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Preschoolers' moral judgments of environmental harm and the influence of perspective taking

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ABSTRACT

We asked whether preschoolers view the environment as a moral concern. In Study 1, preschoolers rated the morality of actions that harmed either the environment or another person, as well as non-harmful behaviors. 3-year-olds equated behaviors that harmed the environment with those that targeted people. Older preschoolers, however, rated behaviors that harmed people as being worse than those that damaged the environment. In the second study, we experimentally tested whether preschoolers' moral evaluations could be influenced using a perspective-taking task. Children who took the perspective of a book character who was the victim of environmental harm rated environmentally irresponsible behaviors more severely than children who took the perspective of a character who caused environmental damage. Together, the studies provide preliminary evidence that children as young as 3 years view environmental behaviors in moral terms and that these early judgments are malleable. The research has implications for environmental education.

1. Introduction

With global temperatures increasing at alarming rates, there is a renewed sense of urgency in understanding the relationship between humans and nature. The consensus in the scientific community is that humans are largely responsible for global warming (e.g., Cook et al., 2013), a view that is beginning to take hold in the American public. A 2016 Gallup poll, for example, found that 65% of Americans believe that human activities are primarily responsible for climate change, an increase of 10 percentage points from the previous year (Saad & Jones, 2016). A complete understanding of the relationship between humans and the natural world also includes the ways in which nature affects people, such as stress reduction, enhanced creativity, and faster recovery from surgery (see Kaplan, 1995 for review). The positive implications of spending time in nature are countered by negative consequences when access to nature is restricted, particularly during childhood. As time spent playing outdoors has been replaced by engagement with electronic devices, questions are being raised about the effects of growing up disconnected from the natural world (Louv, 2005).

From a policy standpoint, children's experiences in nature are also important because they appear to shape lifelong attitudes about the environment (Cheng & Monroe, 2012; Wells & Lekies, 2006). Positive childhood experiences in the outdoors can foster lasting environmental stewardship (Chawla & Derr, 2012; Collado & Staats, 2016). Pro-environmental attitudes and behaviors among children have been associated with exposure to the natural world (Cheng & Monroe, 2012; Collado, Staats, & Corraliza, 2013). This relationship is especially strong for children whose everyday contact with nature is less frequent (Collado, Corraliza, Staats, & Ruiz, 2015; Collado, Staats, & Sorrel, 2016).

As a result, there is a growing recognition that the health of the planet depends on early environmental exposure and education—a belief that has led to the formalization of sustainability curriculum in schools. Legislation enacted in 2015, for instance, provides resources for activities that promote environmental literacy in the American public education system (Every Child Succeeds Act, 2015). One of the key goals of environmental education is attitudinal change. Individuals are more likely to behave in ways that protect the environment when they hold positive attitudes toward the natural world (Stern, 2000). Therefore, an understanding of the developmental origins of environmental stewardship is predicated upon children's attitudes about the environment and their trajectory over time.

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1.1. Moral attitudes toward the environment

Individuals who possess pro-environmental attitudes and who have knowledge of environmental problems are more inclined to act in ecologically responsible ways (Fielding & Head, 2012; Musser & Diamond, 1999). Environmentally-responsible behaviors are especially likely among individuals who believe that nature has moral standing and that people have an ethical obligation to protect the environment (Delaney & White, 2015; Ortberg, Gorsuch, & Kim, 2001). By invoking emotions, morality may influence both attitudes and behaviors (Haidt, 2001; see also Carni, Arnon, & Orion, 2015). With respect to nature, previous research has found that individuals who report strong pro-environmental attitudes tend to frame such issues in moral terms (Stern, Dietz, Abel, Guagnano, & Kalof, 1999). Moreover, when environmental appeals are embedded in language that is consistent with one's own moral framework, people are more likely to endorse pro-environmental attitudes (Feinberg & Willer, 2013).

With respect to children, much of the pioneering work examining moral perceptions of environmental issues has been conducted by Kahn and his colleagues, whose research established that children view the environment as having moral standing (Howe, Kahn, & Friedman, 1996; Kahn & Friedman, 1995; Kahn & Lourenço, 2002; Kahn, 1997a). Importantly, this belief appears to be widespread among children, having been documented in samples of African-American children from Houston, Texas (Kahn & Friedman, 1995), urban Portuguese children (Kahn & Lourenço, 2002), and children living in both rural and urban settings near the Rio Negro in Brazil (Howe et al., 1996). The majority of children in each of these samples reported that environmentally harmful behaviors such as polluting a waterway were wrong even if they were considered acceptable in the local community. Children's judgments vary by age, such that older children are more likely than younger children to condemn environmentally harmful behaviors. For example, in a study investigating children's responses to the Alaskan oil spill in Prince William Sound, the vast majority of fifth and eighth grade participants viewed damage to the shorelines and marine life as "not all right" (Kahn & Friedman, 1995). Significantly fewer second graders in the study responded similarly.

When asked to justify why people have a moral obligation to protect the environment, children initially offer human-centered (i.e., anthropocentric) reasons. Moral reasoning shifts around the age of 11 years, at which time children begin to employ nature-centered (i.e., biocentric) reasoning. In an extension of this research, Kortenkamp and Moore (2009) found that children consider the content of others' justifications when making judgments about moral responsibility. Specifically, children judge people more harshly and are more likely to assign blame when people give anthropocentric reasons for damaging the environment (e.g., opening a park to more visitors in order to raise money to build a parking lot) compared to biocentric reasons (e.g., engaging in the same behavior in order to raise money to purchase an endangered wetland).

Another branch of research studying children's moral understanding of the environment has focused on children's evaluations of behaviors that harm the environment relative to other types of unethical or unusual acts. Hussar and Horvath (2011) found that children between the ages of 6–10 years judged behaviors that harm the environment (e.g., littering, failing to recycle) to be "bad", but not as severe as those that directly harm humans (e.g., grabbing a toy from a classmate). Children did, however, rate environmentally-harmful actions to be more morally wrong than either actions that violate social norms (e.g., eating salad with one's hands) and non-harmful personal choices (e.g., reading during recess). Responses did not vary by age or gender. These results indicate that by the age of 6 years, children's moral frameworks include behaviors that cause harm to the environment. Although school-age children consider such behaviors to be "bad", their evaluations are less harsh compared to actions that harm people.

1.2. Environmental awareness among preschoolers

Little is known about children's knowledge and attitudes about ecological issues in the years before children enter first grade. Cohen and Horm-Wingerd (1993) were among the first to show that children between the ages of 3–5 years are also sensitive to ecological issues. In one task, preschoolers discriminated between two scenes, identifying the one without a threat to the environment (e.g., trash) as "nicer". Children were accurate on an average of 60% of the trials, a rate that is close to what one would expect if children were responding randomly in the forced-choice paradigm (50%). In a second task, preschoolers were shown an image depicting environmental damage (e.g., a person throwing trash from a car window) and were asked to verbally describe what was "wrong with" the scene. In this more cognitively demanding task, children's performance dropped to 25% accuracy on average. Moreover, performance in the language-based task varied as a function of age with 4- and 5-year-olds out-performing 3-year-olds. Overall, the results indicated that preschool-age children possess some, albeit limited, awareness of ecological events.

A commitment to environmental stewardship requires some degree of knowledge about the processes that cause environmental degradation, but it is also strengthened by pro-environmental attitudes. Rather than focusing solely on what children know, researchers have also investigated preschoolers' self-identification with ecological behaviors. Musser and Diamond (1999) adapted the Children's Attitudes Toward the Environment Scale (CATES; Musser & Malkus, 1994) for use with preschool samples (CATES-PV). They found that preschool-age children claimed to be more like characters who engaged in environmentally responsible behaviors than characters whose actions degraded the environment. Children's attitudes varied by age, such that older preschoolers identified more strongly with people whose actions protected the environment. This pattern could reflect actual age-related increases in pro-environmental attitudes, or it could signify that children are becoming more sensitive to the social desirability of pro-environmental stances. Surprisingly, parents' attitudes about the environment did not predict those of children. However, the results did reveal a relationship between children's attitudes and parent reports of the degree to which they participated in environmentally friendly activities in the home. The results build on Cohen and Horm-Wingerd's (1993) early work by showing that pro-environmental actions are part of preschool-age children's self-concepts. There is also evidence that preschoolers' environmental attitudes are associated with measures of social status, such that children who express more positive environmental attitudes are more popular among their peers (Körükçü & Ogelman, 2015). Thus, prior to first grade, children already have some knowledge of human behaviors that damage the environment and have begun to align themselves with environmentally responsible choices.

1.3. The current research

Studies suggest that school-age children view damage to the environment as a moral issue, with an increasing reliance on biocentric reasoning (Hussar & Horvath, 2011; Kahn & Lourenço, 2002). However, very little is known about the early childhood roots of moral attitudes of the environment. In the present research, we set out to fill a gap in the research by conducting an exploratory investigation of preschoolers' moral assessments of