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## The Making of an Environmental Activist: A Developmental Psychological Perspective

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### **Abstract**

*This chapter reviews the research on environmental exemplars, or activists. General themes that have been identified in the literature include early experiences in nature, the influence of other people and organizations, opportunities for environmental education, environmental self and identity formation, and generativity. With these themes in hand, we construct a developmental model suggesting a possible trajectory toward environmental activism. We also discuss possible implications of these findings with reference to the current state of our planet and what may be done to reverse current trends. © 2013 Wiley Periodicals, Inc.*

## The State of Our World

Our planet is in trouble. Over the past century, the human population has more than quadrupled, the use of water and energy has increased 9-fold and 16-fold, respectively, CO<sub>2</sub> emissions have increased 17-fold, hypoxic marine “dead zones” are ever expanding, and our food, water, and soil contain thousands of industrial contaminants (Rees, 2008). In the face of these startling facts and dire warnings, the continued calls for action by the international community have been made over and over again (United Nations, 2012). Yet these calls have gone unheeded: Little improvement has been seen in the health of our planet (Scientific American, 2010). For Canadian academic and environmentalist icon David Suzuki, this fact is a clear indication of the failure of the environmental movement to significantly change people’s worldview about, and their behavior toward, the environment (David Suzuki Foundation, 2012). To effect significant behavioral changes requires a fundamental paradigm shift in how humans see and act in their environment. Yet how is this shift to happen?

To answer this question, we have turned to research on environmental activists to gain insight. Like other areas of exemplarity research (Bronk, King, & Matsuba, this volume; Damon & Colby, this volume; King, Oakes Mueller, & Furrow, this volume; Walker, this volume), we believe that the study of committed environmental activists can help us to better understand the processes and pathways leading to positive environmental behaviors among us all. In this chapter, we review the growing literature on environmental activists and identify the common themes emerging from this literature, particularly focusing on early childhood and adolescent experiences. We also review and expand on those papers that have proposed developmental models to explain the pathways toward environmental identity and action.

## Environmental Activists

Who are environmental activists? According to researchers, environmental activists have included people who were involved in the leadership of environmental organizations, environment-related education, land management and preservation, environmental design, ecology, and other environmental activities involving the law, lobbying, and writing (Horwitz, 1994). Environmental activists have also been identified based on their active participation in a range of environmental issues, including recycling and waste management, pollution and radiation, transportation, land use planning, and habitat and wildlife preservation (Chawla, 1999). Finally, environmental activists have been chosen for study based on their occupations or graduate work in areas such as entomology, mycology, herpetology, and ornithology (James, Bixler, & Vadala, 2010). Thus, there is great diversity in the

kinds of work in which “environmental activists” engage, and in the environmental philosophies that motivate their work.

While the kinds of work that environmental activists do and the underlying environmental philosophies that motivate their work vary widely, few studies have considered whether there are meaningful differences between the various kinds of activists. Rather, the majority of studies have tended to look for commonalities across environmentalist types. Consequently, we focus on these commonalities, acknowledging that further research is needed to study within-group variability.

## **Environmental Ethics**

Just as there are many types of environmental activists, so too are there many reasons that can motivate activism. In some cases, activists are motivated out of their obligation to environmental ethical principles. For example, some environmental activists may adopt an “anthropocentric” perspective by assigning intrinsic value predominantly to human beings. From this perspective, environmental issues are important considerations in as much as they relate to the welfare of human beings. Hence, nonhuman creatures and things in nature are viewed as only of instrumental value to human life. Other environmental activists may adopt a “biocentric” perspective and see nature as having its own intrinsic value, and thus as having certain inherent rights (Leopold, 1949), although articulating what those rights are and their limits has proven controversial (e.g., Moore & Nelson, 2010). A more extreme biocentric form, the deep ecology movement, calls for biospheric egalitarianism (Naess, 1973). This movement considers all living things as having intrinsic value; hence, we are morally obligated to take care of all living organisms.

While the literature on environmental ethics continues to expand, little work has been done to empirically understand the environmental ethics behind activists’ engagement. The one exception to this is Horwitz’s work (1996), in which she asked 29 prominent American environmental activists from two east coast states to describe their environmental ethics. She reported that most activists saw themselves in close relation to and interdependent with nature. Many talked about their respect or reverence for nature, and thus their moral obligation to protect it. Implicit within their responses was the intrinsic value they placed on nature. Moreover, having an environmental ethic obligated people to act in ways that respected nature through acts of caring for it or by preventing its harm. Thus, these environmental activists appeared to be acting largely from a biocentric perspective. Interestingly, it is this shift from an anthropocentric to a biocentric view of nature that Suzuki calls for if there is any hope of saving our planet (David Suzuki Foundation, 2012). But how do we cultivate this shift in perspective among the wider population?

## Common Themes From Research on Environmental Activists

In this section, we highlight some of the emerging themes revealed through studies on environmental activists that suggest how such a shift in perspective could occur. These themes include early and sustained social and educational experiences in nature, environmental self and identity formation, and the personality quality of generativity.

**Experiences in Nature.** The sociocultural context in which we are raised and the experiences that emerge within that context shape who we are as individuals. This seems true with regard to each of our perspectives toward the environment. Anthropologist Wade Davis (2007) writes: “A child raised to believe that a mountain is the abode of a protective spirit will be a profoundly different human being from a youth brought up to believe that a mountain is an inert mass of rock ready to be mined” (p. 65). As this quote illustrates, our sociocultural upbringing and experiences dramatically shape the developmental trajectory of individuals. This seems to be apparent based on findings from qualitative studies on environmental activists. A prevalent theme emerging from research on environmental activists is their experiences with nature. These experiences in the unspoiled natural world are perceived by environmental activists as important factors in their development of an environmental ethic of care (Horwitz, 1994, 1996). Horwitz (1996) also reported that experiences in nature often triggered a positive affective response with activists mentioning feelings of “joy” in, “love” of, or “awe” of nature, with the latter suggesting that these experiences can have a spiritual quality.

Typically, these positive experiences in nature were recalled by activists as occurring early in their lives as a result of their participation in recreational activities such as playing in nature or through living in a rural context (Horwitz, 1996). Most environmental activists spoke of these early experiences as foundational in the development of their relationship with the environment. For instance, Chawla (1999) interviewed environmentalists from Kentucky and from Norway about their environmental efforts and the sources of their commitment. Her environmentalists reported that these early experiences interacting with nature created the first “bond” with the natural world that then became part of the activist’s “regular rhythm of daily life” (Chawla, 1999, p. 19). In fact, early positive experiences in nature were a consistent finding in most studies on environmental activists, and have frequently been interpreted as being pivotal in shaping the life trajectories of activism (e.g., Chan, 2009; Horwitz, 1996). Further, in college and community samples of adults surveyed, Mayer and Frantz (2004) found connection to nature predicted self-reported ecological behaviors, such as turning off the lights when vacating a room, and a sense of subjective well-being.

Recent quantitative empirical research supports the importance of positive childhood experiences in retrospect. In a general sample of adults, Wells

and Lekies (2006) found positive correlations between self-reported childhood participation in nature (e.g., hiking; camping; hunting; picking flowers, fruits, and vegetables) and later adult attitudes and behaviors toward the environment. In addition, in our own recent research, we found that activists versus comparison nonactivist individuals reported significantly more positive experiences with nature in their early life narrative accounts (Bisson, Alisat, Norris, & Pratt, 2012). Below is a quote from one of our young adult environmental activists:

I'm from up north, so we go on a canoe trip every year, and the environment, well, not the environment, but the river and everything, it's so nice, and it's clean and that's important. I guess what happened would be canoeing down the river with my dad and some of his friends. I guess canoe down the river. [*What were you thinking?*] I was really young most of the time, I was probably about six to twelve, we used to do it every year, but I guess how nice it was, that's what I'd be thinking. I guess I was feeling happy. An impact would just be ... I have an attachment to canoeing and stuff like that, just because it was part of my childhood. I guess what it would say about who I am is that I like the outdoors.

Yet positive experiences in nature were not the only motivational factor that seemed to contribute toward activism. Many environmental activists also mentioned negative experiences involving harm of nature as influential. Witnessing the destruction of valued places through clear-cutting of forested areas or the damage done to nature through pollution or radiation have been identified as influential experiences in the lives of environmental activists both in America and in Norway (Chawla, 1999). The influence of experiences of environmental harm on environmental actions may be mediated through their challenge to one's environmental ethics. Horwitz (1996) reported that her activists mentioned similar early childhood and adult experiences involving environmental destruction as influences on their developing environmental sensitivity. Finally, in our research, we found that negative experiences with nature were linked to both a stronger environmental identity and a stronger sense of connection with nature for activists as well as nonactivists (Bisson et al., 2012). Together, this body of research suggests that the reporting of these experiences in nature, both positive and negative, has been identified by environmental activists to be important in the construction of their attitudes and beliefs about the environment and in their movement toward environmental activism.

**People, Organizations, and Society.** Typically, early experiences in nature are not solitary experiences. Rather, these early experiences that activists mentioned involve other people, particularly family members and peers (Chawla, 1999). Often, exposure to nature occurred in the context of trips with their families that involved hiking, canoeing, and so on (Horwitz, 1996). In these cases, people were reported as being important in providing the opportunity to access nature. Participation in environmental or

outdoor organizations, such as Boy Scouts or Girl Scouts, Youth Conservation Corps, and other outdoor clubs, also figured prominently in the lives of environmental activists (Chawla, 1999; Horwitz, 1996). This was evident in our own work (Alisat, Norris, Pratt, Matsuba, & McAdams, 2013), as illustrated in the quote below from one of our young adult environmental activists:

I've always absolutely loved nature and environment and trees, gardens and things that grow and plants and animals, whatever, and I like being outside, and I'd done some volunteer work, for the hatchery before that for a few years. It was just small things really, trying to help out. But I hadn't really been aware of, or plugged into all the big problems, and the community of people trying to do things. So it was really joining the "Student Environment Center" that really triggered me to, to get plugged in. And it's pretty small steps but just, you get involved in the Sierra Club, whatever, and from there, the amount of things that have happened over the last four or five years, have kind of taken off and bloomed.

**Environmental Education.** Activists' interest in environmental issues was often piqued through direct and indirect experiences with nature, both positive and negative, that were frequently social in nature. These social interactions provided a context for the exchange of information. That is, parents and adults belonging to various environment-related organizations played important roles in providing children with knowledge about nature. Chawla (1999) reported that much of her activists' early education about nature was gained through significant others, membership in organizations, and school programs. And with this newfound knowledge about nature, activists were better able to deepen their skill sets with regard to interacting with nature (Horwitz, 1996).

In adolescence and early adulthood, formal education through high school and college classes was mentioned by some activists as being influential in the shaping of their environmental activism (Horwitz, 1996). However, formal education was often not what triggered an interest in environmentalism, but rather provided the opportunity for activists to delve deeper into environmental issues, or to help uncover the breadth of issues associated with environmentalism (Horwitz, 1996). Thus, environmental education, both formal and informal, was often reported as significant in nurturing the "seeds" of environmentalism planted earlier in life and in shaping people's later environmental attitudes and behaviors.

**Environmental Self and Identity.** Further, these sustained experiences in nature seem to shape environmental activists' identities. Horwitz (1996) found that environmental activists reported a strong bond or identification with nature. According to Horwitz, a developing sense of self as being intimately connected to the environment was part of the process in the formation of an environmental ethic. Similarly, Chan (2009), through her life narrative interviews with leaders in the environmental sustainability

movement, found that they mentioned having a unique and special connection to nature early in their life stories. Together these findings suggest that the formation of an environmental self seemed to begin to emerge in childhood for many activists.

As activists transitioned into adolescence and emerging adulthood, the importance of the environmental self to their identities became evident. In our study, we compared young adult environmental activists to a group of individuals, matched on age, gender, and community, on a variety of measures (Matsuba et al., 2012). We found that environmental activists scored higher on measures of general identity maturity and, most notably, of specific environmental identity. In James et al.'s (2010) study, they reported that their environmental professionals developed an awareness of their own environmental identities in adolescence and emerging adulthood as they made decisions regarding the career paths they would follow. In fact, James et al. described "crystallization" moments in their activists' career pursuits when they became fully aware of their fascination with nature and of their own competence and confidence in their knowledge and skills regarding the environment. Hence, sustained involvement with nature and in environmental organizations was reported to have shaped how activists perceived themselves and the identities to which they committed themselves as they emerged into adulthood.

**Generativity.** Finally, research suggests that generativity is an important motivational factor in environmental activism. *Generativity* refers to people's concern and care for the next generations. In the context of our work, generativity refers to people's concern and care for the environment and how its current state may impact future generations. Horwitz (1996) identified generativity as a salient theme in her study of environmental activists, as reflected in concerns for the future of our world's ecosystems. Chan (2009) also identified generativity as a driving force behind her environmental activists' commitment toward sustainability. In our work, we found our environmental activists to score higher on measures of generativity relative to comparison individuals (Matsuba et al., 2012). Further, we found that generativity was a mediating factor between identity development and environmentalism: With identity maturation and commitment came growing concerns for the next generation (generativity), which in turn led to further engagement in environmental activities.

## A Developmental Model of Environmental Activism

From reviewing the literature on environmental activists, an emerging story seems to be unfolding regarding the developmental trajectory of environmental activism. While caution is necessary in proposing such an account, given the retrospective nature of the data on environmental activists and the potential bias in reporting past events, we nevertheless speculate about possible model pathways leading toward engagement in

environmental causes—speculations that will require future research support. To help us in this endeavor, we draw upon research from developmental, moral, and religious/spiritual psychology, believing that these areas can help us understand the formative processes involved in the development of environmental activists. We also draw upon the psychological literature investigating the relationship between children and nature (e.g., Kahn & Kellert, 2002). Based on these bodies of work, there are two related clusters of findings on which we will focus: early childhood experiences in nature, and the environmental self and identity formation in adolescence.

**Childhood Experiences in Nature.** Recent attempts at explaining environmental activism include early exposure to the environment as a critical developmental influence (Chawla, 2007; James et al., 2010; Wells & Lekies, 2006). This early exposure to nature may be facilitated by two factors. First, our human genetic heritage may predispose people to prefer the natural environment versus other built urban environments (Balling & Falk, 1982; Kahn, 2002; Weinstein, Przybylski, & Ryan, 2009; Wilson, 1984). According to Wilson's biophilia hypothesis, humans have a genetically based propensity to affiliate with other living organisms and with certain features of our environment of evolutionary adaptation that were typical of our species' earlier history (e.g., a special enjoyment of savannahs, forests, waterways). Such a hypothesis has been proposed to explain research findings that have demonstrated people's general preferences for, and the health benefits associated with being in, certain aspects of nature (Howell, Dopko, Passmore, & Buro, 2011). Second, as mentioned, early exposure to nature is likely to be socially facilitated through family outings, or through participation in community organizational or school-related activities. Horwitz (1996) suggested that such exposure may foster an esthetic appreciation of nature and provide early knowledge acquisition about nature. Together, the predisposition to be close to nature and the opportunity to be in nature were the early life realities for many of us. Yet few of us have become environmental activists. Why?

Perhaps one important factor is the role of sustained exposure to nature throughout childhood and adolescence. James et al. (2010) argued that early experiences in nature lead to more formal activities in nature (i.e., organization-based outdoor recreational programs), and that these formal activities facilitate the development of environmental competencies (e.g., camping and survival skills). Such developing environmental knowledge and skills may help to expand children's interest to be in nature. Finally, Chawla (2007) emphasized the interactive cycle between children and their environment. As children freely explore their environments, their experiences leave lasting, positive impressions that encourage further engagement with nature. This is because nature can provide novel challenges that maintain and build children's interest. In addition, experiences in nature can serve to expand children's environmental knowledge and competencies and facilitate their more general cognitive and affective

development (Kellert, 2002). Hence, it is this continual, sustained exposure to and interaction with nature that may be important in contributing to environmental activism.

Work within developmental psychology suggests possible underlying mechanisms to explain children's movement toward or away from environmentalism. According to social cognitive theories, children develop cognitive schemas about their world and cognitive scripts to guide them in how to act in that world, which are influenced by context (Crick & Dodge, 1994; Dubow, Huesmann, & Boxer, 2009). Within the context of nature, therefore, social cognitive theorists would argue that early experiences in nature are foundational because they facilitate the development of children's cognitive schemas and scripts focused on nature and the natural environment. For example, aggressive children growing up in poor neighborhoods may have acquired cognitive schemas that depict the world as hostile, and have adopted normative attitudes and beliefs that aggression is an acceptable behavioral response in situations (Guerra, Huesmann, & Spindler, 2003). As we know, children living in poverty are at particular risk for negative outcomes, including higher levels of aggression (Evans, 2004; Leventhal & Brooks-Gunn, 2000). Some have attributed the cause of aggression, in part, to increased exposure to violence on the streets and in the home. Witnessing such violence facilitates the development of cognitive schemas and scripts focused on violence and aggression (Dubow et al., 2009).

Within the context of nature, then, social cognitive theorists would argue that early experiences in nature are foundational because they facilitate the development of children's cognitive schemas and scripts focused on nature and the natural environment. Further, positive experiences in nature may lead to a sense of closeness to nature, which may then motivate further engagement (Weinstein et al., 2009). Over time, these sustained experiences in nature will shape children's cognitive schemas about their world, their scripts on how to interact in that world, and the life stories they craft that feature prominently the environmental episodes of their past.

Likewise, a failure to expose children to natural environments can have negative longer-term consequences, such as a fear of the wilderness or the disgust experienced by witnessing nature in action (e.g., a decaying dead animal). Such emotions may work to prevent children from exploring nature later in life. Bixler and Floyd (1997) found that rural and suburban youth who scored high in disgust related to nature, and in worries and fears about the natural environment, were more likely to prefer manicured park settings and urban environments, and showed a dislike for wildland environments, compared to those who scored low on these negative emotional measures. Hence, a failure to expose children to wild nature can have negative consequences in terms of their attitudinal, emotional, and behavioral responses to nature later in life.

More recent work by Kahn, Saunders, Severson, Myers, and Gill (2008) suggest that children as young as 6 years old can be fearful of nature and still

care for nature. In their study, they asked children attending an interactive exhibit on bats at a zoo about their fear of, the care for, and the rights afforded to bats. They found that while some children feared bats, this did not prevent them from caring for bats. Most children also accorded bats feelings and thoughts and certain (animal) rights. Whether these results generalized to other animals in less captive environments remains to be seen.

Sadly, most measures show the health of our planet in a state of decline, and there is very little optimism that significant environmental improvements are going to happen anytime soon. If we take the United States, the world's largest economy, as our example, there is good reason to be concerned. With the current economic downturn, the U.S. government is cutting the budgets of many of its branches, including the Environmental Protection Agency (Johnson, 2011) and the Division of Forest Services, which manages our national parks (National Parks Advocates, 2011). And the large majority of Americans continue to live in urban over rural areas (79% vs. 21%) (U.S. Department of Transportation, 2000). Given these trends in the United States, it would appear that fewer people are having, or are interested in having, wilderness experiences in nature. Yet, if early and sustained experiences in nature are critical in the development of later environmental attitudes and behaviors, as most research on environmental activists suggests, then we should be concerned that current and future generations are having fewer opportunities to experience nature.

Further, there continue to be generational shifts in our understanding of "nature." Kahn (2002) refers to this as environmental generational amnesia: "With each ensuing generation, the amount of environmental degradation increases, but each generation in its youth takes that degraded condition as the nondegraded condition—as the normal experience" (p. 106). As environmental degradation increases, and access to pristine nature diminishes, people's conceptions of nature and their closeness to nature may devolve more toward urban parks and zoos, rather than to national parks and wildlands. Similarly, Louv (2008) writes anecdotally of a "nature deficit disorder" (not a formal clinical disorder), referring to a number of behavioral problems he has observed among American children ostensibly as a result of them spending less time in the outdoors, and more time watching "screens" such as TV, computers, gaming platforms, and handheld devices. The cause of children spending less time in nature, Louv speculates, is due to parental fears of the outdoors along with less access to nature. These conditions that Kahn and Louv describe are illustrative of a growing concern by many regarding the effects that fewer experiences in wilderness are having on children's general well-being, as well as their attitudes and behaviors toward nature.

Finally, lack of access to nature may affect children's folk biology development. Coley, Solomon, and Shafto (2002) have shown that American urban children's early understanding of plants and animals is quite anthropocentric. That is, these children understand other living things in reference

to human beings. This understanding is likely to be exacerbated by children's shows that anthropomorphize animals, such as Disney movies (e.g., *Finding Nemo*). Such a phenomenon is in contrast to first nations children, who are raised in indigenous communities where they have significant everyday experiences with plants and animals. These children show no early anthropocentric folk biology reasoning, but rather reason based on the similarity among all living things (Coley et al., 2002). Hence, the early folk biology development of children is not universally anthropocentric, but varies across different populations. Urban American children with few opportunities to interact in nature are more likely to have a skewed perspective of nature, including wildlife, which may impact how they interact with and respect nature later in life.

In summary, early and continued experiences in nature throughout childhood seem likely to be important in creating sustained interest and motivations to care for nature. Continual experiences with nature may be important in the creation of cognitive schemas of a natural world as children develop, and a cognitive script of how to interact in nature so that these wild places become familiar, positive spaces. Moreover, these experiences in nature are likely to be important in influencing people's attitudes toward the natural world and facilitating the development of environmental ethical principles. Finally, early and continual experiences in nature may help to contribute to aspects of cognitive development and the development of an environmental self and identity, which we turn to now.

**Self, Identity, and the Environment in Adolescence.** Recent work on self development suggests possible pathways to an environmental self and identity. By the age of 2 years, a sense of self is believed to exist, as captured in the well-known rouge-mirror task studies (Lewis & Brooks-Gunn, 1979) when children respond appropriately to their reflections in mirrors. From here, children begin to develop their self-concept, or mental representation of self, based on information collected on the self through experiences of sensation and reflections (Kihlstrom, Beer, & Klein, 2003). Such development is accelerated by the self's widening social interactions in relationships and groups. In its adult-like form, a self-concept is thought to be made up of a collection of multiple, context-dependent self-aspects, which are nodes that are laid out in a connectionist-type memory network (McConnell, 2011). Self-aspects include relationships, roles, and social identities (e.g., son, boyfriend, and football player). Self-aspects can also include behavioral situations or episodes (e.g., self at a party) and affective states (e.g., being angry). Each self-aspect is associated with one or more personal attributes, which include personality and affective traits, behaviors, physical characteristics, and social categories (e.g., African American male).

Further, McLean, Pasupathi, and Pals (2007) explain how self stories in childhood can play an important role in self development. They persuasively argue that with the emergence of situated stories (i.e., personal memories that are created within specific situations) comes the development of

life stories and one's self-concept in childhood. For instance, the situated self stories in childhood can help shape self development, as these stories are integrated into one's broader, emerging life story in adolescence and emerging adulthood (McAdams, 2011). Events that are told repeatedly are more likely to contain personal meaning, and thus have greater impact on the developing life story. Moreover, continual specific behavioral experiences, or the situated self stories they facilitate, may begin to be abstracted out and become people's trait-like sense of the "me" (McAdams, 2011). Those important to the self become part of an individual's self-aspects and attributes (McConnell, 2011). For example, youth who continually experience and reflect on episodes involving the self engaged in caring and compassionate life events may begin to abstract out the self-attribute of caring, or of empathy (Soucie, Lawford, & Pratt, 2012).

Among environmental activists, positive and negative childhood stories about the environment may be the situated stories in their developing life narrative, and contribute to abstracting out "environmentalist" as an important self-aspect. Evidence consistent with this perspective comes from Alisat et al. (2013). Based on five situated environmental stories, these authors found that environmental activists had more developed environmental identities relative to comparison individuals. That is, environmental activists' stories (a general scene, an early scene, a moral courage story, a story where moral courage was not shown, and a turning point) were scored higher in meaning, vividness, and impact compared to non-activists' stories. These cumulative self-narrative scores also were significantly correlated with standard questionnaire measures of environmental identity across the two groups. Thus, narratives can be an important indicator of the expertise and investment of the self into an environmental identity.

Over time and continual experiences in and reflections on self and the natural environment, the environmentalist self-aspect may thus become an important part of one's sense of self. Again, James et al. (2010) write about the formation of environmental identity as being a "crystallization process" among their environmental activists. Similarly, in research on moral exemplars, Colby and Damon (1992) write about the unity of the self and morality among their interviewees. Finally, King, Ramos, and Clardy (2012), in the context of spiritual development, write about a transcendent experience when a spiritual exemplar shifts focus away from the self-as-individual to the self in relation to some "other."

If the environmental self and identity formation process is important in the development of an environmental activist, and identity formation is believed to occur in adolescence and emerging adulthood (Erikson, 1968), there are some troubling findings with regard to this current generation of youth. If we return to the United States as our case study, this contemporary cohort of youth are the least concerned about the environment,

compared to youth from other cohorts spanning the last 30 years, and are assigning greater responsibility for the environment to the government (Twenge, Campbell, & Freeman, 2012; Wray-Lake, Flanagan, & Osgood, 2010). Add to this the fact that adolescence is generally considered a “time-out” period in which youth are more disengaged from nature compared to other developmental periods (Kaplan & Kaplan, 2002). Part of the reason for youths’ disengagement is due to their preference to spend time with their peers, and that most typical activities they do with their peers do not involve nature. Thus, if the goal is to attract youth to the natural environment, simply providing individual opportunities to be engaged with nature will not suffice. Opportunities to interact with nature will need to be social, where individuals can interact with their peers and experience mutual support and stimulation, something we already know about when it comes to political engagement in youth and its impact on longer term social activism (see McAdam, 1990).

In summary, the environmental self and identity begin to develop in early childhood and continue to be elaborated in adolescence and into adulthood. Opportunities to engage in the natural environment allow children to develop a schema of their world as involving the natural environment, a self-schema of themselves interacting in that environment, and an emerging sense of the importance of nature to the self and its associated life story, all leading to the development of an environmental identity in seriously committed individuals. Unfortunately, recent trends in countries like the United States suggest that opportunities to form an exemplary environmental self and identity over childhood and adolescence may be diminishing.

## Conclusion

Our world is in trouble. If the health of our planet is going to improve, a paradigm shift is needed in how individuals think about and act in the environment. By looking to studies on environmental activists and their autobiographical sense of self, we have gleaned insight into some factors that may be important in moving society forward to making this shift. Early and sustained experiences in natural environments that are socially facilitated are believed to be critical factors in constructing the self and worlds of activists in which the natural environment features so prominently. These situated and sustained experiences in nature are likely to be important in the development of people’s environmental identities as they pass through adolescence into emerging adulthood, and narrate this journey as part of their life story. Further developmental work is needed to verify the veracity of this proposed pathway toward environmentalism, and to understand how this environmental self may sustain care and concern for the planet we all share.

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