

## Young Children Selectively Avoid Helping People With Harmful Intentions

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Two studies investigated whether young children are selectively prosocial toward others, based on the others' moral behaviors. In Study 1 ( $N = 54$ ), 3-year-olds watched 1 adult (the actor) harming or helping another adult. Children subsequently helped the harmful actor less often than a third (previously neutral) adult, but helped the helpful and neutral adults equally often. In Study 2 ( $N = 36$ ), 3-year-olds helped an actor who intended but failed to harm another adult less often than a neutral adult, but helped an accidentally harmful and a neutral adult equally often. Children's prosocial behavior was thus mediated by the intentions behind the actor's moral behavior, irrespective of outcome. Children thus selectively avoid helping those who cause—or even intend to cause—others harm.

Humans are not equally prosocial toward all individuals. Instead, we select the beneficiaries of our prosocial acts from among multiple potential beneficiaries. One crucial criterion for this selection is the beneficiary's helpful or harmful behavior: We help and affiliate with helpful individuals and shun or punish harmful individuals (e.g., Fehr & Gächter, 2002; Krebs, 2008). To date, almost no work has examined whether children make such selections. We do know that infants' social preferences for nonhuman agents are determined by those agents' helping or hindering behaviors (Hamlin, Wynn, & Bloom, 2007) and that children begin helping others early in life (Warneken & Tomasello, 2006, 2007), but relations between the two have not yet been assessed. Later, in the preschool years, children's abstract moral reasoning about story characters is related to their everyday prosocial behavior (Eisenberg-Berg & Hand, 1979; Janssens & Deković, 1997). In one particularly relevant study, Olson and Spelke (2008) asked 3.5-year-olds to help a protagonist doll decide how to allocate resources to other dolls. Children allocated more of the protagonist doll's resources to a doll who was generous to the

protagonist doll (direct reciprocity) or generous to a different doll (indirect reciprocity) than to a non-generous doll, thus demonstrating some appreciation of direct and indirect reciprocity.

Olson and Spelke's (2008) study could also be interpreted as showing that young children consider others' moral behaviors when deciding whom to share with. However, sophisticated moral judgments take into account several factors, including not only the consequences of but also the intentions behind a behavior (see Cushman, 2008; Piaget, 1932/1997; Turiel, 2006; Turiel, Killen, & Helwig, 1987; Weiner & Peter, 1973). Thus, to show that children's prosocial behavior is mediated by others' moral behavior, one needs to show that the prosocial behavior is mediated not only by the outcomes of but also the intentions behind others' actions. In the present work, we assessed whether young children show differential prosocial behavior toward agents who vary in the helpful or harmful intentions underlying their behavior.

A secondary issue, also raised by Olson and Spelke (2008), is that children's responses on behalf of others (the protagonist doll in their study) may not correspond to children's responses when they themselves must decide whom to share with or help. Our first study thus tested whether children respond differentially to others' harmful or helpful behaviors even when they themselves are the ones sharing or helping. The primary question of the second study was whether intentionality mediates

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children's judgments of others as worthy recipients of prosocial acts. Note that in both studies, children witnessed but were not the recipients of the harmful or helpful behaviors. Using such third-party interactions circumvents ethical issues and ensures that children's subsequent actions are responses to the actor's behavior rather than a result of their own emotional responses to being helped or harmed (see Olson & Spelke, 2008).

The general procedure of both studies was as follows: In a between-subjects design, after warming up with three adults, the children viewed four familiarization trials during which one adult (the actor) behaved in a condition-specific way (e.g., harmfully or helpfully) toward another adult (the recipient). The four familiarization trials were followed by one helping test in which children were presented with a forced choice between helping the actor or the third (familiar but neutral) adult. The dependent measure in both studies was thus instrumental helping, which is relatively easy to elicit without explicit verbal instructions (Warneken & Tomasello, 2006, 2007). A forced choice was included because young children are highly motivated to help (see Warneken & Tomasello, 2009) and might help a harmful actor if that were their only option; the forced-choice paradigm gave them the option of not helping the actor. Finally, once children had helped one person in the helping test, they were given the opportunity to help the other person if they chose so.

### Study 1

In Study 1, children saw the actor harming, helping, or, as a baseline measure, behaving neutrally toward the recipient. We predicted that children's subsequent helping would be mediated by the actor's behaviors toward the recipient.

#### *Method*

##### *Participants*

Participants were 3-year-olds ( $N = 54$ ; 9 girls and 9 boys per condition) between 35 months 21 days and 38 months 17 days ( $M = 37$  months 11 days,  $SD = 22.46$  days) from a medium-sized German city. Fifteen additional children were tested but excluded because of indecisiveness or unclear responses during the helping test (6; see the Procedure section for a description of a clear helping response), fussiness or inattentiveness (4), parents

not following instructions (4), and experimenter error (1). Children were recruited from a database of parents who volunteered to participate in child development studies. Participants were all native German speakers and came from mostly middle-class backgrounds. Although precise information about the sample's ethnicity is not available, about 98% of the population from which the sample was drawn is native German. All children were seen in a child laboratory for a 45-min "play" session. The same three adult female experimenters played the same roles (of recipient, actor, and neutral person) for all children.

#### *Materials and Setting*

The setup is shown in Figure 1. Each child saw four familiarization trials during which the child, recipient, and actor sat around a table; the neutral person sat to the side, visible to the child, reading a magazine. The following materials were used during familiarization trials: two necklaces with colorful beads, two belts with colorful beads, blank sheets of paper and a color pencil, and a blue and a red ball of clay in a container.

In the subsequent helping test, two identical color-matching games were used which consisted of a box with four holes marked by different colors into which balls of matching colors could be placed. The child stood at a predetermined location and the color-matching games' boxes were placed 2 m from and on either side of the child (see Figure 1). Next to each box lay three of the four balls required for each game; a blue ball was missing from both sides. One blue ball lay in the middle, 1 m from the child. The parents sat directly behind the child, the actor and neutral person sat next to their game (side counterbalanced across children), and the recipient stood to the side of and behind the child, facing away from the interaction, and kept time.

#### *Procedure*

After warming up with the children, the recipient introduced the actor and neutral person to children as her friends. The actor and neutral person then warmed up with children, being careful to interact equally and similarly with them. Throughout, the recipient wore one of the necklaces and belts described before. After about 10 min in the warm-up room, the recipient told children that she would like to show them the toys in a different room, and escorted the children and parents to the testing room, followed by the actor and the neutral person.

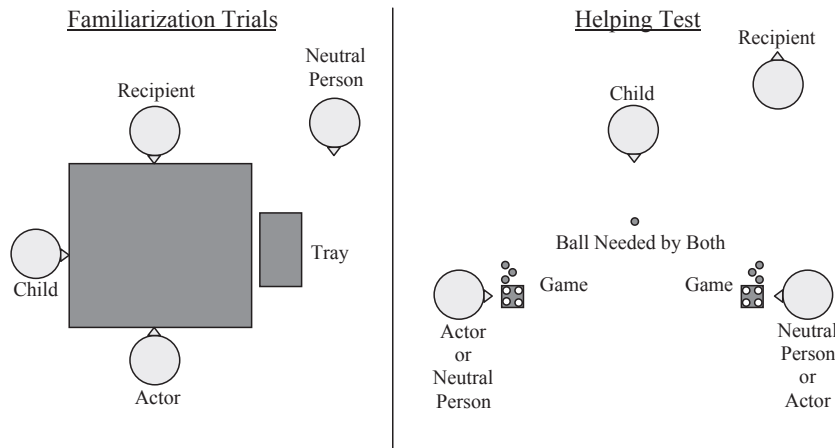


Figure 1. Experimental setup for all conditions.

The study was between-subjects with three conditions (harm, help, and baseline). All conditions had four familiarization trials followed by one helping test. Each familiarization trial (adapted from Vaish, Carpenter, & Tomasello, 2009) began with a 45-s presentation in which the recipient presented one of the following objects (order counterbalanced):

*Necklace and belt.* The recipient admired and showed off her necklace or belt. A second necklace and belt lay on a tray, visible but inaccessible to children.

*Picture.* On one sheet of paper from the stack, the recipient drew a picture, proudly commenting on how pretty it was and how happy it made her.

*Clay.* Using one ball of clay, the recipient made a bird, commenting as in the picture trial. The second clay ball remained in the container.

These 45-s presentations ended differently depending on the condition: In the harm condition, the recipient placed her possession on the table and the actor said in a mildly aggressive tone, "I'm going to take [or tear or break] this now," and put on the necklace or belt, or tore up the picture or bird and threw the bits into a bin. The actor did not display aggression in her facial expression (which was neutral while she spoke and during her actions), nor in any other way before or during her actions. The recipient watched the actor sadly but silently. After 15 s, the recipient assumed a neutral expression and began the next demonstration.

In the help condition, in contrast, the recipient was accident-prone: Instead of placing her possession on the table, she accidentally dropped her necklace, detached beads from her belt, tore her picture, or damaged her clay bird, and was sad about each mishap. The actor said sympathetically,

"I'll get [or fix] it," then retrieved or repaired the object. The recipient watched the actor sadly but silently (as in the harm condition). After 15 s, the actor placed the object on the table and smiled, and the recipient happily took it, put it aside, and neutrally began the next demonstration.

The baseline condition established the appropriate chance level for analyses of the other conditions and thus involved the actor behaving neutrally. After necklace and belt demonstrations, the recipient told the children that the necklace (or belt) on the tray was not hers. The actor then commented on the necklace or belt on the tray ("The necklace has so many beads" or "This belt can be adjusted here") and counted the beads or adjusted the belt. After picture and clay demonstrations, the actor said, "These [remaining] sheets are all blank" or "This [second ball of] clay is stuck to the container," and proceeded to examine the paper or unstuck the clay. The actor's comments and expression were neutral and the recipient watched the actor neutrally. After 15 s, the actor put the object away and the recipient began the next demonstration.

In each condition, the familiarization trials were followed by a helping test in which the actor and neutral person simultaneously but individually played their respective color-matching game. After placing the three available balls in their slots, both simultaneously reached for the ball in the middle and maintained this reach, looking only at the ball. If children did not act within 15 s, the recipient silently cued parents to ask children to "give the ball." If this was ineffective, parents asked children to point to the person they wanted to give the ball to. As a last resort, the recipient sat between the actor and neutral person, held up the ball, and

asked children to give it or point to the person they wanted to give it to. Whomever children chose gratefully accepted the ball. Only placing the ball in or near one person's hand or pointing to one person were considered clear responses. If children did not respond within 1 min, the test was ended.

After the helping test, children received a second ball to hand to whomever they chose. This helped resolve the situation by giving children the chance to help both individuals. Finally, in the harm condition, the actor made amends (e.g., by returning the recipient's necklace and belt) and apologized, and the recipient accepted the apology.

### Coding and Reliability

During testing, the primary author coded to whom children chose to give the ball. A second coder (blind to condition and hypotheses) coded this measure from videotapes for a random 50% of children (9 per condition). Agreement was perfect,  $\kappa = 1.0$ . For the same 50%, before giving the code, the second coder judged (using relevant cues such as one person reaching slightly further than the other) whether either person was likelier to receive the ball. She judged the actor as likelier in seven cases and the neutral person in five cases, but these numbers were unrelated to condition and to who received the ball (Fisher's exact tests,  $ps = .47$  and  $1.00$ , respectively).

### Results

As preliminary analyses revealed no gender effects, gender was not included in further analyses. All reported  $p$  values are two-tailed. In the baseline condition, 12 of 18 children (67%) helped the actor; 67% was thus the appropriate test proportion for the other conditions. Following Hamlin et al. (2007), we used binomial tests to analyze the experimental conditions. In the harm condition, a significantly lower proportion of children than 67% helped the actor (4 of 18, or 22%; binomial probability,  $p < .0005$ ). This difference did not emerge in the help condition (11 of 18 children, or 61%, helped the actor; binomial probability,  $p = .760$ ; see the first three bars of Figure 2).

Secondary analyses using chi-square tests revealed that the harm condition differed significantly from the baseline condition,  $\chi^2(1, N = 36) = 7.20$ ,  $p = .007$ , and from the help condition,  $\chi^2(1, N = 36) = 5.60$ ,  $p = .018$ . The help and baseline conditions did not differ,  $p = .729$ .

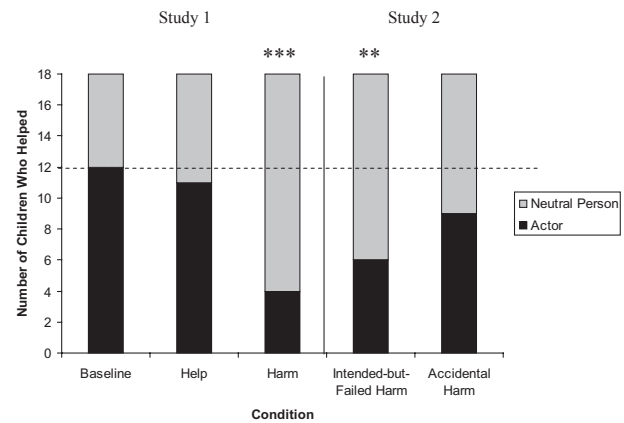


Figure 2. Number of children who helped the actor or the neutral person in Studies 1 and 2.

Note. The dashed line represents chance (67%) as established by the baseline condition.

\*\* $p < .01$ . \*\*\* $p < .0005$ .

An alternative explanation for the results of the harm condition is that children refrained from helping the actor because they were afraid of her (e.g., because of her mildly aggressive tone of voice). However, the phase in which children received a second ball suggests otherwise: All 14 children who had first helped the neutral person gave the second ball to the actor, indicating they were not afraid of her but, when forced to choose during the helping test, chose not to help her.

### Discussion

This study showed that 3-year-olds take into account others' harmful behaviors toward third parties when deciding whether or not to help them. This extends Olson and Spelke's (2008) findings to children's own prosocial behavior and suggests that children select whom to help and selectively direct resources away from harmful people.

The actor's harmful but not her helpful actions impacted children's behavior. This suggests a negativity bias, that is, a greater impact of negative than of positive information. This bias has been extensively documented in adults (e.g., Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001) and in children's social-emotional development (Vaish, Grossmann, & Woodward, 2008). Our findings suggest a similar bias in children's moral development: Children's prosocial behavior is decreased toward a harmful individual but not increased toward a helpful individual. This result is consistent with the research on children's moral judgments that indicates that children correctly identify "bad" acts substantially earlier than "good" acts (Hill & Hill,

1977; Rhine, Hill, & Wandruff, 1967; see Karniol, 1978; Smetana, 2006; Turiel, 2006, for discussions). Future studies should further explore the origins and implications of the negativity bias in moral development (see Aloise, 1993; Leslie, Knobe, & Cohen, 2006, for relevant work).

Notably, although most children in the harm condition helped the neutral person first, they handed a second ball to the actor. This concurs with Olson and Spelke's (2008) finding that although 3.5-year-olds allocated resources selectively when resources were limited, when resources were sufficient, children divided them equally among recipients, displaying a sense of fairness. When a second ball was available, children in our study also displayed fairness, or at the very least, they were willing to help the actor when she was the only one who needed help.

In Study 1, young children helped a harmful individual less, but whether this was in response to the individual's harmful intentions or to the negative outcomes she caused remains unclear because the harm condition featured both intentional harm and negative consequences. The critical question of why children helped a harmful actor less was addressed in Study 2.

## Study 2

The intention–outcome distinction is essential to the study of moral development, given that sophisticated moral judgments are thought to rely on not only the consequences of but also the intentions behind others' behavior (Cushman, 2008; Karniol, 1978; Piaget, 1932/1997; Turiel et al., 1987). Developmental work suggests that when intentions and outcomes are pitted against each other, children around 5 years of age and above reliably use the perpetrator's intentions when making moral judgments and assigning punishment; prior to this, they rely largely on outcome information (e.g., Miller & McCann, 1979; Wellman, Larkey, & Somerville, 1979; Zelazo, Helwig, & Lau, 1996). Much of this past work has assessed children's verbal evaluations of hypothetical moral transgressions, which may not be optimal for very young children whose language skills are limited and which do not always correspond to children's actual behavior (Astington, 2004; Darley & Shultz, 1990; Wainryb, Brehl, & Matwin, 2005). We asked in our second study whether young children's ability to respond to the intentions behind moral transgressions might be evident in their prosocial behavior.

In Study 2, we teased apart intentions and outcomes using two new conditions: In the intended-but-failed harm condition, the actor intended but was unable to harm the recipient (non-negative outcome, negative intention), and in the accidental harm condition, the actor accidentally harmed the recipient (negative outcome, non-negative intention). If the intentions behind others' harmful actions mediate children's prosocial behavior, children should subsequently help the actor less than the neutral person in the intended-but-failed harm condition but not in the accidental harm condition.

## Method

### Participants

Participants were 3-year-olds ( $N = 36$ ; 9 girls and 9 boys per condition) between 35 months 18 days and 38 months 15 days ( $M = 37$  months 7 days,  $SD = 24.93$  days). Seven additional children were tested but excluded because of indecisiveness or unclear responses during the helping test (3), fussiness or inattentiveness (2), parent not following instructions (1), and experimenter error (1). Participant recruitment, the sample's ethnicity and socioeconomic backgrounds, and the duration of sessions were the same as in Study 1. The same experimenters played the same roles as in Study 1.

### Materials and Setting

The materials were the same as in Study 1 with minor changes. In the intended-but-failed harm condition, the sheets of paper had a border of transparent tape such that they could not easily be torn. In the accidental harm condition, a set of beads was wrapped around the belt such that it could easily fall off, and the sheets of paper had an inconspicuous rip such that they could easily tear. The setting was identical to Study 1.

### Procedure

The warm-up session was identical to Study 1. The two between-subjects conditions of Study 2 again involved four familiarization trials and a helping test. The recipient's presentations during familiarization trials were similar to Study 1 except that she decorated her clay bird with beads. The four 45-s presentations ended with the recipient placing her possession on the table. In the

intended-but-failed harm condition (like the harm condition), the actor then said mildly aggressively, "I'm going to tear [or break] this now," and attempted (with obvious effort) to tear up the picture, dislodge the beads from the clay bird, or break the necklace or belt. She did not display aggression facially or in any other way before or during her actions. Importantly, she was unable to cause harm as she could not tear through the tape around the paper, the beads were lodged too deeply into the clay, and pulling on the beads of the necklace and belt did not break them off. The recipient watched the actor sadly but silently. After 15 s, the actor gave up and placed the object back on the table. The recipient examined the object, smiled briefly (to indicate satisfaction that it was intact), placed it to the side, and neutrally began the next presentation.

In the accidental harm condition, the actor accidentally destroyed the recipient's objects. Thus, the actor admired the picture but accidentally tore it while returning it to the recipient. Similarly, the beads fell off the belt and the knot of the necklace came undone while she was admiring these objects. In the clay situation, the actor was looking at her watch when the bird was placed on the table so that when she turned to admire the bird, her arm collided with it and broke it. After each mishap, the actor said in a sorry tone of voice, "I didn't want that to happen" or "That wasn't on purpose" (in alternating order, beginning with the former). The actor apprehensively examined the broken object but did not repair it or apologize, and the recipient watched the actor silently but sadly. After 15 s, the actor placed the object to the side and the recipient neutrally began the next presentation.

As in Study 1, familiarization trials were followed by a helping test and a final phase in which children could hand over a second ball. Finally, in the intended-but-failed harm condition, the actor apologized and the recipient accepted the apology.

#### *Coding and Reliability*

Coding and reliability were conducted as in Study 1. Agreement was perfect between the primary and second coders' coding of whom children gave the ball to,  $\kappa = 1.0$ . The second coder also judged that the actor was more likely to receive the ball in one case and the neutral person in four cases, but these numbers were unrelated to condition and to who received the ball (Fisher's exact test,  $ps = .40$  and  $1.00$ , respectively).

#### *Results*

As preliminary analyses revealed no gender effects, gender was not included in further analyses. All reported  $p$  values are two-tailed. We again used the test proportion (67%) established by the baseline condition in Study 1. Binomial tests revealed that in the intended-but-failed harm condition, a significantly lower proportion of children than 67% helped the actor (6 of 18, or 33%; binomial probability,  $p = .008$ ). This difference did not emerge in the accidental harm condition (9 of 18 helped the actor,  $p = .204$ ; see the last two bars of Figure 2).

Chi-square analyses revealed that the intended-but-failed harm condition differed significantly from the baseline condition of Study 1,  $\chi^2(1, N = 36) = 4.00, p = .046$ , but not from the harm condition,  $p = .457$ . In contrast, the accidental harm condition differed marginally from the harm condition,  $\chi^2(1, N = 36) = 3.01, p = .083$ , but not from the baseline condition,  $p = .310$ .

Results from the final (second ball) phase again suggest that children were not afraid of the actor in the intended-but-failed harm condition: Of the 12 children who helped the neutral person during the helping test, 10 handed the second ball to the actor.

#### *Discussion*

In Study 2, 3-year-olds decreased their prosocial behavior toward a person who had harmful intentions toward a third party even if she did not cause negative outcomes. Moreover, children did not significantly decrease their prosocial behavior toward a person who caused negative outcomes without harmful intentions. These findings are the first evidence that by age 3, children selectively reduce prosocial behavior toward intentionally harmful—and thus morally blameworthy—individuals regardless of the consequences of those individuals' actions.

Study 2 contributes to the moral development literature as it suggests that as early as 3 years, children respond differently to intentionally versus unintentionally caused harm. In prior work in which intentions and outcomes were pitted against each other in hypothetical moral transgressions, children reliably used a perpetrator's intentions in their moral evaluations starting around 5 years of age (e.g., Wellman et al., 1979; Zelazo et al., 1996). Interestingly, however, Imamoğlu (1975) found that even when older children (5-year-olds) fail to differentially evaluate intentional versus accidental acts, they respond differentially on other measures

such as like-dislike judgments of the perpetrator. Thus, young children's understanding of a perpetrator's intentions may be more apparent in their liking of or willingness to help the perpetrator than in their verbal evaluations of the transgression. Affiliation and helping may thus be precursors to and important facets of children's moral evaluations. More generally, nonverbal, nonhypothetical behavioral measures complement verbal measures of children's judgments and reasoning about intentions. Future work should accordingly employ both verbal and behavioral measures focusing on both the act and the actor to obtain a fuller picture of children's moral judgment-making.

### General Discussion

The present studies demonstrate that young children's prosocial behavior is mediated by others' moral behavior. In Study 1, 3-year-olds helped a harmful adult less than a neutral adult, extending Olson and Spelke's (2008) findings to children's own prosocial behavior. The important new finding from Study 2 was that 3-year-olds grasped the intentions behind harmful behavior and selectively decreased their prosocial behavior toward the actor if and only if she could be held morally responsible for her actions (i.e., when she had harmful intentions), even if she was unsuccessful in causing harm. Thus, by age 3, children selectively withhold help from morally blameworthy individuals.

It could be argued that children in the harm and intended-but-failed harm conditions helped the actor less because of her mildly aggressive tone of voice rather than her harmful behavior. However, some aggression is likely a reliable cue to intentional as opposed to accidental harm. Indeed, our rationale for including mild aggression was that having the actor speak entirely neutrally would create an unnatural harming situation in which the actor's intentions would be ambiguous. For instance, children might infer from a neutral voice that the actor had not registered or did not remember that the objects belonged to the recipient and she thus did not intend harm. Thus, although future studies could control for the actor's aggression, we argue that some mild aggression is naturally linked with intentionally harmful behavior and retaining it creates a more ecologically valid situation.

There are also several reasons to believe that the actor's mild aggression alone does not explain the results. First, the actor was only aggressive in her

tone of voice and only before the transgressions, not in any other way or at other times during the procedure. Also, nearly all children in both the harm and intended-but-failed harm conditions gave a second ball to the actor, suggesting that her aggression had not made them afraid of her (though it is possible that children were afraid of the actor but their fear did not stop them from helping her in this context). Finally, in a recent study exploring children's protest against moral transgressions (Vaish, Missana, & Tomasello, *in press*), a puppet proclaimed her harmful intentions (to tear another puppet's drawing because she did not like it) in the same neutral, nonaggressive way in which she proclaimed her nonharmful intentions (to tear a blank piece of paper because she did not like it). Three-year-olds nevertheless protested more in the harmful than in the neutral case. Thus, young children do recognize moral transgressions even in the absence of aggression, at least when the transgressor provides another reason for the transgression (not liking the drawing). It is thus unlikely that our findings are due solely to the slightly aggressive way in which the actor spoke before her harmful actions.

In the present studies, children directed less helping toward a person who harmed or intended to harm a third party. A similar result emerges in adults: In economic games, adults punish individuals who show unfair behavior even when they were not themselves affected by that behavior (Fehr & Fischbacher, 2003, 2004; Singer et al., 2006). Our findings show that the ability to identify harmful individuals and to withhold help from them emerges early in childhood, although it remains unclear whether children actively punished the harmful actor or more passively shunned or avoided her.

Our results are limited to children's interactions with adults and may not generalize to children's interactions with their peers (see, e.g., Killen, 1991). Numerous authors have observed that child-child interactions provide a rich and unique context within which children develop a sense of fairness, equality, and justice (e.g., Arsenio & Lover, 1995; Damon & Killen, 1982; Dunn, Cutting, & Demetriou, 2000; Piaget, 1932/1997; see Smetana, 2006). Thus, when in such interactions, children may display a more advanced command of these concepts and at still younger ages than we have shown here. Alternatively, our use of child-adult interactions in a laboratory may have made children comply with what they perceived as the adults' expectations. Note, though, that our helping measure did not

entail providing responses about the moral transgressions directly to an adult; rather, it was a more implicit assessment that took place after, and in a different situation than, the transgressions. Children's responses are thus unlikely to have been influenced much by their perceptions of the adults' expectations. Still, on the view that children were complying with such expectations, children may not show the same sensitivity in interactions with other children. Even so, our findings at least demonstrate young children's ability to recognize harmful intentions in interactions with adults under controlled conditions. It remains for future research to assess this ability across multiple contexts and types of interactions.

Relatedly, although we assessed the impact of the intentions behind and outcomes of moral behavior, we recognize that these are only two of several criteria that fall under only one of several domains that impact children's moral judgments. Other criteria in the moral domain include, for instance, whether the perpetrator apologized and whether she was already punished (e.g., Miller & McCann, 1979). Criteria in the psychological domain include the victim's and the children's own relationship with the perpetrator (e.g., Slomkowski & Killen, 1992; Wellman et al., 1979). The context of the transgression and individual differences among children also play a role, and of course, all of the aforesaid domains and factors interact with each other (see Helwig, 2006; Killen, 2007; Smetana, 2006, for reviews). Intentions and outcomes thus form only one piece of the rich and multifaceted area of children's moral judgments.

Furthermore, we broadly used the term *moral behavior* throughout to mean acts that have consequences for others' rights or welfare (e.g., Smetana, Schlagman, & Adams, 1993). Morality certainly includes other criteria, such as obligation and independence from authority sanctions, which distinguish it from the conventional, psychological, and personal domains of social knowledge (e.g., Smetana, 2006; Turiel et al., 1987). Our focus here, however, was on whether children's prosocial behavior is mediated by an individual's harmful transgressions against others. Although these are precisely the types of transgressions that fall into the moral domain, our focus on prosocial behavior rather than on moral judgments precluded an assessment of whether children perceived the transgressions as moral in the strict sense or not. Children may have withheld help for many reasons (such as how much they liked the perpetrator) that are related to but not the same as judging the trans-

gressions to be moral. All the same, children's ability to recognize harmful behaviors and intentions as seen in their prosocial behavior might be an early step on the way to the full-blown, explicit moral judgments that children make just a few years later and as such, is important to explore.

Finally, to say that children's prosocial behavior is mediated by others' harmful behaviors and intentions is not to disregard the many additional mediating factors. For instance, there is evidence for a direct reciprocity effect on the sharing behavior of 3-year-olds (Levitt, Weber, Clark, & McDonnell, 1985; Olson & Spelke, 2008). Sympathy for the potential beneficiary also plays a role (see Eisenberg & Miller, 1987; Vaish et al., 2009). Overall, the emerging picture is that early in development, children begin engaging in sophisticated social and moral evaluations that impact their own prosocial behavior.

## References

- Aloise, P. A. (1993). Trait confirmation and disconfirmation: The development of attribution biases. *Journal of Experimental Child Psychology, 55*, 177–193.
- Arsenio, W., & Lover, A. (1995). Children's conceptions of sociomoral affect: Happy victimizers, mixed emotions and other expectancies. In M. Killen & D. Hart (Eds.), *Morality in everyday life: Developmental perspectives* (pp. 87–128). Cambridge, UK: Cambridge University Press.
- Astington, J. W. (2004). Bridging the gap between theory of mind and moral reasoning. *New Directions for Child and Adolescent Development, 103*, 63–72.
- Baumeister, R. F., Bratslavsky, E., Finkenauer, C., & Vohs, K. D. (2001). Bad is stronger than good. *Review of General Psychology, 5*, 323–370.
- Cushman, F. A. (2008). Crime and punishment: Distinguishing the roles of causal and intentional analyses in moral judgment. *Cognition, 108*, 353–380.
- Damon, W., & Killen, M. (1982). Peer interaction and the process of change in children's moral reasoning. *Merrill-Palmer Quarterly, 28*, 347–367.
- Darley, J. M., & Shultz, T. R. (1990). Moral rules: Their content and acquisition. *Annual Review of Psychology, 41*, 525–556.
- Dunn, J., Cutting, A. O., & Demetriou, H. (2000). Moral sensibility, understanding others, and children's friendship interactions in the preschool period. *British Journal of Developmental Psychology, 18*, 159–177.
- Eisenberg, N., & Miller, P. A. (1987). The relation of empathy to prosocial and related behaviors. *Psychological Bulletin, 101*, 91–119.
- Eisenberg-Berg, N., & Hand, M. (1979). The relationship of preschoolers' reasoning about prosocial moral



- conflicts to prosocial behavior. *Child Development*, 50, 356–363.
- Fehr, E., & Fischbacher, U. (2003). The nature of human altruism. *Nature*, 425, 785–791.
- Fehr, E., & Fischbacher, U. (2004). Third-party punishment and social norms. *Evolution and Human Behavior*, 25, 63–87.
- Fehr, E., & Gächter, S. (2002). Altruistic punishment in humans. *Nature*, 415(6868), 137–140.
- Hamlin, J. K., Wynn, K., & Bloom, P. (2007). Social evaluation by preverbal infants. *Nature*, 450(22), 557–560.
- Helwig, C. C. (2006). Rights, civil liberties, and democracy across cultures. In M. Killen & J. Smetana (Eds.), *Handbook of moral development* (pp. 185–210). Mahwah, NJ: Erlbaum.
- Hill, K., & Hill, C. (1977). Children's concepts of good and bad behavior. *Psychological Reports*, 41, 955–958.
- Imamoğlu, E. O. (1975). Children's awareness and usage of intention cues. *Child Development*, 46, 39–45.
- Janssens, J. M. A. M., & Deković, M. (1997). Child rearing, prosocial moral reasoning, and prosocial behaviour. *International Journal of Behavioral Development*, 20, 509–527.
- Karniol, R. (1978). Children's use of intention cues in evaluating behavior. *Psychological Bulletin*, 85, 76–85.
- Killen, M. (1991). Social and moral development in early childhood. In W. M. Kurtines & J. L. Gewirtz (Eds.), *Handbook of moral behavior and development* (pp. 115–138). Hillsdale, NJ: Erlbaum.
- Killen, M. (2007). Children's social and moral reasoning about exclusion. *Current Directions in Psychological Science*, 16, 32–36.
- Krebs, D. L. (2008). Morality: An evolutionary account. *Perspectives on Psychological Science*, 3, 149–172.
- Leslie, A. M., Knobe, J., & Cohen, A. (2006). Acting intentionally and the side-effect effect. *Psychological Science*, 17, 421–427.
- Levitt, M. J., Weber, R. A., Clark, M. C., & McDonnell, P. (1985). Reciprocity of exchange in toddler sharing behavior. *Developmental Psychology*, 21, 122–123.
- Miller, D. T., & McCann, C. D. (1979). Children's reactions to the perpetrators and victims of injustices. *Child Development*, 50, 861–868.
- Olson, K. R., & Spelke, E. S. (2008). Foundations of cooperation in young children. *Cognition*, 108, 222–231.
- Piaget, J. (1997). *The moral judgment of the child*. New York: Free Press. (Original work published 1932)
- Rhine, R. J., Hill, S. J., & Wandruff, S. E. (1967). Evaluative responses of preschool children. *Child Development*, 38, 1035–1042.
- Singer, T., Seymour, B., O'Doherty, J. P., Stephan, K. E., Dolan, R. J., & Frith, C. D. (2006). Empathic neural responses are modulated by the perceived fairness of others. *Nature*, 439, 466–469.
- Slomkowski, C. L., & Killen, M. (1992). Young children's conceptions of transgressions with friends and non-friends. *International Journal of Behavioral Development*, 15, 247–258.
- Smetana, J. G. (2006). Social-cognitive domain theory: Consistencies and variations in children's moral and social judgments. In M. Killen & J. Smetana (Eds.), *Handbook of moral development* (pp. 119–153). Mahwah, NJ: Erlbaum.
- Smetana, J. G., Schlagman, N., & Adams, P. W. (1993). Preschool children's judgments about hypothetical and actual transgressions. *Child Development*, 64, 202–214.
- Turiel, E. (2006). Thought, emotions, and social interactional processes in moral development. In M. Killen & J. Smetana (Eds.), *Handbook of moral development* (pp. 7–35). Mahwah, NJ: Erlbaum.
- Turiel, E., Killen, M., & Helwig, C. (1987). Morality: Its structure, functions, and vagaries. In J. Kagan & S. Lamb (Eds.), *The emergence of morality in young children* (pp. 155–243). Chicago: University of Chicago Press.
- Vaish, A., Carpenter, M., & Tomasello, M. (2009). Sympathy through affective perspective-taking and its relation to prosocial behavior in toddlers. *Developmental Psychology*, 45, 534–543.
- Vaish, A., Grossmann, T., & Woodward, A. (2008). Not all emotions are created equal: The negativity bias in social-emotional development. *Psychological Bulletin*, 134, 383–403.
- Vaish, A., Missana, M., & Tomasello, M. (in press). Three-year-old children intervene in third-party moral transgressions. *British Journal of Developmental Psychology*.
- Wainryb, C., Brehl, B., & Matwin, S. (2005). Being hurt and hurting others: Children's narrative accounts and moral judgments of their own interpersonal activities. *Monographs of the Society for Research in Child Development*, 70 (Serial No. 281).
- Warneken, F., & Tomasello, M. (2006). Altruistic helping in human infants and young chimpanzees. *Science*, 311, 1301–1303.
- Warneken, F., & Tomasello, M. (2007). Helping and cooperation at 14 months of age. *Infancy*, 11, 271–294.
- Warneken, F., & Tomasello, M. (2009). The roots of human altruism. *British Journal of Psychology*, 100, 455–471.
- Weiner, B., & Peter, N. (1973). A cognitive-developmental analysis of achievement and moral judgments. *Developmental Psychology*, 9, 290–309.
- Wellman, H. M., Larkey, C., & Somerville, S. C. (1979). The early development of moral criteria. *Child Development*, 50, 869–873.
- Zelazo, P. D., Helwig, C. C., & Lau, A. (1996). Intention, act, and outcome in behavioral prediction and moral judgment. *Child Development*, 67, 2478–2492.