

# Life Paths Into Effective Environmental Action

LOUISE CHAWLA

**ABSTRACT:** Structured, open-ended interviews were conducted with 30 environmentalists in Kentucky and 26 in Norway (35 men, 21 women) who represented a broad range of issues, from wilderness protection to urban planning, to determine the sources of their environmental commitment. Experiences of natural areas, family influences, organizations, negative experiences, and education were mentioned most often. People were also asked about the period in life when significant experiences occurred, and on this basis, a typical life path of predominant sources of commitment at different ages was constructed. Respondents also recommended strategies for effective environmental action.

**W**hat motivates people to take action to protect the environment? When people explain the sources of their commitment to action, how much credit do they give to childhood learning? In 1980, Tanner sought answers to these questions by initiating the study of significant life experiences: the formative influences recalled by people whose lives demonstrate environmental concern. He reasoned that if educators understood the type of experiences that motivate responsible environmental behavior, they would be better able to foster the development of an informed and active citizenry. His work has introduced a series of similar studies (for a review of this literature, see Chawla, 1998; Tanner, 1998).

This research has shown that respondents repeatedly attribute their environmental interests or action to a similar set of sources: extended time spent outdoors in natural areas, often in childhood; parents or other family members; teachers or classes; involvement in environmental organizations; books; and the loss or degradation of a valued place. Most of this research has involved White, middle-class samples in North America, Australia, and Britain, but similar

experiences have been described by African American, Asian, and Hispanic environmental educators in the United States (James, 1993), environmental professionals in El Salvador (Sward, 1999), and environmental educators in a nine-country study (Palmer & Suggate, 1998).

Because these studies have lacked comparison groups, they do not show that these antecedents distinguish environmentally committed people from the general public. Sia (1984), however, constructed an environmental sensitivity scale, based on the results of an interview study by Peterson (1982), to measure the degree to which people report having had experiences of these kinds. Applications of this scale by Sia, Hungerford, and Tomera (1985) and Sivek and Hungerford (1989) suggested that these experiences can effectively distinguish more from less environmentally active citizens, in combination with the factors of knowledge and perceived skill in using environmental action strategies.

Except for the work of Sward (1999), these studies have involved single-interest samples: environmental educators or members and staff of wilderness or wildlife preservation organizations. The environmental movement covers a broad range of issues, however, including issues of environmental justice that have enlisted ethnic and low-income populations (Di Chiro, 1995). From the beginning, Tanner (1980, p. 23) advised that research of this kind should not only

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*Louise Chawla is an associate professor at Whitney Young College, Kentucky State University, Frankfort.*

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focus on people who are active in wilderness conservation and preservation, but that it should also explore "the origins of those who are active in other kinds of environmental issues, such as urban environmental problems or alternative energy sources."

In this research I carry the study of significant life experiences farther by comparing the backgrounds of environmentalists in two countries—the United States and Norway. I have also included people who work on a broad variety of issues, from wilderness protection to urban planning. In addition, I have examined both the significant experiences that people report and the sequence in which they occur, to reconstruct the life paths that people say they have followed as they have learned dedicated and effective action. As in preceding research of this kind, I studied people in the environmental movement only, so no comparisons with less active citizens can be made.

I used a phenomenological approach (Stewart & Mickunas, 1990), combined with the process of open coding recommended by Strauss and Corbin (1990). The research is phenomenological in that I describe people's own self-understanding of the sources of their commitment to environmental action and the meaning that these experiences hold for them. I assumed that action is guided by intention and that people's intentions reflect their past experiences and future goals. This self-understanding of motives and goals draws upon the basic material of this study, which is memory.

Autobiographical memory itself has been the subject of extensive research. As Neisser (1988) observed, most of this work has focused on the verity of memory: To what degree do memories conform to objectively established records of the past? Memory is fallible, but recent studies of autobiographical memory have rehabilitated its reputation, with qualifications. They show that, although memories are often inaccurate about the precise details of what happened, they are usually accurate about the general course of events (Linton, 1982; Neisser, 1981; Wagenaar, 1986). Events of high personal importance produce significantly more vivid memories than events of low importance (Conway & Beckerian, 1988). Unconstrained recall—when people are allowed to develop their own account of the past at their own pace—is much more accurate than forced recall—when people are cross-examined about an event regardless of their own sense of its significance (Neisser, 1988). According to these findings, in the current study I drew on memories of the most reliable kind, because I invited people to freely remember past experiences of personal importance, with a focus on general facts about major periods of their lives.

Neisser (1988) argued, however, that researchers' emphasis on the verity of memory has missed memory's most important function, which is its utility. As we proceed through our lives, what matters most is not the actual past but how we understand and use the past in meeting the present and the future. As is observed in phenomenology, we know and act upon the world through our consciousness of it, and therefore consciousness itself requires attention and

description (Stewart & Mickunas, 1990). In this spirit, I explored U.S. and Norwegian environmentalists' own self-awareness of the experiences that have led them to their sense of connection to the environment and dedication to protect it.

### Method

Structured open-ended interviews were conducted with 30 environmentalists in Kentucky and 26 in Norway (35 men, 21 women). In interviews that lasted between 1 and 2 hr, people whose lives demonstrated their commitment to protect or improve the environment were asked to tell when and where they grew up and went to school, their parents' occupations, and their own vocations and environmental activities. They were then asked to tell the story of their most important environmental efforts and the sources of their commitment, to share their wisdom regarding how to work most effectively, and to describe their vision for wise development. In Norway, people were also asked to tell what strengthened them to continue their effort despite periods of discouragement. In Kentucky, the interviews were conducted by me and an assistant. In Norway, all interviews were done by me.

To ensure that these people were, in Tanner's words, "citizens who have demonstrated amply their informed and responsible activism" (1980, p. 20), I asked a few well-known environmental figures at each site to recommend others whom they considered especially effective. People who were mentioned more than once, or who represented distinct forms of achievement, were invited to participate. In both countries, participants worked on a range of issues: recycling and waste management, pollution and radiation, transportation, land use planning, habitat and wildlife preservation, and environmental education (EE). In addition, several Norwegians worked to promote sustainable lifestyles and Third World equity, and several Kentuckians worked to regulate surface mining. Because Kentucky is a state with few paid positions in nonprofit organizations, Kentuckians were more likely than Norwegians to work as volunteers and to cover different issues at different periods of their lives.

In keeping with the participants' status as experienced activists, about 60% in each country were between the ages of 30 and 49 (Table 1). The remaining 40% of the Kentucky sample, and 27% of the Norwegian sample, were 50 or over. In terms of education, all but 4% in Kentucky and 15% in Norway had gone beyond secondary school; 77% in Kentucky and 38% in Norway had continued their education beyond a basic university degree to a master's or doctorate. Men were more likely than women to have pursued an advanced degree, even though women were more likely than men to have a professional parent and less likely to have a parent who was a farmer or skilled or semi-skilled laborer. Overall, the samples were White, well educated, and middle class. This composition reflects the structure of environmental leadership at each location and the relative

homogeneity of the populations. In Kentucky, only 8% of the population in the 1990 census were non-White or Hispanic. In Norway, only 2% of the 1994 population were born in Africa, Asia, or Latin America.

The tape-recorded interviews were transcribed by the state Oral History Commission in Kentucky and by me in Norway. Because in this article I focus on people's explanations of their commitment to environmental work, their reasons for persevering through periods of discouragement, and their advice regarding how to work most effectively, I first read through all of the transcripts and highlighted these sections. In a review of the literature on significant life experiences, I had already established previous categories of sources of environmental concern (Chawla, 1998). Therefore, I read the relevant highlighted sections with an eye to replicating these categories as well as identifying new ones. On the basis of this reading, I defined different categories of sources of commitment. The definitions were given to two independent readers to apply to selected transcripts that represented the full range of categories. Readers were instructed to look for "explicitly stated motives," in the form of "important people, events, or lines of reasoning that led someone into committed environmental work, either as a professional or volunteer." Category definitions were discussed and revised, and a new set of coding was done, with a final average interjudge agreement score of 86%. I then completed the analysis of the remaining transcripts and transferred each person's sources of commitment to cards for sorting according to country and sex. Following a similar process of open coding (Strauss & Corbin, 1990), I independently analyzed people's reasons for persevering despite discouragement and their advice for effective work. The results of these analyses were summarized through simple descriptive statistics.

During the analysis of sources of commitment, I noted whether experiences were attributed to childhood, the college or university years, or adulthood. In keeping with the convention of the United Nations, childhood was defined as under 18 years of age. This division conveniently marked major changes in people's lives, because after this age people usually left childhood settings behind for school, marriage, or work. In determining sources of commitment, I focused on people's accounts of their lives up to the point when they had made a settled decision to pursue environmental work, either as a career or as a committed volunteer. Later events were included only when people claimed that they caused their commitment to deepen significantly or to take a new form.

The analyses showed no notable differences according to sex. Therefore, only differences by country are reported below.

## Results

### Sources of Environmental Commitment

The paths that lives follow reflect both intention and chance. As Bandura (1982) noted, most theories of human

development are deterministic: Psychoanalytic theories focus on how a child's inner life accounts for adult personality and behavior; socialization theories, on how childhood socialization forms a model for later life patterns. Although lives often show these continuities, Bandura observed, individual lives are also shaped by chance encounters and events, which sometimes turn people's interests and energies in new directions. As a result, there is an essential unpredictability about life histories.

In this study, this combination of continuity and chance characterized people's reconstructions of their environmental histories. People were asked, "How would you explain the sources of your commitment to environmental protection? What personal experiences have turned you in this direction and inspired you to pursue it?" People usually began their chronology of events with the chance fortunes of birth: the family that they were born into and the place where they were born. They described how, as children, they developed habits and predispositions, which determined how they responded to later chance events: an environmental news story, a job announcement, a friend's invitation to join an environmental group. As they took advantage of these opportunities, they developed new skills and beliefs, which sent them off in yet new directions, and so on. What may have first been chance became a foundation for continuities in attitudes and behavior, which determined responses to new chances.

In tracing this path, nearly all respondents attributed their commitment to several sources. At each site, both the mode and average number of significant sources per person was four, with a range of one to six (80% gave three to five responses). This result is consistent with similar studies, which have also showed multiple sources of environmental concern (Chawla, 1998).

Most people described childhood as the foundation of their relationship with the environment but added later formative circumstances as well. Table 2 defines the different sources of commitment that emerged from the coding process outlined above. Table 3 shows how frequently each source was mentioned, and Figure 1 shows the periods of life with which each was associated. Childhood predominated in importance both in terms of the number of types of formative experiences with which it was associated and its frequency of mention. Only three respondents did not begin their explanations of their commitment with childhood.

Like James's (1993) interviews with environmental educators from minority ethnic groups, this study revealed two distinct paths into environmentalism: a concern for the environment, in and of itself, and a concern for social justice. As Tables 2 and 3 together show, most people explained their commitment in terms of experiences that involved the environment itself. For example, they talked about their experience of natural areas, family members who modeled an appreciation for nature, or the degradation of a favorite place. Fourteen respondents (25%), how-

**TABLE 1. Sample Distribution by Age and Sex**

Sample	Under 30	30-49	50+
Kentucky ( <i>n</i> = 30)			
Male	0	13	7
Female	0	5	5
Norway ( <i>n</i> = 26)			
Male	2	10	3
Female	1	6	4

Note. For males, *n* = 35; for females, *n* = 21.

ever, talked about social justice, either as a parallel but related dimension of their activism, or as their primary motive, which ultimately led them to the realization that a healthy environment is an essential component of justice. They spoke about their anger, for example, when they discovered that their working-class community was exploited by a polluting industry or their shock when they saw pictures of people in other countries who lived in conditions of abject poverty or famine. People often rooted both types of concern in childhood. The different forms of experience that emerged are summarized in the sections that follow.

**TABLE 2. Sources of Commitment to Environmental Protection**

Experience of natural areas	<ul style="list-style-type: none"> <li>• A valued childhood home or vacation place surrounded by a rural landscape or by forests, fields, mountains, lakes, or seashore.</li> <li>• Attachment to valued family land, such as a farm.</li> <li>• Enjoyment of outdoor activities in natural settings, such as canoeing, camping, hiking, bird watching.</li> <li>• Adult exposure to valued natural settings.</li> </ul>
Family	<ul style="list-style-type: none"> <li>• Proenvironmental values learned from a family member through either examples of appreciation or protection (walks in the woods with parents, a grandparent's gardening) or explicit teaching ("take care of your place").</li> <li>• Family examples of social justice, activism, the obligation to do what is right.</li> <li>• In later life, support and cooperation from family members for environmental efforts.</li> </ul>
Organizations	<ul style="list-style-type: none"> <li>• Volunteer (i.e., not paid) participation in childhood outdoor groups such as the Scouts, teen or university environmental or social equity groups, and adult environmental organizations or neighborhood associations.</li> </ul>
Negative experiences	
Habitat destruction	<ul style="list-style-type: none"> <li>• Build-up of a childhood area or other favorite place.</li> <li>• Destruction of a natural area or decline of a species or habitat.</li> </ul>
Pollution, radiation	<ul style="list-style-type: none"> <li>• Observation or fear of pollution, radiation, or waste dumping.</li> </ul>
Education <sup>a</sup>	<ul style="list-style-type: none"> <li>• Formal coursework or extracurricular activities such as an internship or field trip.</li> <li>• An inspiring teacher.</li> <li>• School milieu of environmental activism or social service.</li> </ul>
Influence of friends	<ul style="list-style-type: none"> <li>• Recruitment into an environmental organization or job position by a friend; discovery of an environmental problem through a friend.</li> <li>• Solidarity with like-minded friends.</li> </ul>
Vocation	<ul style="list-style-type: none"> <li>• Experiences in a paid occupation that initiate or deepen environmental commitments (not ongoing work in a profession that has been chosen because of already established environmental commitments).<sup>b</sup></li> </ul>
Sense of social justice	<ul style="list-style-type: none"> <li>• Indignation at polluters' or developers' unfair treatment of oneself, one's family, one's community, or the poor and vulnerable in general.</li> <li>• Belief in fair treatment for all, including everyone's right to a healthy environment.</li> <li>• Exposure to other people's poverty.</li> </ul>
Book or author	<ul style="list-style-type: none"> <li>• An influential book or author with an environmental message.</li> </ul>
Principles or religion <sup>c</sup>	<ul style="list-style-type: none"> <li>• Belief in the creation's holiness, or intrinsic rights, or need for intact ecosystems.</li> <li>• Belief that environmental work is one way to make life meaningful.</li> <li>• Sense of obligation to do what one understands to be right.</li> </ul>
Concern for children, grandchildren	<ul style="list-style-type: none"> <li>• Desire to provide healthy living conditions for children now and in the future, often motivated by a concern for one's own children or grandchildren or the children of one's city.</li> </ul>

<sup>a</sup>These experiences are not merely useful to later environmental work, but inspire it.

<sup>b</sup>These on-the-job experiences are explicitly said to motivate a new or deeper level of environmental interest.

<sup>c</sup>These principles are explicitly stated as an explanation for responsible environmental action.

**TABLE 3. Sources of Commitment to Environmental Protection Mentioned by Environmentalists (% Mention Rate)**

Sources of commitment	Kentucky ( <i>n</i> = 30; 20 M, 10 F)	Norway ( <i>n</i> = 26; 15 M, 11 F)	Total ( <i>N</i> = 56; 35 M, 21 F)
Experience of natural areas	87	65	77
Family			
Parents	67	61	64
Others	13	12	13
Total	80	73	77
Organizations	53	58	55
Negative experiences			
Habitat destruction	23	23	23
Pollution, radiation	10	23	16
Total	33	46	39
Education	40	35	38
Friends	23	42	32
Vocation	30	23	27
Sense of social justice	23	27	25
Book or author	7	35	20
Principles or religion	10	19	15
Concern for children, grandchildren	0	8	4

*Note.* Average number of responses per person = 4, range = 1–6.

### *People and Places*

As Table 3 shows, the leading explanations of commitment were the experience of natural areas and the influence of family members who directed attention to the value of the environment or the importance of social justice (77% of the combined sample in each case). In all cases in Norway, and in 22 of 26 cases in Kentucky, formative places were childhood places. In all but one case in each country (when a spouse was mentioned), family role models also belonged to childhood. These were usually parents (mentioned by 67% of the sample in Kentucky and 61% in Norway), but grandparents, an older sibling, or an uncle sometimes played a similar role.

The special places that stood out in memory, where people formed a first bond with the natural world, were always part of the regular rhythm of daily life: the garden or nearby lake or forest where people played as children, the summer cabin or grandparents' farm that was visited repeatedly in the course of growing up, favorite hiking trails during the university years. In these places, people became comfortable with being out in the natural world, usually alone or with a small group of family or friends.

Sometimes these places served as a refuge from indoor stresses. Hanne Wilhjelm, an architect who became responsible for the implementation of Norwegian planning regulations related to children, described her childhood gardens and forests in this way:

With two brothers who were older than I was, and who had very busy lives of their own, I was a rather lonesome child at home. So nature became my friend. The garden around the house was a very very friendly arena for me. As a child, you can make your own world outdoors in a way that you can't do indoors; so I made a world of friendly places and things, and that was very important for me.

It is interesting to note that five Norwegians observed that their extensive use of the natural world in childhood did not set them apart from others, because "that is just being Norwegian." Three conceded, nevertheless, that these experiences were important sources of their present feeling for nature, but two insisted that their skiing and hiking in the woods as boys were too ordinary to be remarked (and therefore they were not counted in this category). In contrast, when U.S. respondents described hiking, camping, or exploring the outdoors in childhood, they presented these experiences as something that made them special.

Of the 43 respondents who mentioned outdoor places, 33 (77%) also described family members who taught them to value natural things. For these people who had opportunities to feel happy, free, and engaged in natural areas, family role models drew their attention to what they were experiencing and affirmed its value. Kari Andersen, a biologist who helped to organize protests against the damming of rivers, speculated about what might have distinguished her background from that of other Norwegians, who also spent their childhood outdoors.

We always were out. I grew up in the 50s in Norway, and everyone was out in the 50s in Norway. Hiking, picking berries, fishing, and everything. So I don't think that is something special. But my mother knew the names of the plants more than other mothers did. So we talked more deeply about things. We didn't only fetch berries and fish, but talked about it.

According to Oscar Geraldts, a lawyer who fought against the damming of the Red River in Kentucky, positive outdoor experiences need to be combined with a positive role model. In response to the question about sources of commitment, Geraldts described walking in the woods and fishing the creek with his father, who "could teach you how to make a willow whistle or a pop gun out of certain things or how to find the fishing bait under the rocks and appreciate what's there. Or who takes you out on the porch when a thunderstorm comes in so you could enjoy it." Geraldts then proposed that all the hours that he spent out in the woods and the creek made him an environmentalist. When it was pointed out to him that, given Kentucky's rural nature, many of the fiercest advocates of the dam must have grown up playing in woods and creeks, he was thoughtful for a minute. "Maybe a lot has to do with who you go fishing with," he conceded. "Or who you're talking to when you're walking."

Of the 14 respondents who related their environmental concerns to social concerns, 7 traced this source to childhood. Two Norwegian women, for example, remembered that as children they were profoundly affected by pictures of refugees from the Biafran War. Five people had parents who exemplified social concern or activism. Tom Fitzgerald, an environmental lawyer for citizen groups in Kentucky, is representative of others who traced their work, in part, to a general childhood climate of social or political action.

My interest in environmental issues was sparked, in large part, by exposure to the questions of surface mining and strip mining. My interest in social activism was something that was steeped in me from much younger days. My father instilled in us a strong sense of both social obligation and of justice, and of equity, or a lack thereof. He had worked in a project called Friendship House in Harlem, which was an interracial community center that was run back in the 30s, and had been active in the Catholic Lawyers' Guild and a number of fairly liberal groups. . . . My brother was also very strongly committed to social change. And so it was something I grew up with.

All respondents who described social concerns said that they grew to understand that social and environmental exploitation are linked.

### *Organizations*

Whereas family influences and formative places were usually attributed to childhood, the third-ranking source of environmental commitment—participation in environmental or outdoor organizations—figured significantly at all periods of life in Norway and in childhood and adulthood in

the United States (Figure 1). This category was scored when environmental feeling originated, or deepened significantly, in the course of participation. Several people discovered new relationships with nature in the Boy Scouts or Girl Scouts, for example, and some people joined groups as a result of a friend's persuasion rather than through convictions of their own, only to find themselves authentically involved. Others learned strategies and skills in groups that confirmed their vocation as an activist. In Norway, both childhood and university organizations figured importantly, through a combination of scouting, a dynamic national organization named Nature and Youth, and Third World solidarity groups. In the United States, most people who mentioned organizations named adult groups (11 of 16 respondents): national organizations and groups that focused on local and statewide issues.

### *Negative Experiences*

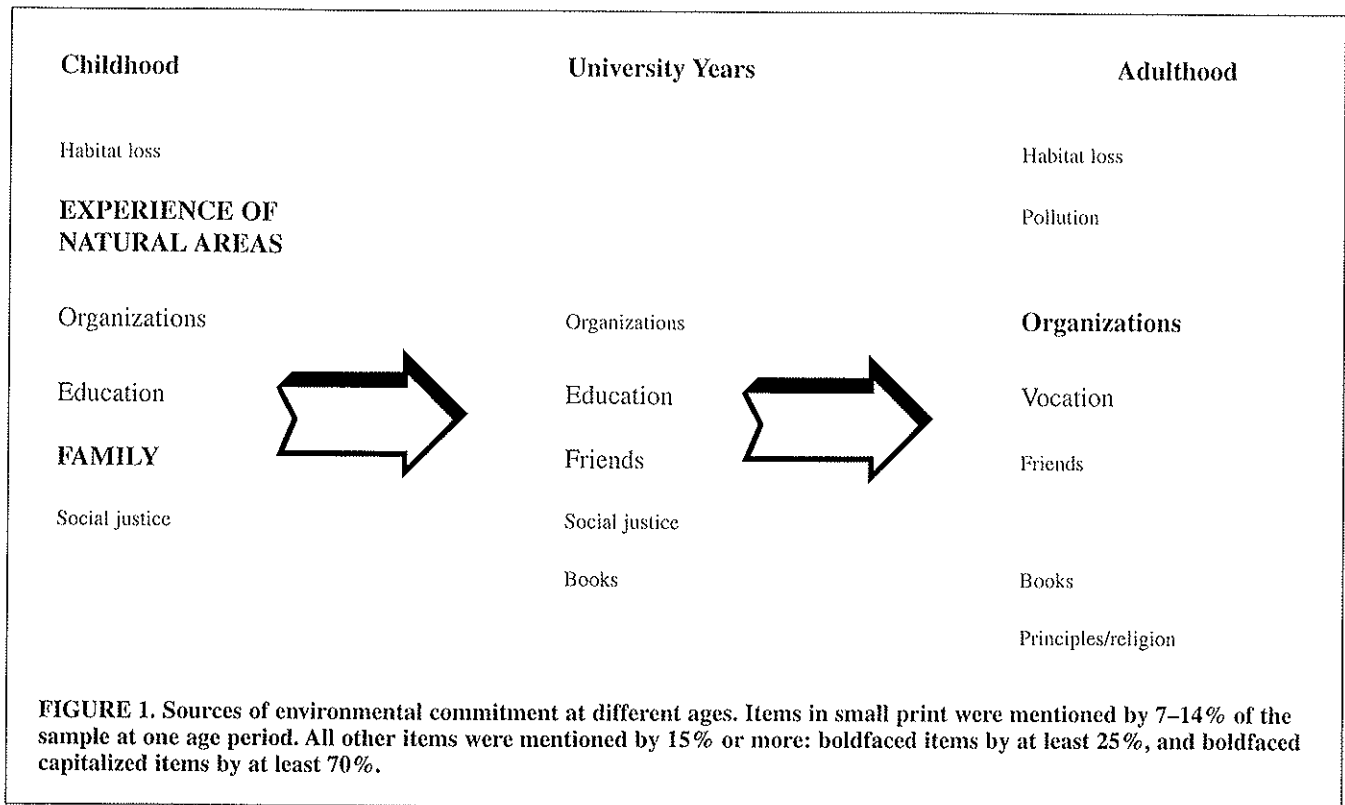
Negative experiences, which ranked fourth as a source of concern and action, took two forms: destruction of a valued place and fear of toxic threats such as pollution or radiation. Tor Traasdal, director of the Norwegian group The Future in Our Hands, noted that postwar economic growth was so rapid that "the speed of that growth, I think, tended to give a lot of people the feeling that OK, enough is enough." A number of people saw the direct effects of this growth in the form of the clear cutting of forests where they had camped or skied, the build-up of open fields where they had roamed, or the culverting of streams where they had played.

In Norway, a series of poisonous algae blooms on the seacoast and, above all, the nuclear accident at Chernobyl, made fears of pollution and radiation particularly strong. Elin Enge, a leader in the effort to reduce consumption and promote solidarity with the Third World, spoke for others whose vacation refuges were contaminated by the fallout from Chernobyl. Referring to a national park that many have called the heart of Norway, she observed:

If Dovrefjell ever falls, to me, that means the world is really collapsing. So when the Chernobyl accident happened and the downfall came, we couldn't eat the fish, and we had to be careful about eating the sheep. You could eat the fish in the lake once a week, but not more than once a week, otherwise you had too much radioactivity. In your own sanctuary . . . I mean, this is a religious place for me, these mountains are, so when that is threatened, it was an impetus for my work.

### *Education*

In the sample overall, education (in the form of inspiring teachers or classes) figured fifth in importance. Like membership in organizations, education was coded only when it was described as the source of significantly new or deepened environmental attitudes. It was not coded if someone had already decided upon an environmental career and then proceeded to take necessary courses. Some people had teachers who involved them in field work or other environmental investigations that left a lasting impression. Some were



caught up by a general mood of student organizing and demonstrations. Others were given internship positions where they had a first taste of the career that they subsequently selected. Except for one case in which a person attended a Steiner primary school, all references to education related to junior high, secondary school, or the university.

Most significant school memories featured opportunities to take action, rather than passive classroom learning. Sometimes teachers introduced local issues, and sometimes they took advantage of preexisting concerns. Rune Haaland, a leader of Bellona, a Norwegian organization that investigates and confronts polluting industries, recalled such a teacher.

My first concern about the environment was due to the fact that 40 tons of fish were lying dead near a local lake in 1973, when I was 13. Because of pollution from both industry and the farmers—too much nitrogen and phosphorus. Large amounts of green algae were poisoning the water. This happened every year in the summertime when there was much sun. Then the ecology of this lake totally collapsed. In school they had a very good biology teacher, so we made some tests of the water quality and we learned about the ecology. That was the reason I was getting more and more interested in ecology. . . . So I think it was the right climate to create an environmentalist.

#### Other Sources of Inspiration

Remaining sources of commitment, mentioned by a third or less of the combined sample, were predominantly attributed to the university years and adulthood. In the university and later adulthood, friends were often the catalyst that prompted someone to join an organization or protest move-

ment or to apply for an environmental job. Once in a career position, people's understanding of issues, and corresponding sense of commitment, sometimes became transformed. Similarly, books sometimes inspired new understanding and decisions. With age, religious beliefs and ethical principles assumed increased importance. Concern for the life quality of future generations was rarely mentioned as a direct motivation, despite the fact that most respondents were parents or grandparents.

#### Life Patterns and Persistence

After the preceding sources of environmental concern and action were identified, they were analyzed chronologically. For each respondent, I created a chart that listed each motivation as it was named, under childhood, the university years, or adulthood. Figure 1 summarizes the results of this chronology.

The figure represents a composite *ideal type* of participants' reconstruction of the sources of their activism. An *ideal type*, as introduced by Weber (1949), is a form of interpretation in social research that presents an idealized scheme with which the real situation or action can be compared. It serves as a generic description, which illuminates characteristics of numerous instances, even though no particular case may exactly correspond. Similarly, no single person claimed all of the sources of concern and action presented in Figure 1, but the fact that most people described three to five forms of experience demonstrates that some converging combination of influences was typical.

As Figure 1 shows, the influence of family members and time outdoors in natural areas is predominantly associated with childhood, from early childhood through the secondary school years. Beginning with the university years, friends become important role models and sources of encouragement and remain so into adulthood. It is the same with books, whereas concern for abstract principles of religion or ethics first emerges as significant in adulthood.

Events that spur concern for habitat loss, or concern for social justice, occur most often in childhood, although they may figure at each age. Concern over less visible problems of pollution or radiation becomes more salient in adulthood. Education becomes important in the junior high through university years. At every age, organizations offer opportunities to encounter the environment and to join with others in action. Finally, the influence of experiences on the job and concern for the future of children and grandchildren belong to adulthood.

Members of the Norwegian sample were asked not only why they became involved in environmental work but why they persisted in it. "Were there ever moments when you were ready to give up the effort?" they were asked. "What strengthened you to go on?" Two answers predominated: a commitment to principles of life or caring (46% of the Norwegian sample) and the enjoyment of challenge and cooperative effort (23%). Three quarters of those who emphasized a commitment to principle were more than 40 years old, whereas all of those who emphasized the pleasures of a good fight and its comradeship were under 40. Both reasons for persistence, nevertheless, can be described as intrinsic satisfactions—the sense of integrity of living up to internalized values or the sense of competence of meeting challenges or working effectively with others (De Young, 1996).

### Recommendations for Effectiveness

An understanding of how people learn effective environmental action presupposes a definition of effectiveness. The measure used in this study, which formed the criterion for selecting sample members, was a demonstrated ability to accomplish at least some goals. How to achieve this end is more difficult to define. What knowledge, skills, and personal qualities prepare people for success? This question was presented to participants, who were asked, "To a young person starting out, full of zeal to protect the environment, what advice would you give about how to work effectively?"

Just as participants in both countries showed basic agreement about personal sources of commitment, they showed similar strong agreement about personal resources for effectiveness. In both countries, they named an average of three ingredients for success, which clustered around four answers, followed by more scattered responses. The four most frequent recommendations were to be well informed about issues, to work within an organization, to be politically active, and to conserve your energy and morale (Table 4).

In one form or another, "know your facts" was the most frequent advice, ranking first in frequency in the United

States and second in Norway. Some respondents recommended taking formal courses in biology, ecology, and chemistry, but most people referred to self-education about a chosen issue. Have accurate facts that warrant your concern and that can stand up against opposition attempts to discredit you, said nearly three quarters of Kentucky respondents and nearly half of Norwegian respondents. In terms of knowledge, several respondents noted that familiarity with the economic and political means to find solutions was as important as an understanding of problems. Effective activists need not only to be able to identify and document problems, but also to find solutions that depend on knowing "the roles and rules of the game" and the influential players. They also need to understand how problems appear from different sides, as a foundation for dialogue, coalitions, and when necessary, compromise. As Ralph Madison, a Kentucky chemist who "retired" into full-time volunteer work, observed, "Of course, you have to have enough bias to keep you going, but it should be a bias which is balanced. . . . You've got to be able to look at both sides and weigh the situation. Otherwise, people won't take you seriously."

Given the amount that needs to be learned, it is not surprising that many respondents recommended that people join an environmental organization, where they could learn from others as well as gain greater effect. The importance of friendships among members, as an incentive to join and as a support during periods of stress or frustration, was also noted by many. Membership in an organization, however, was mentioned by 88% of the sample in Norway but only 33% in Kentucky. Perhaps this difference reflects Norway's orientation to collective cooperation, as a socialist democracy, in contrast to the ethos of individual achievement in the United States. It may also reflect the fact that Norway has a highly visible national organization for young people, Nature and Youth. Begun as a school nature study society in 1962 and later integrated into the Society for the Protection of Nature (Norway's largest environmental group), Nature and Youth serves members from ages 15 through 25 and has its own independent direction and agenda. Many of Norway's leading environmental figures have graduated from this organization, and its reputation for bold action makes it an attractive channel for young people's concern and energy. Twelve Norwegians recommended membership in this organization specifically. A few mentioned Blekkulf, the partner organization that the Society created in 1989 for 6- to 15-year-olds. Both groups demonstrate the potential for youth organizations to attract and train activists on a national scale.

In both countries, one quarter to one third of respondents recommended political action. In the United States, this invariably meant legal action within the political system, with an emphasis on the state and local level where citizens could have direct contact with their representatives. Sidney Cornett, an Appalachian activist, expressed this view—that one of the most effective channels is to organize "to get peo-



**TABLE 4. Ingredients of Effective Action (% Mention Rate)**

Recommendation	Kentucky ( <i>n</i> = 30)	Norway ( <i>n</i> = 26)	Total ( <i>N</i> = 56)
1. Be informed	73	46	61
2. Join an environmental organization	33	88	59
3. Be politically active	33	27	30
4. Conserve yourself	30	27	29
5. Understand your own interests, motives	13	15	14
6. Be patient, persistent	23	4	14
7. Use the media, communication skills	10	15	13
8. Build a broad base of support	10	12	11
9. Use honest, nonviolent means	7	15	11
10. Follow a sustainable lifestyle	17	4	11
11. Maintain a practical idealism	10	8	9
12. Prepare for an environmental career	13	0	7
13. Miscellaneous	13	15	14

*Note.* Average number of responses per person = 3, range = 1–5.

ple involved, and to get them to hold their elected officials accountable for what they're doing." Three Norwegians, however, recommended nonviolent civil disobedience when conventional political means fail, in keeping with Norway's dramatic history of mass sit-ins to block the construction of hydroelectric dams (Reed & Rothenberg, 1993). As Rune Haaland noted, "In Norway, it is acceptable to take illegal action, if you have good documentation, and if you have tried other types of ways, and if you do it in a nonviolent way."

The fourth- and fifth-ranked recommendations (with two recommendations sharing fifth place) reflect seasoned activists' concern to prevent burn-out and the ineffective scattering of energy. They relate to learning to conserve energy and morale, understanding one's own motives, and having patience and persistence. Regarding morale and energy, several respondents noted the need to set feasible concrete goals, which in practice usually mean local goals, where some relatively short-term successes would be possible, and to notice successes, no matter how small. Others stressed the importance of not taking oneself too seriously and maintaining a sense of balance by setting aside time for family, friends, or the sheer enjoyment of the outdoors. Karen Armstrong-Cummings, the director of a Kentucky environmental organization, observed that in the long run these approaches are more effective, because they enable people to continue working on environmental issues until age 75 or 80 and sharing their experience with those who are younger, rather than burning out by age 25. Other people counseled the need for self-examination to understand one's principles, interests, and motives, and therefore the

most satisfying way to focus energy. Finally, some urged patience and persistence, the understanding that whatever the outcome of individual "battles," the larger "war" is a global reorientation of human relationships with nature, to which every action contributes.

Remaining recommendations, made by 15% or less of the participants at any one site, were primarily practical: learning how to use the media and other communication channels, building a broad base of support, using honest and legal means to achieve one's end, balancing idealism and practicality, and getting an education for an environmental career. Six people noted that activists need to exemplify sustainable practices in their own lives. Miscellaneous suggestions included traveling to see international connections among issues, teaching one's own children an environmental ethic, picking precedent-setting issues, and working to replace consumer-driven capitalism with an economy of low consumption.

### Discussion

The preceding findings are purely descriptive. They summarize effective environmentalists' own reconstructions of the experiences that have led them to feel connected to the environment and committed to protect it. As such, they lack the force of findings from longitudinal research, and they lack a control group that could determine how much these people's memories differ from those of people who are apathetic or opposed to environmental protection. Nevertheless, descriptive phenomenological research of this kind has important insights to offer. It is a necessary foundation for the construction of theories that are grounded in people's

own understanding of their experiences and actions. For although longitudinal research may give more accurate measures of the actual fact of people's environmental experiences, whether or not people remember and draw upon these experiences depends on how they filter and evaluate the past in the context of their present needs. As Neisser (1988) argued, what matters most to us as we carry out our lives is not the past as it actually happened, but whether, and how, we use the past.

In Hungerford and Volk's (1990) model of the determinants of responsible environmental behavior, the major "entry-level variable" is *environmental sensitivity*, which functions as a prerequisite or, at the least, a variable "that would enhance a person's decision-making" in determining to act responsibly (p. 11). Autobiographical research, such as this study, sheds light on the types of memories that form this predisposition to make responsible decisions.

Interview approaches such as this one do not have to be limited to exploring the meaning of life events over long spans of time. They can also be used to identify what young people remember as salient and meaningful after the close of a formal EE experience. As Bartlett (1932) first noted, once people construct their own account of an event in memory, this account tends to remain remarkably persistent over time.

Just as EE research must accommodate people's own understanding of events, researchers in EE must also accept that they can never achieve a final unchanging model of the development of responsible environmental behavior apart from the effects of history. Social research, like society, is embedded in history. So, specifically, is EE research: Not only is the nature of environmental experience subject to historical change, but so are the ways in which participants and researchers select and interpret experience. As Baltes and Nesselroade (1980) showed, even longitudinal research cannot explain human development validly unless the effects of history are factored in.

The fact that this is only the second study to find that social as well as environmental concerns can form a path of entry into environmental action may reflect these processes of change. In part, this finding may be explained by the diversity of issues that respondents covered, which is broader than in any previous study. No comparable study has included activists who represent the "not in my backyard" movement, who are primarily concerned with protecting the safety and livability of their communities. Nor have other studies included people who belong to Third World solidarity groups that seek to reduce consumption in industrialized nations and to share the earth's resources more equitably with the poor. Such groups are an important wing of the environmental movement in Norway, other parts of Scandinavia, and northern Europe. In historical context, however, this breadth of issues itself may be seen to reflect the broadening of the environmental movement from its origins in wilderness conservation and preservation to encompass the "not in my backyard" movement, since the 1970s, and Third

World issues, after the Earth Summit in 1992. As the environmental movement changes historically, it will attract new types of people, and its participants will understand their relationship to the environment in new ways. Environmentalists will draw on new areas of memory and experience in constructing their "ecological identity" (Thomashow, 1995).

In considering whether this sample is representative of the contemporary environmental movement, another equally critical question may be whether these people's degree of activism sets them apart from ordinary levels of good citizenship. In terms of responsible environmental behavior, their achievements have been extraordinary: They have secured an amendment to the Kentucky state constitution to overturn the "broad form deeds" that allowed coal companies to strip mine land without a property owner's consent, forged a Norwegian alliance of more than 100 environmental and social justice groups to press for better national and international environmental policies, created a comprehensive EE program for a large metropolitan school district, and led many successful (and some unsuccessful) fights to clean up rivers and dump sites. Is it possible that these highly committed people's paths of development differ essentially from those of more ordinary good citizens who simply take out the weekly recycling, turn off unneeded lights, and vote for "green" candidates?

The available evidence suggests that people who show responsible environmental behavior on the small scale of simple daily habits tend to share some of the same past experiences as the people in this sample. As noted earlier, Sia (1984) created an environmental sensitivity scale that included items about whether people spent time outdoors in natural areas as children, had parent or teacher role models, or read nature books. Members of the Sierra Club and Elderhostel visitors at a nature sanctuary who reported more of these experiences also tended to report more actions like recycling, signing petitions, and composting (Sia, Hungerford, & Tomera, 1985-1986). Palmer (1993) and Palmer and Suggate (1998), in an international questionnaire study of environmental educators, found that most respondents reported some routine good environmental habits and, at the same time, positive outdoor experiences and positive role models among family, friends, or teachers. On the basis of these limited comparisons, the types of experiences reported here appear to be associated with adult environmentalism in small things as well as large.

Research on community giving and volunteering in general supports the importance of role models and organization membership, as in this study. In a large interview survey reported by Hodgkinson (1995), people who gave time and money to improve their community were also likely to have had a family member or other adult who set an example of helping others and to have belonged to a church or civic organization in childhood or adolescence. These experiences appear to contribute to a general predisposition to community participation and altruism. Specific aspects of

these experiences appear to turn this predisposition into specific directions (e.g., in this case, whether adult role models care for the environment or organizations focus on environmental issues).

Environmental educators need not only to understand how to prepare people for a general level of environmental citizenship but also to produce leaders who can mobilize others to take action. The participants in this study embody this type of leadership. For this reason alone, the types of formative experiences that they describe deserve consideration.

The experiences that the members of this study emphasize, however, challenge a narrow definition of EE. Teachers, other students, and courses in formal school settings ranked fifth in number of mentions among environmentalists in Norway and fourth in Kentucky (even though conservation or environmental education was part of the Kentucky state curriculum from 1944 to 1984). In numerous similar studies, formal education has ranked second, third, or fourth (Chawla, 1998). In this and other studies, informal outdoor experiences and experiences of natural areas have ranked first.

These consistent results suggest that—important as school-based instruction may be—environmental educators also need to seek ways to foster the type of out-of-school experiences that figure so saliently in environmentally committed people's memories. The multiple in-school and out-of-school influences that people describe point to the need for a broad definition of EE that includes not only classroom instruction and field studies, but also (a) preservation or creation of neighborhood natural areas to ensure that informal experiences of nature are an accessible part of children's everyday lives, (b) outreach to parents to encourage them to serve as role models of care for nature, and (c) support for a variety of community organizations where children can find adult and peer role models as well as opportunities for collective action. Many community-based EE programs already demonstrate how these approaches can be implemented, and good models of how to design and use naturally landscaped schoolyards and gardens or how to involve children in the care of the local community have recently been compiled by Rivkin (1995), Moore (1997), and Hart (1997). This broad definition of EE will require broad-based alliances of educators, local officials and organizations, landscape designers and planners, developers, recreation and park directors, and public interest media. This broad definition, it may be noted, corresponds to the education recommendations of the President's Council on Sustainable Development (1996).

Even as EE researchers move forward in their understanding of formative experiences, they need to accept limits to what such experiences can explain or predict. As I noted at the beginning of this article, in life paths, individual interests and abilities interact with personal circumstances and historical opportunities and constraints. Therefore, the actual course that lives take is shaped by individual choices and historical chances. If it is defined broadly—as

informal learning out of doors and nonformal learning in organizations as well as formal learning in the classroom and the field—EE can increase the opportunities, and thus the chances, that lives will take an environmentally responsible form.

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