

Can Devotion to Nature be Nurtured?

**The Effects of Childhood Experiences with
Nature, Environmental Problems, and Family Values
on the Development of Personal “Pro-Environmental” Attitudes and Behaviors**

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Introduction

Human impacts on our environment are causing increasing concern among scientists. But people in the United States and other countries have a wide range of responses to suggestions that individuals, communities and economic or political organizations need to change behaviors and “save” the environment or even sustain

preferred behavior. They also may have great “faith” in the capacity for human technological innovation—the idea that we will adapt our way of life with more efficient technology to suit our growing needs. These conflicting points of view demonstrate how thoroughly environmental issues are tied to their social context.

Understanding how people form environmental perspectives will provide a sociopolitical background that is vital when responding to many environmental problems. Why is there such disagreement in the ideas about how humans should regard the natural environment? What are the developmental factors that influence the way a person thinks about her role and responsibility to protect nature? It is important that Environmental Studies look at the person in her social context to explore the ways in which people form their environmental attitudes and values.

The focus of my research is to investigate why some people are committed to environmental protection—and hence exhibit “conservation behaviors”—while others are not. These conservation behaviors include (but are not limited to) recycling, choosing to ride a bike or walk rather than drive, driving a more fuel efficient car, making consumer choices based on ecological considerations, limiting consumption, and supporting organizations, policies and political campaigns that not only believe environmental issues are important, but are offering promising solutions. A lack of commitment may either stem from not believing a certain environmental problem exists, not believing an individual can do anything to change it, not having the resources and capability to pursue change, or perhaps simply not caring enough to change personal behavior.

My hypotheses for this investigation of commitment to environmental protection concern two aspects of an individual’s development—both *what* certain individuals

believe and also *how* they have developed those ideas. Regarding *what* individuals believe, my first hypothesis is that individuals who consider themselves “environmentalists” are more likely to feel a personal responsibility to protect the natural world. If a person does not believe there is an individual responsibility for environmental protection, she would not be compelled to show any conservation behavior. This notion of responsibility will be connected to other aspects of the individual’s moral development, as I hypothesize environmentalists will have a much broader conception of what deserves protection. Likewise, people who adopt particular behaviors based on the sentiment of responsibility may also believe individuals hold a good deal of control over environmental problems. Environmentalists must feel they are having a personal impact and relieving part of the problem—or else focusing individual behavior on environmental protection would be hopeless.

Considering *how* certain individuals develop these ideas, there are several factors that come into play from both the social and natural environment. I hypothesize the strongest influence on an individual’s beliefs will be parental attitudes and behaviors.¹ However, for environmentally dedicated individuals who diverge from their parent’s concerns, I believe they will have developed their environmental commitments because of some influential childhood experiences with nature. These experiences may include learning about environmental problems in school, being directly impacted by an environmental problem, or perhaps developing a notion of spirituality that is connected to nature and other living things in the world. For individuals who are not concerned with

¹ Although it is common in this modern era for children not to grow up with their biological parents, for purposes of this study, “parental attitudes” are used as an over-arching category for attitudes and values of the most prevalent guardian. All of the participants in this study grew up with at least one biological parent.

environmental problems, aside from parental attitudes and values, I hypothesize that they will have had less experience with environmental problems impacting them directly.

Additionally, religious individuals with no environmental commitment will more likely hold a religious practice or interest that does not include principles for the treatment of nature or connection to other aspects of the natural world.

This study will contribute to the interdisciplinary understanding of human behavior if we can reach qualitative conclusions about the influences that govern certain types of attitudes and behaviors. Furthermore, in this modern era, if environmental problems increasingly warrant our attention and commitment, environmental educators,

Of particular interest are theorists who have explored larger contexts of influence and the interplay between developing persons and their changing environments.

Bronfenbrenner (1979) discusses activities, roles and relationships within settings and their larger cultural context in order to frame a “social ecology” of human development.

Similarly, Weisner (1984) describes an “ecocultural niche” of activity settings that result from adapted family responses to opportunities and constraints of the environment.

These authors are only two of many influential theorists who have developed ways of thinking about our social and “ecological” influences.

It must be noted that after the 1960s, an even more crucial theoretical transformation took place, as there was a desire to apply social psychological knowledge to a general concern for the natural environment. The result was a theoretical emphasis on the possible effects of the physical environment, “the ecological context in which behavior was embedded” (Krupat, 1985, p. 5). Human development evolved into an interdisciplinary approach of social and cultural psychology, emphasizing the importance of both the social and physical environment. This understanding is crucial to any study of developmental effects on attitudes and behaviors regarding the human relationship with nature. For instance, if particular physical environments influence human development in particular ways, how do experiences with the *natural* physical environment, or absence of such experiences, play a role in influencing human responses to the natural world? Before we can take up this fundamental question it is important to address discoveries in the field of human development concerning the complex relationship between persons and their “social and physical” environments.

One must be careful, however, not to assume this learning and shaping of reality is strictly mediated by social interaction. Kay Milton (2002) explains that in order to learn from social interaction, we must treat it as a source of information. Similarly, we must be able to treat our non-social environment as another source of information. She concludes, “In order to examine what kinds of experience generate what kinds of knowledge, we need to consider a human being’s relationship with their total environment, not just their social environment” (Milton, 2002, p. 41). This is congruent with the findings of Krupat (above) and pushes theorists Bronfenbrenner and Weisner to add the natural environment to their set of developmental influences. Milton’s work will be helpful when examining personal experiences with nature and how they may affect dedication to environmental

homogeneous and biased collection of people. It seems likely that this sample,

Non-activist political behaviors (e.g., joining an organization, voting, signing a petition, or writing a check)

Consumer behaviors (e.g., purchasing “green” products, recycling, reducing energy use, and alternating consumption habits)

Ecosystem behaviors (e.g., putting up bird boxes, planting sea oats, counting wildlife populations, promoting prescribed fire)

Other behaviors which are specific to our expertise or workplace (e.g., reducing waste in the production process, establishing mortgage criteria for energy efficient houses, suing a polluter, etc.)

We may say that an individual holds positive environmental attitudes if an individual displays behaviors from at least one of these categories. More “environmentally committed” individuals should demonstrate behaviors in each of these categories and a highly dedicated person will exhibit consistent behaviors throughout many aspects of their life.

connection between people and the natural world,” indicating that spirituality is a way of living that focuses on the elimination of barriers. She found several themes of spirituality in her interviews with eighteen environmental activists. These themes include connectivity to the natural environment (and to others, God, everything), tolerance of other religious beliefs, creativity in terms of ideas that help protect the environment, care for the earth, a guiding ethic that it is wrong to degrade the natural world, as well as a feeling of being “called” to work on behalf of the natural world. McDonald provides valuable conclusions in that she believes spirituality is a way people find meaningful connections between self and other. Spirituality is an outward manifestation of an individual’s worldview and ideology.

These ideological beliefs, so deeply connected to the nature of environmentalism, are part of the reason some people reject environmentalist principles in the first place. Because concern for the environment evolves on such a personal level—and ideas about how humans should behave in relation to the natural world are ambiguous and variously interpreted—it is no surprise that some people would not be inclined to dedicate themselves to environmental protection. Staats describes a “social dilemma” involved in performing pro-environmental behaviors as he states: “Individual decisions in which personal advantages are maximized will harm the collective interests of society by doing great damage to the environment” (Staats, 2003, p.193). Many individuals do not want to give up luxuries—or even necessities—for public good. Likewise, individuals that *do* exercise personal restraint (for example, by not driving), are still punished by both suffering from the harm caused by the general public’s air pollution, and from a reduction in their own direct benefit from time saved and comfort. For this reason, it is particularly

interesting to examine the psychological conditions that would form the basis of a collective reorientation towards environmentally sustainable behavior. What conditions would foster widespread ideas of owning responsibility rather than “passing the buck”?

In light of the above research, which speculates on the types of interactions and experiences that would spark individual in

The interviews were loosely divided into three parts and aimed to document three aspects of the participant's experience with nature and environmental issues:

Family background and childhood experiences (including demographic information, childhood experiences in nature, childhood activities and parental attitudes).

at. Value lies in what each interviewee emphasizes and perceives as “important” in their childhood experiences and the development of their beliefs.

The subjects of the study were undergraduate students, both male and female, ages eighteen to twenty-five. The sample

interviewees, monitoring my facial expressions and by continuing to interview participants until I had attained a variety of experiences.

Some participants were recruited by contacting all of the Environmental Studies concentrators and asking if they would like to participate in this study—seven respondents were interviewed. A number of other students of varying concentrations were recruited through personal contacts and random approaches, in the case of students at the University of Illinois, Chicago. I hypothesized that Environmental Studies concentrators would more likely be highly dedicated to issues regarding the environment, although there are many routes to responsible environmental behavior other than concentrating in that field. Similarly, concentrating in Environmental Studies does not necessarily mean you hold a personal interest in protecting the environment. For this reason, I tried to find both Environmental Studi

beginning with the letter “A” and all individuals who did *not* consider themselves environmentalists with names beginning with the letter “B.” This will hopefully make differing viewpoints easier to follow for the reader. The method of categorizing participants based on self-identification was based on Staat’s idea of “self-identity as the salient part of an actor’s self which relates to a particular behavior” (Staat, 2003, 196). Therefore if the participants, themselves, consider their attitudes to be of one nature or the other, that is what should be the basis of an analysis of their value development.

Within the eight “non-environmentalists,” it is important to note that three of them (Benjamin, Brian and Beth) added an explanation to the effect that they believe environmentalism is important and necessary; however, they, themselves do not “do enough” in order to consider themselves “worthy” of the environmentalist title. This is interesting as it raises the issue of judgment—whether it is self-judgment or judgment in the eyes of others—that is intimately tied to environmentalism. This emphasizes that environmental problems are not only scientifically based, but are considered moral problems as well. The moral aspect entails social ideas of what are “right” and “wrong” actions to take when considering the environment in social policy and personal behavior.

Demographics:

The ethnicities of participants in the interviews were primarily Caucasian and South Asian (resulting from the relative lack of cultural diversity at the University of Chicago). Twelve participants had grown up entirely in the United States, while one man, Avery, had spent most of his childhood in an urban city in Poland; Amanda had also spent two years living in Poland; and Blake had grown up in rural India. I decided to

include these three participants in my analysis of the data because their own cultural experiences will bring additional insight to the questions and themes in play. Since they each have spent at least some time in the United States, I suspect they would be able to include ideas and experiences from both cultures. Aside from ethnicity, three participants explained that they spent the majority of their childhood in a “rural” setting (Brenden, Brice, and Blake), while four lived in very urban settings (Bridgett, Beth, Brian, and Avery). The remaining eight grew up in towns and suburbs of medium size. In addition, eight participants said they grew up in “low-middle” or “middle” class households, while seven described their families as “upper-middle” or “upper” class. **Table 1** displays participants and their basic demographic information.

Table 1

Interviewees and Their Demographic Information:

Name	Age	Gender	Ethnicity	Social Class	Place of Origin	Size of City of Origin	Self-Described “Environmentalist”?
Abby	20	F	Caucasian	Upper-Middle	Ogden Dunes, IN	Suburban	Yes
Alex	20	M	Caucasian	Upper-Middle	Bloomington, IL	Suburban	Yes
Amanda	20	F	Caucasian	Upper	Greenwich, CN	Suburban	Yes
Amber	20	F	Caucasian	Upper-Middle	Madison, WI	Suburban	Yes
Andrew	20	M	Caucasian	Middle	Rhode Island	Suburban	Yes
Angela	20	F	Caucasian	Low-Middle	Boulder, CO	Suburban	Yes
Avery	21	M	Caucasian	Middle	Poland	Urban	Yes
Benjamin	22	M	Asian	Upper	Muncie, IN	Suburban	No
Beth	20	F	Caucasian	Middle	Chicago, IL	Urban	No
Blake	22	M	South Asian	Middle	Ahmedabad, India	Rural	No
Bob	23	M	Caucasian	Upper-Middle	Arlington, VA	Suburban	No
Brenden	22	M	Caucasian	Middle	Missouri	Rural	No
Bria	21	F	South Asian	Upper-Middle	Indianapolis, IN	Urban	No
Brian	21	M	African American	Middle	Chicago, IL	Urban	No
Brice	22	M	Caucasian	Upper-Middle	Kennett, MO	Rural	No

Family Background and Childhood Experiences:

The first major part of the interview involved describing childhood experiences that related to a number of topics including family practices, schooling, religious

involvement, personal hobbies, and experiences with nature. I will be describing five

Self-described environmentalists were more likely to describe their parents as having concern for the environment, but this was by no means unanimous. Andrew and Brian described both parents as having “a lot” of concern. Amber and Angela described their mothers as being particularly concerned with protection of the environment. Amber explained, “My mom is *very* concerned. She never takes plastic bags from the store when she shops. And in a restaurant, she won’t even take straws from the waiter.” Abby, Alex, Amanda, and Avery described their parents’ environmental values as somewhat practical or not “as extreme” as their own interest. Even in these cases, however, participants told of some exposure to conservation behaviors—all mentioned recycling and all told of a childhood experience that included some knowledge of environmental issues or varying degrees of family conservation behaviors.

The fourth set of observations relates to education. The type and size of participant’s schools were recorded as well as information regarding whether or not the participant was ever taught about environmental problems in school. Alex, Amber, Angela, Andrew, Brian, and Blake all attut envBlake a.0006 Tge ofr taught

example, because there are equal numbers of “environmentalists” and “non-environmentalists” who remember environmental education, perhaps differences lie in how much this education *impacted* certain individuals. A future study could probe the topic of education further, asking more specifically about how involved students were in learning about environmental problems or how involved the teacher was (and if this impacted the student’s perception) in these types of lessons.

The fifth and final set of results in this section on childhood experiences relates to outdoor experiences during childhood and the formation of emotional connections to the natural environment. When asked, “what types of activities were you interested during childhood?” the majority of participants responded with formal activities (such as sports, music, drama, etc.). There was no significant majority of environmentalists or non-environmentalists who spoke of certain structured outdoor activities (such as soccer or tennis) and Amber, Andrew, Brenden, and Blake all brought up unstructured activities such as playing in the street with friends, playing outdoors, and fishing.

There were, however, a few accounts of significant outdoor experiences—usually among the “environmentalists”—when participants talked about vacations or trips their families went on during childhood. Boris, Brian, Abby, Amanda, Amber, Angela, and Avery all mentioned hiking or camping during childhood. This may relate to parental attitudes—perhaps more “environmentalist” parents would be inclined to take their families on vacations “in nature.” Boris, Brice, and Amber remembered visiting national parks. One explanation for why there was not a majority of environmentalists that mentioned trips to national parks is that these vacations may stem from not only an environmental interest, but a *historical* one as well. The remaining participants (a non-

environmentalist majority) only mentioned places they visited (for example, Florida, Mexico, Japan) or reasons for the vacation such as “to visit family.”

Another section during the interview where participants had the opportunity to discuss connections to the outdoors or specific experiences with nature was in relation to a question directed to the self-described environmentalists: “Were there any significant persons, events, or experiences that you believed contributed to your interest in the natural environment?” Abby, Amber, and Angela each gave detailed descriptions of their childhood experiences with nature. Abby and Angela described the beauty of their childhood environment, explaining they were almost “in awe” of the natural world. Amber gave a specific memory of the woods by her house, describing it as a “sanctuary” where she could refresh from the “cars and sound and noise.”

Present Behaviors:

The second part of the interview was devoted mainly to understanding current attitudes and behaviors of participants. Loosely following Stern’s ideas (2000) about differing realms of pro-environmental behavior (see p.10), participants were asked about their conservation behaviors. All of the self-described environmentalists reported that they currently recycle—two added that they at least *try*

limiting meat consumption, buying organic or fair trade products, etc.). Two of the “non-environmentalists” currently limit their meat consumption for cultural or religious reasons.

In regards to political activism, six out of seven environmentalists are registered to vote, four are registered democrats, and two marked “other” on the survey (unspecified if green party, libertarian, etc.). Seven out of eight non-environmentalists are registered to vote; four are registered democrats, two republicans, and one unspecified. All of the

question was not applicable to Alex, Andrew, Brenden and Beth, who were neither religious nor spiritual. **Table 2** displays each participant's response:

Table 5

Religious and Spiritual Practice of Interview Participants

Name	Religious?	Spiritual?	Do nature or environmental concerns play a role in this practice or interest?
Abby	No	Yes	

Present Attitudes and Ideologies:

The final portion of the interviews attempted to get a clear idea of what peoples' attitudes and values regarding the environment currently are. Three main questions were asked in order to explore participants' judgment of nature's "rights," individual responsibility to protect nature, and individual control over environmental problems. Participants were first aske

gave similar reasons agreeing, “it is a public good.” Benjamin summarized this point of view saying: “No. Rights are obligations. We are not obligated, but it might be in our interest. Nature does not have the right over us though.”

The final cluster of responses avoided a direct answer. Blake explained that he had never given it much thought, “Probably, but I do not value them. I haven’t thought about it.” Brenden avoided a position saying, “I am reluctant to accept arguments based on ‘intrinsic value’ and such.”

The second question that participants were asked in order to explore their ideas about the individual’s role in relieving environmental problems was, “To what extent do you feel individuals have *control* over environmental problems (such as pollution, diminishing resources, consumption, etc.)?” Participants responded in essentially two ways. Some took the stance that individuals have *a lot of* control and were optimistic with this idea (as Alex said, “Change is important on all levels. Add all of the individual actions up and we have a lot of control”). Others took the stance that *in theory* individuals have a lot of control, but there is a practical constraint because we are currently not doing enough. Boris’ response exemplifies this idea: “We have complete control, but we won’t do anything...we’re too apathetic.” Andrew echoed, “If we wanted to, we would, but it’s not a priority now. The government might have more [control] than individuals at this point.”

Benjamin gave a good insight as to why individuals may not be exercising control. He explained, “It’s based on a buzz. Things will get done if there’s a buzz, an interest. And that always has to come on a very individual level.” Avery, Blake, and

Beth all described a limited amount of control, constituting the third and final group of responses to this question.

The last question regarding present attitudes towards environmental protection was, “To what extent do you feel it is *your responsibility* to ensure protection of the environment?” As predicted, environmentalists agreed that individuals have a great

ineligible by age constraints, leaving thirty-four surveys to be tabulated and analyzed for data. **Table 3** outlines the specific ethnicities of survey participants.

Table 3

Race and Ethnicity of Survey Participants

Subject	Number	Percent
Asian or Pacific Islander	13	38

(which proposes that the two variables are *not* independent, i.e., that there is a significant relationship between the two). In these tests the chi-square statistic, X^2 , must be 3.84 in order to reject the Null Hypothesis and proclaim a relationship between the two variables.³ **Tables 4 and 5**, on the following page, display contingency tables comparing environmentalism with the variables of Social Class and Parents' Concern for Environmental Problems. Chi-square tests were also performed for the variables of Environmental Education and Amount of Television Watched During Childhood, but because these variables did not prove to have a significant relationship with environmentalism, these tables are located with other non-significant chi-square tests in Appendix C.

For each contingency table, I have included the total number of people who answered each response as well as the percentage (marked in red in parentheses). The chi-square statistic is marked in blue.

Table 4: *Environmentalism and Social Class:*

	Environmentalists	Non-Environmentalists	Totals
Identified as upper-middle or upper class	7 (50%)	5 (25%)	12
Identified as low or middle class	7 (50%)	15 (75%)	22
Totals	14	20	34

Chi-Square = 2.26

³ 3.84 is the critical value of X^2 , testing significance within 5% for a 2 x 2 table with 1 degree of freedom (Freund 2001, page 391, Table III page 573).

Table 5: *Environmentalism and Parents' Concern for Environmental Issues*

	Environmentalists	Non-Environmentalists	Totals
Parents had concern	13		

behaviors, charitable behaviors, and spirituality between the two

Table 7: Environmentalism and Charitable Behaviors

	Environmentalists	Non-Environmentalists	Totals
Volunteers or actively supports a charitable organization	15 (71%)	14 (50%)	29
Does not volunteer or actively support a charitable organization	6 (29%)	14 (50%)	20
Totals	21	28	49

Chi-Square = 2.27

A similar comparison is made in **Table 7**, the relationship between environmentalism and “charitable behaviors.” Survey participants who defined themselves as “environmentalists” were more likely to also volunteer or donate to charitable organizations (*any* charitable organization, not just environmentally affiliated ones). Although there are still a significant number of non-environmentalists who have these charitable behaviors, one can only speculate that environmentalists are perhaps more likely to feel responsible for other social problems.

Table 8: Environmentalism and Spirituality

	Environmentalists	Non-Environmentalists	Totals
Identifies as “spiritual”	18 (86%)	17 (61%)	35
Does not identify as “spiritual”	3 (14%)	11 (39%)	14
Totals	21	28	49

Chi-Square = 3.68

One of the most striking comparisons of the survey is shown in **Table 8**—the relationship between Environmentalism and Spirituality. This relationship produced the closest statistic to the critical value of X^2 , supporting McDonald’s work of 2001 on the spirituality of committed environmental activists.

Present Attitudes:

Finally, the third set of questions aimed to test whether there was a significant difference between the two groups regarding people who described a personal or

and likelihood to act on that perception. In regards to differing responses to Hypothetical Scenario 2, environmentalists were much more likely to prefer “Eric’s” vacation (pristine natural beauty) to “Nicole’s” (recreational activities and people to share them with).⁵

Other tests were run in order to compare the relationship between social class and a number of other variables. None of these tests proved significant and so are presented only in Appendix C. Although none of the chi-square tests in any of the three areas of questions produced a statistic that attained a 5% significance level, several of them were close enough to support the claim that further research (with a larger and more diverse sample of people) may produce significant findings. These statistics are therefore not proof, but evidence of probable and quantifiable differences between the two self-identified groups.

Discussion

There are clearly different ways that non-environmentalists and environmentalists think of their roles in relation to the natural world. Both the interviews and surveys supported the idea that present ideologies concerning nature and environmental problems correlate with people’s attitudes and how they choose to behave. One of the most telling themes for how individuals justify their actions is individual responsibility, displayed by participants’ discussion of their active or inactive role in ensuring environmental protection.

Participants differed in their answers explaining how much responsibility each person has, as a result of differing representations of the future. Scientists, political

⁵ This preference was verified as truly “environmentalist” rather than classist, as

authorities, and popular culture all have a large amount of uncertainty in their predictions of the severity human impacts will have on our environment. Different representations of the future are associated with diverse behaviors and intentions in the present. In conjunction with the theories of Turiel and Shweder, stated at the beginning of this paper, individuals absorb information that is available, yet construct for themselves a way of living that they feel reflects what is important, based on their own experience.

The question regarding individual responsibility is he

An exploration of responses to Hypothetical Scenario #2 may produce additional insight regarding different representations of the future. As was stated in the results, environmentalists were more likely to prefer “Eric’s” vacation—a calm, pristine, secluded lake that does not allow motorboats and is not heavily visited. We might speculate that environmentalists need these “escapes” into nature in order to refresh their spirit and mind. Environmentalists may feel as though we are heading towards an earth with “too many” people and “too much” technology. A calm and quiet vacation would offer environmentalists a chance to get away from it all and feel renewed by being in nature. Non-environmentalists, on the other hand, were more likely to prefer “Nicole’s” vacation, a much busier vacation spot with jet skiing and motorboats. Non-environmentalists are not so worried about what the future will hold. They appear to be less critical of the number of people or the amount of technology the earth can support. For non-environmentalists, enjoyment of the present day is of greater concern (as related by Boris, Brenden, Bria, and Benjamin).

One of the other significant differences between the practices of environmentalists versus non-environmentalists is the predominance of spirituality within environmentalists. Avery provided a good example for how some religious environmentalists see their role in nature (see **Table 2**). However, this study found that many environmentalists who do *not* identify as “religious” still *do* identify as “spiritual.” Nature has, in one sense, supplemented religion for these individuals. Rather than feeling connected to the greater power of God or to others who are part of your religion, environmentalists feel deeply tied to the natural world. Many religious environmentalists share this sense of spirituality. Biological “creation,” evolution, and

natural beauty have given so many individuals a sense of awe and connection to the natural world.

Although I have mentioned a strong divergence in the attitudes and behaviors of the two comparison groups, this discussion should not exclude mention of notable similarities as well. One of the hypotheses that turned out to be unsupported was the positive correlation between environmentalism and perceived control. What this study suggested, on the contrary, is that environmentalists are no more likely than non-environmentalists to believe individuals have control over environmental problems. This finding leads us to wonder why environmentalists feel compelled to act, even if they are pessimistic about how much they are relieving a problem. One explanation may be environmentalists still believe humanity can gain control (through changed systems of government perhaps). If these individuals are aiming to make change on a larger scale, and have faith in a more complex or powerful system, they are still likely to carry out the perceived “right” action on a personal level. In addition, even if environmentalists do not believe their actions in particular will change the world, they may see themselves as setting an example for others and thus should still do what is “right” simply because it is “right.”

Many of the interview and survey results support theories introduced in the beginning of this paper, about how individuals construct ideas for themselves about what is “important” in this world based on their own experience. The interviews have demonstrated that both positive and negative experiences serve as significant influences leading individuals to develop attitudes that esteem environmental protection. Abby, for

example, had a very negative experience involving the destruction of natural beauty in her hometown. She remembers:

My whole life, you go down to the beach, and you see steel mills on your sides.
And the air has always been dirty. My da

Positive childhood experiences with nature that help people form emotional connections to the environment are equally as prevalent in gaining pro-environmental attitudes as are the negative experiences previously mentioned. These positive experiences seem particularly relevant for participants who diverge from their parents' values. Likewise, these experiences may strengthen the attitudes of participants with environmentally concerned parents, making this concern more of their "own" interest. Amber gives a detailed explanation of a positive childhood memories involving nature:

When I was little, we had this sort of woods by our house. It still exists, but back then it was a lot bigger. Me and my friend used to go and run out there and get lost and hide. We would make forts, and we would pretend we were living alone in nature. In winter, we would go sledding and then go find our forts made of sticks and pretend to build little fires. We enjoyed getting out there—getting away—just being totally disconnected from our other world, away from my parents and responsibilities, and the world of cars and sounds and noise. It was really refreshing to be alone and away all by myself with nature. I always thought of it as...a sanctuary...my special place I could go.

This experience with nature is obviously very powerful for Amber. The way she describes her play area as a "sanctuary" gives the reader a clear idea of how important this place was for Amber. In fact, it was not "just" a play area. The work of David Sobel (1993) offers insight, as he conducted research on the personal meanings that children give to play areas, forts, and dens—similar to the place Amber describes above. Sobel explains, "These new homes in the wild and the journeys of discovering are the basis for bonding with the natural world" (Sobel, 1993, p. 160). Amber has obviously kept this image in her mind—a constant reminder of her connection to nature, and perhaps the devotion she holds to protect it from harm. Amber's experience also exemplifies theories of emotional connections and environmental sensitivity that Milton (2002) explored. Through enjoyment and value of this experience, care is fostered for the environment.

Although one of my original hypotheses emphasized the importance of parental concerns with environmental problems on the development of personal “pro-environmental” attitudes and behaviors, this study has proven family values to be much more inter-connected and complicated than initially proposed. Parental attitudes are in some ways connected to almost every other variable this study compared. Parents will influence how much television a child is exposed to, what sorts of activities she engages in, where the family lives, and what the family eats. An individual’s town or city of origin will influence the frequency and quality of interactions she has with the natural world. In addition, the political views of her parents as well as the political and dominant views of her surrounding community will all play a role in shaping the individual’s developmental experience.

Environmental values are by no means separated from other aspects of an individual’s personality or other aspects of their social world. The aim of asking questions related to political activism, charitable behaviors, religious or spiritual involvement was to obtain a more “complete” view of each individual and draw connections between all aspects of their lives. By asking about other charitable behaviors, for example, the interview and survey questions aimed to understand whether participants who felt responsible for environmental protection felt responsible for other social problems. The slight correlation that was found in **Table 7** calls for further exploration of other “non-environmental” behaviors environmentalists exhibit.

Limitations of the Study

Although fifteen interviews were sufficient to explore several themes regarding childhood experiences with nature, exposure to environmental problems, and family values, this study was somewhat limited in the number and diversity of participants. While the method of including participants from the University of Illinois, Chicago was intended to reduce this drawback, comparing and analyzing two different sample populations produced problems of its own. As exemplified in the comparison of Environmentalism and Television-Watching, the interview and survey produced two very different results. It was remarkable how only one of the environmentalists interviewed watched “a lot” of television growing up. However, the chi-square test from the *survey* results showed almost no connection between these two variables (see **Table 11** in Appendix C).

One positive aspect of semi-structured interviewing is that extra information ma

composed of?” However, the sample size was small and there was limited time to conduct interviews, therefore my questions were not as ideally neutral as I would

Clearly, there are several common themes of childhood experiences for participants who currently hold “pro-environmental” attitudes. Positive childhood experiences of natural areas proved to be salient in the interviews of self-described environmentalists, supporting the work of Tanner (1980) and Peterson (1982). Negative childhood experiences of environmental destruction (particularly in areas that were “personally valuable” as in the cases of Andrew and Abby) proved to be similarly significant.

interesting to analyze various spiritual practices or interests of both environmentalists and non-environmentalists by asking more neutral questions (proposed on p. 44-45). A longitudinal exploration of spirituality development may also prove insightful among environmentalists, as their conceptions of spirituality evolve with time among other aspects of their life. Finally, a more in-depth analysis of environmental education has proven to be a study worthy of investigation. Since there was an even number of environmentalists and non-environmentalists in this study who recalled learning about environmental problems in school, it seems as though more needs to be done to invoke concern and care among students than simply “mentioning” environmental problems in classrooms.

Further research must strive to evaluate individuals of much more diverse backgrounds and experiences. Similarly, while this study has explored several routes to the development of differing attitudes or values on the environment, and speculated on

framework and a set of significant preliminary data, which will advance further study of the diverse ways individuals develop environmental values.

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APPENDIX A: Semi-Structured Interview Questions

The information you provide in this interview will be recorded for transcription purposes, but remain entirely confidential. Your responses will be analyzed in my senior thesis paper to better understand how chil

Interview Questions:

Family Background and Childhood Experiences

APPENDIX B: Supplementary Survey and Hypothetical Questions

Please fill in the information below by providing written responses and circling your answers where appropriate.

Age: _____

Gender: M F

Ethnicity: _____

Highest level of Education attained: _____

College Major (if applicable): _____

Are you registered to vote? Y N Republican Democrat Other _____

Are you religious? Y N
 To what degree? Not at all Slightly Moderately Strongly Very Strongly

Are you spiritual? Y N
 To what degree? Not at all Slightly [() -ip57gly

How often did you watch TV as a child? Never Sometimes Moderately Often

How often did you read as a child? Never Sometimes Moderately Often

What type of school did you attend?

Elementary School: Public Private Approximate size_____

Middle School: Public Private Approximate size_____

High School: Public Private Approximate size_____

Were you ever taught about environmental problems in school? Y N

To what extent? _____

Do you donate money, volunteer or actively support any charities? Y N

What proportion of your charity giving goes to environmental organizations or causes?

Have you ever actively participated in promoting or protesting a political initiative? Y N

Have you ever actively participated in promoting an environmental initiative? Y N

Would you consider yourself an “Environmentalist”? Y N

To what degree? Not at all Slightly Moderately Strongly Very Strongly

Use the number scale to describe the frequency of your actions.

	Never	When it's convenient	Usually	Always
How often do you recycle ?	1	2	3	4
How often do you compost ?	1	2	3	4
-ride a bike/walk rather than drive?	1	2	3	4
-purchase “fair trade” or “green” products?	1	2	3	4
-turn off lights when not using them?	1	2	3	4

Do you take ecological considerations into your diet or dress? (limit meat, buy organic, limit fur/leather, etc.) Y N

Does an address of environmental concerns influence your decision in political campaigns?

Hypothetical Scenario 1: (Circle your answer at the end of reading the story)

Appendix C: Additional Chi-Square Tables Not Included in Results*Comparisons Regarding Background and Childhood Experiences***Table 11:**

Comparisons Regarding Present Behaviors

Table 15:

Table 19: