. In this world, humans are set apart not by the ability to think or to use tools, but by the ability to dream.

Experts in conflict resolution tell us that conflicts cannot be resolved until a relationship has been established that both sides think is worth saving. This MOU demonstrates the beginning of such a relationship, in which people from different worlds listen respectfully to each other and try to find common ground. Out of this relationship understanding may be reached and conflicts may be resolved.

Another group of people that natural resource professionals might listen to are the artists, musicians and poets who have been inspired by the forests and other

natural environments of North America. Art, music and poetry are attuned to matters of the heart. They represent a dimension of the human experience of forests that is often neglected in forest planning. Recently the Ottawa National Forest held an exhibit of works by local artists who had been inspired by the natural settings of the forest. Perhaps we should go even farther, by inviting artists, poets and musicians to spend time at National Forest district offices, painting, writing, or composing as part of the planning and public involvement process for specific forest areas.

There are many other avenues available for gaining insight into people's environmental experiences and values. Newsletters and other written materials may provide good insights into the viewpoints of the groups or organizations that produce them. Informal meetings or focus groups have proven to be a good vehicle, as have qualitative surveys in which people speak or write about their experiences and feelings for particular places (Mitchell et al. 1993). The basic idea is simple: invite people to tell their stories, provide a safe place in which they can speak, and then listen for the experience that lies behind their words.

An Example: The Black River Special Places Study

The Opportunity Area Analysis process used by the Northeastern Region of the National Forest System is an especially good context in which to seek this kind of understanding. The rest of this chapter will summarize a research project that the author recently conducted with the Ottawa National Forest as part of their Opportunity Area analysis for the Black River area of northern Michigan. This study provides one example of a research method that forest managers could use to learn about the human experiences that their forests are supporting.

The Black River area, located on the Lake Superior shore of Michigan's upper peninsula, includes a National Scenic River, a Scenic Byway and a National Scenic Trail. There are several large waterfalls on the river and some outstanding groves of hardwoods, pine and old-growth hemlock. For recreationists there is also a campground, a picnic area and a rustic, historic harbor. The Ottawa National Forest invited the author to do a research study to help them learn more about the feelings of attachment that many people have to this area.

The basic approach was to make contact with people who have strong feelings for the area, and to ask them to explain what features of the area and what kinds of experiences have contributed to those feelings. First, a flier was designed that announced the "Black River Special Places Study." The flier invited anyone who was interested in participating to send their name and mailing address to the author. The Ottawa National Forest mailed the flier to people on their public involvement mailing list for the Black River Area. They also placed it in Forest Service offices,

recreation sites and local businesses where people in the Black River area could pick it up.

Fifty-five people responded to the flier by sending their names and addresses. These people were sent instructions for writing their responses. The format was designed to be as open as possible, so that people could describe their experiences in their own words. They were asked to think of places within the Black River area that were special to them, to describe these places and to explain what thoughts, feelings, memories and associations came to mind about these places. Twenty-three people sent descriptions of their special places. These people included both residents and visitors of the Black River area. A few of them had lived near the Black River since childhood. Their descriptions were read phrase by phrase, to identify the places and features they described as well as the feelings and meanings that they connected with these places.

One thing that stood out immediately was the strength of the positive feelings that these people had for the Black River area. They used words like "great", "fantastic", "marvelous" and "wonderful" to describe the Black River and its surroundings. Three people went so far as to call the Black River area a heaven or a paradise.

Beauty was one of the qualities of the Black River area that was mentioned most often. One resident of the area wrote, "The pleasure I get from living within and sharing a place of beauty that is my home is hard to describe." Along with natural beauty people also described a sense of serenity or peace. For example, one person wrote, "It is so very quiet and relaxing. To walk the beach gives a person a very peaceful feeling." Many people attributed the beauty and serenity of the Black River to its natural and undeveloped condition. They referred to the rustic, primitive character of the area and its relative isolation. One person wrote, "It is beautiful and the feeling of wilderness lakeshore is great." Several other people also used the word "wilderness" to describe the area. Even with the developed recreation sites, trails and other users in the area, the Black River is not crowded and people can find opportunities for solitude and privacy.

Other aspects of the natural character of the area that people wrote about were its pristine quality, the clean air and especially the crystal-clear water of the lake. People also wrote about the abundance of natural features—the diversity, uniqueness and rarity of the plants, animals and geology of the area. For some people, the beauty of these natural features evokes powerful feelings. One person said that his first hike on the North Country Trail was such a beautiful experience that it gave him chills on his spine. The water rushing over the waterfalls gives a sense of force and energy which one person referred to as "mesmerizing." Another person said that the grandeur of the old-growth hemlocks gave a spiritual sense of the "majesty of nature and the minuteness of man." Some people also pointed out the importance of the Black River area as an entry or gateway to the largest of the Great Lakes.

In addition to its natural features, the people of the Black River area also contribute to its specialness. The Black River is a friendly place, and people enjoy meeting and talking to other visitors and to the people who live and work in the area. One person wrote, "I have met a lot of good people down at the bottom of the falls in the 35 years I have fished here." The history of the area as a commercial fishing community is also important, especially for those people whose families were a part of this history. Two people in particular wrote detailed reminiscences of their childhood experiences and of their parents' and grandparents' roles in the history of the harbor.

Some people recalled difficulties or hardships of the past, and there are elements of difficulty and danger that still exist in the present. The rougher elements of the Black River area include the strong winds on the lake and high water over the waterfalls at certain times of year. One person wrote about a bear that had torn off the steps of her cabin and part of her porch. But these dangers and difficulties don't seem to detract from people's feelings for the area. If anything, they evoke a sense of respect. The only feature of the Black River area that was described in consistently negative terms was the black flies.

People who have lived in the Black River area for a long time have seen many changes take place. Some of these changes they experience as positive, such as improvements in the harbor facilities, docks and access to the waterfalls. Some changes they experience as negative—one person complained about the intrusion of the campground into what had been a favorite wooded area, and another was concerned about the increasing numbers of people on Black River Road. But, generally, the people who participated in this survey seem to view human influence and management as beneficial to the Black River area. People praised the high quality of the construction, maintenance and cleanliness of recreation facilities. Several older people especially appreciated the measures taken by managers to enhance access to the waterfalls. One person who walks with a cane said that "the wide paths recently put in are a blessing to handicapped people."

With respect to the future, some people pointed out opportunities for developments that they thought would enhance the Black River area. But for the most part, these people said that they like the Black River as it is now, and they were concerned at the possibility that future changes and development might spoil the qualities that make the area special. The single most frequent recommendation for management from these people was to limit development and maintain the area as it is. One resident wrote, "We love and respect it, and fervently hope it is not improved to death. Let Nature do what she does so *well*. ... mostly we want it to stay pristine and quiet. Please, no more improvements!"

This resistance to change is not hard to understand. The Black River in its present condition has a great deal of value to these people. This value is not contained in the market price of an acre of land. It is contained in the feelings of fondness that these people have for the area, their respect and love for its wild flora and fauna and their memories of the friends and family they have known there.

Some people said that they felt grateful for being able to visit or live in a place like the Black River area. One resident said simply, "Living here is a privilege and blessing."

To summarize, for these people the Black River area seems to combine the best of both the human and natural dimensions of ecosystems. While it may not be a wilderness in the strict sense understood by some resource managers, it does have many of the features and provides many of the experiences that people identify with wilderness. Its natural qualities are combined with a strong sense of human history and community. The Black River area is a wilderness in which people feel at home, and it supports experiences of beauty and serenity that are increasingly hard to find in an urbanized and commercialized world.

Conclusion

Research regarding the human dimensions of places such as the Black River can help to reveal the ways in which people are experientially and emotionally related to their environments. These experiences of natural environments contribute to the quality of people's lives and lie at the heart of many of today's resource management issues. Understanding these experiences is more than just a technical task of social science data collection. It is also a creative, human process, which requires us to open ourselves to perspectives other than our own.

Lakoff and Johnson (1980), in their quote earlier in this chapter, say that if we want to understand how other people experience the world, then we need to use our imagination. We need to be able to bend our own view of the world, at least a little bit. We need to be willing to experiment, to play around and see what the world might look like and feel like from different points of view.

For example, resource managers often talk about sustaining the productivity of the land. But what if we spoke about sustaining the *generosity* of the land, instead of its productivity? Or what if we spoke about sustaining the *creativity* of the land? What if, instead of managing an ecosystem, we spoke of *cooperating* with the ecosystem, or *participating* in the ecosystem? Playing with words in this way is one example of how we can use imagination to bend our world-view.

The diversity of words that different people use to describe the natural world reflects the diversity of ways in which that world is experienced. Each way of experiencing implies its own set of values and actions. Treating ecology as a matter of the heart gives us the opportunity to stretch our own perspectives while we learn about the perspectives of other people, and thereby achieve greater understanding and compassion in our debates over the use of natural environments.

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