



Published in final edited form as:

Infancy. 2013 January 1; 18: 91–119. doi:10.1111/j.1532-7078.2012.00125.x.

Socialization of Early Prosocial Behavior: Parents' Talk about Emotions is Associated with Sharing and Helping in Toddlers

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Abstract

What role does socialization play in the origins of prosocial behavior? We examined one potential socialization mechanism, parents' discourse about others' emotions with very young children in whom prosocial behavior is still nascent. Two studies are reported, one of sharing in 18- and 24-month-olds ($n = 29$), and one of instrumental and empathy-based helping in 18- and 30-month-olds ($n = 62$). In both studies, parents read age-appropriate picture books to their children and the content and structure of their emotion-related and internal state discourse were coded. Results showed that children who helped and shared more quickly and more often, especially in tasks that required more complex emotion understanding, had parents who more often asked them to label and explain the emotions depicted in the books. Moreover, it was parents' elicitation of children's talk about emotions rather than parents' own production of emotion labels and explanations that explained children's prosocial behavior, even after controlling for age. Thus, it is the quality, not the quantity, of parents' talk about emotions with their toddlers that matters for early prosocial behavior.

Keywords

Prosocial Behavior; Socialization; Parent-child Discourse

Over an extended apprenticeship from infancy through adolescence, children are socialized into all things human. In the current paper we focus on the socialization of prosocial behavior: what role might parental socialization play in shaping the earliest-appearing forms of helping and sharing? A long and rich history of scholarship has shown that beginning in the preschool years socialization is a key ingredient in children's ability and willingness to act on behalf of others. However, the role of socialization in more nascent manifestations of prosocial behavior has been relatively neglected (Hay & Cook, 2007).

Prosocial behavior is generally defined as voluntarily acting on behalf of others to enhance their welfare, often out of caring and concern for others (Eisenberg, Fabes, & Spinrad, 2006). Somewhat remarkably, even infants and toddlers are now known to behave prosocially. Under the right conditions, one- and two-year-old children will help others (Liszkowski, 2005; Warneken & Tomasello, 2006, 2007), show concern when someone is visibly upset or in pain, and sometimes pat or hug them (Nichols, Svetlova, & Brownell, 2009; Zahn-Waxler, Radke-Yarrow, Wagner, & Chapman, 1992), cooperate with others to accomplish shared goals (Brownell, Ramani, & Zerwas, 2006; Warneken & Tomasello,

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Portions of this research were presented at meetings of the Society for Research in Child Development and the International Conference on Infant Studies.

2006), and voluntarily share food and toys (Brownell, Svetlova, & Nichols, 2009; Dunfield, Kuhlmeier, O'Connell & Kelley, 2011; Hay, Caplan, Castle, & Stimson, 1991). One goal of this paper is to integrate recent research on the early ontogeny of prosocial responding with perspectives on the socialization of prosociality in older children.

Several investigators of prosocial behavior have recently argued that the early development of helping, sharing, comforting, and cooperating is not influenced by socialization processes, in part because infants are presumed to be too young to benefit from or to have received parental input or guidance about such matters (Dunfield et al., 2011; Geraci & Surian, 2011; Olson & Spelke, 2008; Warneken & Tomasello, 2009). Rather, the first manifestations of prosocial responding are held to result from a natural inclination to behave prosocially (Hoffman, 2007; Warneken & Tomasello, 2009; Wynn, 2008). It is only later, as preschool children, when they begin to understand and uphold norms of caring and responsibility, that their prosocial behavior is assumed to become open to socialization which then shapes the acquisition of culture-specific moral standards. In this paper we argue that even in infancy and toddlerhood socialization influences prosocial behavior.

We suggest that well before prosociality becomes governed by social and moral norms, socialization both exploits and cultivates whatever built-in affective and motivational systems may ground human prosocial behavior to drive its emergence and early course. As one example of early socialization we focus on parent-child discourse about emotions, based on the reasoning that as young children learn to talk about emotions with parents, especially in shared activities, they come to care about others' emotions, to understand and infer how emotions and internal states figure in human behavior and relationships, and to know how and when to act on that understanding (Dunn, 1988; Nelson, 2007; Thompson, 2006). We conducted two studies with 18- to 30-month-old children, the period when prosocial behavior is first emerging, to examine how parents' talk about emotions is related to their children's helping and sharing.

Socialization of prosocial behavior

Socialization of prosocial behavior can operate through many pathways. It can, for example, act on children's motivation to behave prosocially (Chase-Lansdale, Wakschlag, & Brooks-Gunn, 1995; Dunn, 2008); it can contribute to the social understanding that is necessary for prosocial responding (Denham, Zoller, & Couchoud, 1994; Ensor, Spencer, & Hughes, 2011); and it can shape the social and regulatory skills needed to implement a prosocial response (Eisenberg, 2000; Spinrad & Stifter, 2006). The specific processes through which socialization operates on prosocial behavior can also vary, from modeling, instruction, and reinforcement, to behavioral control and disciplinary actions; empathic, positive, and responsive caregiving; scaffolding and instrumental support; and conversations about emotions and prosocial behavior, including other-oriented reasoning and inductive explanations. These pathways and processes have been amply demonstrated to promote prosocial behavior throughout childhood and adolescence, beginning in the preschool years (see Grusec, Davidov, & Lundell, 2002, and Hastings, Utendale, & Sullivan, 2007 for reviews). However, relatively little research has addressed how socialization practices relate to prosocial behavior when it first emerges beginning in the second year of life.

As evidence of the role of socialization in the early ontogeny of prosociality, Zahn-Waxler & colleagues (2001) found that heritability of empathic concern declined between 14 and 20 months of age. This means that social influences must increasingly explain prosocial responsiveness during this period. Correspondingly, these authors have demonstrated significant shared environment, i.e., familial, influences on empathy-related helping in children between 19 and 25 months of age (Volbrecht, Lemery-Chalfant, Aksan, Zahn-

Waxler, & Goldsmith, 2007). More specifically, several independent studies have shown that mothers' emotionally available and responsive caregiving is associated with empathic prosocial responses to others' distress in children between 18 and 30 months of age (Kiang, Moreno, & Robinson, 2004; Kochanska, Forman, & Coy, 1999; Moreno, Klute, & Robinson, 2008; Robinson, Zahn-Waxler, & Emde, 1994; Spinrad & Stifter, 2006; Van der Mark, Van Ijzendoorn, & Bakermans-Kranenburg, 2002; Zahn-Waxler, Radke-Yarrow, & King, 1979). Although this research has made it clear that the quality of the parent-child relationship is associated with burgeoning prosocial responses in very young children, it remains limited in two ways that the current studies aim to address. First, with its focus on empathic concern, other early-appearing forms of prosocial responding such as sharing and helping have yet to be explored in relation to parental socialization. Second, parental influences have been restricted to global measures of sensitivity and responsiveness; specific socialization practices have not yet been investigated.

A handful of studies serve as exceptions, having examined early helping behavior in relation to specific socialization practices, but the findings are mixed. In a classic study of toddlers' participation in routine household tasks, Rheingold (1982) found that when parents were asked to get their 18- to 30-month-olds to help, they made a point of attracting children's attention, modeling and describing their own activities, and encouraging children's participation, all of which were effective in securing children's assistance. A recent extension and elaboration of Rheingold's study found that the more parents appropriately scaffolded toddlers' helpful participation in a household-like task, the more quickly their children helped an experimenter in an independent set of prosocial tasks (Hammond, 2011). However, two other recent experimental studies that examined the impact of parental instruction and reinforcement on toddlers' helping behavior found no effects. Warneken & Tomasello (in press) found that when 24-month-olds were actively directed by either a parent or another adult to help an experimenter, they did not, in fact, help any more than did children whose parents simply watched them or whose parents were absent. They also demonstrated that 20-month-olds who were materially rewarded for helping an adult were significantly less likely to help later when the rewards were discontinued than were children who had never been rewarded for helping (Warneken & Tomasello, 2008). Based on these findings, they concluded that very young children's prosocial behavior may be independent of adults' explicit efforts to socialize or encourage them.

However, what can perhaps most reasonably be concluded from the foregoing is that socialization of prosocial behavior may occur most effectively in the context of joint activity, with sensitive scaffolding of emerging competence, rather than from direct instruction. In the current study, we used joint picture-book reading as one such context. Joint activity is known to be a potent contributor to the early acquisition of social understanding (Carpendale & Lewis, 2004; Carpenter, Nagel, & Tomasello, 1998; Denham & Auerbach, 1995; Nelson, Adamson & Bakeman, 2008). Reading picture books together with their children provides parents with the opportunity to discuss others' emotions with them and to support and promote their emerging emotion understanding, one pathway through which prosocial behavior can be socialized.

Parental talk about emotions and prosocial behavior in young children

Prosocial responding depends on children's orientation toward and apprehension, understanding, and concern for others' feelings and desires in relation to their own. The dawning awareness of the subjectivity of emotions, desires, and intentions during the second year of life transforms early social behavior, permitting the emergence of other-oriented responding to another's plight (Brownell, Nichols, & Svetlova, in press; Ensor & Hughes, 2005; Hoffman, 2007; Zahn-Waxler et al., 1992). Parents' efforts to draw young children's

attention to others' emotions and internal states and to discuss them may serve as an important catalyst in this developmental process. Talking about emotions objectifies them and helps young children represent, reason about, and respond to them separately from experiencing them. This, in turn, may promote more complex, other-oriented forms of response to others' emotions. Parents' discussion of emotions and internal states with their young children is likely to be especially valuable in fostering prosocial and altruistic behavior because of the salience of emotions and the likelihood that thinking and talking about them will enhance children's awareness and understanding of their own and others' needs and desires (Brown & Dunn, 1991; Thompson, 2006). We know that maternal discourse with toddlers about emotions and mental states contributes to later emotion understanding and children's own use of psychological language (Dunn, Brown, Slomkowski, Tesla, & Youngblade, 1991; Laible, 2004; Ruffman, Slade, & Crowe, 2002; Symons, 2004). Among preschool-age and older children, parents' discussion of emotions is associated with children's prosociality (Denham, Bassett, & Wyatt, 2007; Denham, Cook, & Zoller, 1992; Garner, Dunsmore, & Southam-Gerrow, 2008).

A small number of studies have examined links between prosocial behavior and parental talk about emotions in very young children in whom both language and prosocial behavior are just emerging. In early and seminal research, Zahn-Waxler et al. (1979) showed that 18- to 30-month-old children whose mothers frequently used multiple forms of affective communication exhibited greater concern in response to others' distress and were more likely to try to comfort them. The authors argued that this style of interaction, focused on discipline but laden with emotion, lays the groundwork for a child's general sensitivity to the feelings of others as well as an understanding of the effects of one's own actions on others' emotions. In another influential study, Dunn and colleagues found that mothers' discussion of feelings during family interactions with 18- and 24-month-olds was associated with children's cooperative and conciliatory behavior with siblings (Dunn & Munn, 1986). More recently, Garner (2003) found that 25-month-olds whose mothers more often explained a doll's emotions or asked the children to label the doll's emotions were more attentive to and concerned about an adult's distress when her favorite toy broke. There is thus initial evidence for relations between parental talk about emotions and toddler-aged children's early prosocial responsiveness.

The current studies

In the two studies presented here we built on these conceptual and empirical foundations to examine in greater depth how emergent prosocial behavior one- and two-year olds relates to parent-child discourse about emotions. To do so, we observed how parents discuss emotions with their young children during joint picture-book reading. Books for young children often depict actions and interactions of people and animals together with their emotional consequences, constituting a rich environment for parents to highlight and discuss story characters' emotional and mental states in relation to specific actions and events (Dyer, Shatz, & Wellman, 2000). Indeed, parents discuss others' emotions with their preschool children more frequently during picture-book reading than they do in everyday conversations (Sabbagh & Callanan, 1998). As a result, a number of authors have found associations between parents' emotion and mental state talk during picture-book reading and their preschool children's concurrent or subsequent social understanding or prosocial behavior (Adrian, Clemente, & Villanueva, 2005; Garner et al., 2008; Slaughter, Peterson, & Mackintosh, 2007; Symons, Fossom, & Collins, 2006; Taumoepeau & Ruffman, 2006; 2008). In the current studies, we ask whether parents' discussion of emotions with still younger children predicts prosocial behavior during a period of significant developmental transition in emotion understanding and prosocial behavior.

When reading picture books with children who are younger than 18 months of age, parents tend simply to comment on and label the pictures, whereas with children 18 months or older they actively engage and support their children in labeling and discussing the pictures (Fletcher & Reese, 2005). All of the children in the current studies were between 18 and 30 months of age. It is important to note that even children with quite limited language competence can be helped to participate actively in discourse about emotions and emotion-related events in picture books. By 24 months of age, children spontaneously refer to emotions in their own talk (Bartsch & Wellman, 1995; Bretherton, Fritz, Zahn-Waxler, & Ridgeway, 1986; Brown & Dunn, 1991; Dunn, Bretherton, & Munn, 1987), but this is preceded by earlier comprehension of emotion and internal state terms in others' talk (Bretherton et al., 1986; Ridgeway, Waters, & Kuczaj, 1985). To elicit labeling from a young child who comprehends but does not yet produce a variety of emotion words, parents can ask simple yes/no questions such as, "Is he happy?" or they can ask the child to point, "Show me the happy one." They can also ask for explanations with yes/no questions: "Is he sad because he dropped his ice cream?" "Is he afraid of the dark?" (see Fletcher & Reese, 2005, and Moerk, 1985, for relevant reviews). One focus of the current studies was the extent to which parents helped their children reflect on and reason about the emotions depicted in books by asking their children to label or explain them.

Whereas the few existing studies of socialization influences on prosocial behavior in toddlers have focused on empathic concern and comforting, the current studies examined two other forms of prosocial behavior, helping and sharing. Different types of prosocial behavior vary in their cognitive and social-cognitive demands on young children (Dunfield et al., 2011; Svetlova, Nichols, & Brownell, 2010), hence may be differentially associated with particular socialization practices. In this study we examined two types of helping, instrumental (action-related) and empathic (emotion-related) helping. Instrumental helping involves assisting someone with an action-based goal such as returning a dropped or out of reach object, and requires a relatively basic ability to represent others' goals and goal-directed actions, knowledge available even to infants in the first year of life (Woodward, 1998). Empathic helping, on the other hand, involves intervening to alter another's negative emotional or internal state such as sadness, pain, or hunger. This sort of helping requires more advanced self-other understanding which only begins to appear in the second year of life, including the ability to differentiate another's internal state from one's own, the ability to infer the source or cause of another's internal state, and knowing what actions might serve to alleviate it (Hoffman, 2007; Zahn-Waxler et al., 1979; Zahn-Waxler et al., 1992). We also examined sharing which, like empathic helping, requires an inference about another's desire or need in relation to one's own. The focus was on other-oriented sharing specifically; that is, when children voluntarily give away a valued resource to someone else who has none but who has a need or desire for it (Brownell, Iesue, Nichols, & Svetlova, in press). Such other-oriented sharing also depends on understanding others' internal states and wanting to alleviate them. We reasoned that parenting that helps the child understand and respond to others' emotions is likely to be more important for prosocial responding that depends on sensitivity to others' internal states like empathic helping and sharing, than for prosocial responses based on more basic knowledge about action goals like that required by instrumental helping. One aim of the current studies was to test this hypothesis by considering whether different aspects of early prosocial behavior are more, or less, associated with parental talk about others' emotions.

In summary, two studies were conducted, one of instrumental and empathic helping with 18- and 30-month-olds, and one of sharing with 18- and 24-month-olds. We focused on these ages because this is when sharing and helping first appear, and our interest was in how socialization relates to emerging prosocial behavior. In both studies, parents read age-appropriate picture books with their children and their emotion-related and internal state

discourse was recorded. Both the content and the structure of parents' talk were coded. In particular, parents' labeling and explanation of the emotions depicted in the books was distinguished from their efforts to elicit their children's labeling and explaining. We hypothesized that parents' discussion of emotions with their toddlers would be associated with children's prosocial behavior across this period, regardless of the children's age. We further hypothesized that parents' emotion-related discourse would be more strongly associated with sharing and empathic helping than with instrumental helping. Finally, we hypothesized that parents who more often encouraged their children to attend to and reflect on others' emotions by eliciting the children's own talk about the depicted emotions would have more prosocial children.

Method

Participants

Children in both studies were healthy and typically developing, from working- and middle-class families recruited from a medium-sized city and surrounding suburbs. In the helping study, 62 children participated; thirty-one 18-month-olds ($M = 18.5$ months; 15 boys and 16 girls) and thirty-one 30-month-olds ($M = 30.4$ months; 17 boys and 14 girls). Seventy-eight percent were Caucasian, 11% Asian, 7% African American, and 4% Hispanic. Ten additional children were tested but their data were not usable because of procedural error, the child's refusal to participate, or absence of parent book-reading data. In the sharing study, 29 children participated; ten 18-month-olds ($M = 18.0$ months; 4 boys, 6 girls) and nineteen 24-month-olds ($M = 24.2$ months; 8 boys, 11 girls). Seventy-six percent were Caucasian, 14% biracial, 7% African-American, and 5% Asian. An additional four children were tested but their data were not usable because of attention problems, the child's refusal to participate, or parental interference. It should be noted that although the sample size for the sharing study is somewhat small, particularly for 18-month-olds, it is consistent with sample sizes in other recent studies of early prosocial behavior (e.g., Brownell et al., 2009; Over & Carpenter, 2009; Warneken & Tomasello, 2006).

General procedure

In both studies procedures took place in a single playroom and were video recorded from behind a one-way mirror with audio provided by an in-room multi-directional microphone hung from the ceiling. A female experimenter (E) conducted the sessions together with an assistant experimenter (AE). All sessions began with a period of warm-up free play to acquaint the children with the two adults and to make them comfortable. A parent remained in the room completing questionnaires and was asked not to comment on, encourage, or instruct the child except when asked to participate by E. Questionnaires included the MacArthur Communicative Development Inventory, a well-validated, widely used measure of early language development (Fenson, et al., 2000).

Parent-child book reading

The parent-child book reading procedure was the same for each study. Two age-appropriate books (Aliko, *Feelings*, Greenwillow Books, 1986; Parr, T. *The Feelings Book*, LB Kids, 2005) were selected because they included emotional content, but also depicted multiple scenes, events, and objects that parents could talk about in addition to or instead of emotions, thereby permitting the capture of differences in parents' predilection to discuss emotions with their children. Parents were directed to read the books to their children like they would at home (only the cover of the Aliko book was read as it had a series of 16 panels conveying a narrative that included actions, objects, and emotions). To encourage parents' spontaneous talk, all words were stricken out so that only pictures were available to talk about. The books were read by the children's regular, daytime caregivers who accompanied

them to the lab, most often mothers ($n = 75$), but also fathers ($n = 9$), grandmothers ($n = 5$), a grandfather ($n = 1$), and an aunt ($n = 1$). Supplemental analyses showed no effects or differences as a function of who read the books; for simplicity, all will be referred to as parents.

Parents' language related to the books was transcribed verbatim from the video records, and transcripts then scored for several dimensions of parental emotion and mental state talk drawn from prior research. Three basic categories of talk were identified (Ruffman, Slade, Devitt, & Crowe, 2006; Symons et al., 2006): 1) emotions (e.g., happy, sad, angry); 2) mental states (e.g., think, know, remember); and 3) other internal states (e.g., hungry, tired, cold). Additionally, in the sharing study, desire talk (e.g., want, need) was coded.

Two further distinctions were made. First, parents' *labeling* of emotions was distinguished from their *explanation or elaboration* of emotions. Elaboration and explanation of emotions provide additional context for the emotion, refer to its cause, or discuss how one could know that someone was feeling that way (Garner, Jones, Gaddy, & Rennie, 1997; Laible, 2004; Martin & Green, 2005; Slaughter et al., 2007). Labeling and explaining were coded separately for emotion talk only. Second, parents' *production* of emotion labels and explanations was distinguished from their *elicitation* of children's own emotion labeling and explanation since these make different demands on children's understanding and may differentially predict outcomes (Martin & Greene, 2005; Ninio, 1980, 1983). Production and elicitation were coded separately for emotion talk and desire talk. Finally, parents' efforts to induce empathy with the characters (e.g., "Awwww," pretending to cry on the character's behalf) were also coded (Garner, Jones, Gaddy, & Rennie, 1997).

Thus, each transcript was coded for: total number of utterances; emotion labels (produced vs. elicited); emotion explanations (produced vs. elicited); desire talk (produced vs. elicited; coded for the sharing study only); other mental state talk; other internal state talk; and empathy-inducing utterances (see Table 1 for definitions and examples). Parents' talk was transcribed and scored by assistants who were blind to hypotheses and the children's ages. For the sharing study, reliability was established on 25% of the records; percent agreement overall was .84, and ranged from .76 to .96 for individual codes. For the helping study, reliability was established on 16% of the records; percent agreement overall was .88 and ranged from .76 to .98 for individual codes. Children's talk was not coded because it rarely occurred spontaneously and because their utterances could not be easily distinguished.

Two composite variables were created to serve as the primary measures for analysis: total production (sum of emotion label production, emotion explanation production, desire talk production, mental state talk; internal state talk, empathy induction); total elicitation (sum of emotion label elicitation, emotion explanation elicitation, desire talk elicitation). All measures were converted to proportions of total utterances to control for different amounts of time spent reading the book.

Sharing

In the sharing study AE acted as the recipient of sharing. To emphasize AE's role as a playmate, E treated AE like a child and AE behaved similarly to the child participant throughout the session, playing when the child did, looking at E when the child did, following directions from E, and so on; AE never instructed or helped the child. Six sharing tasks were administered with order counterbalanced across participants (see Table 2 for overview of tasks). Free play and other tasks (e.g., book reading) were interspersed between sharing tasks.

Each task featured a different item to be shared (e.g., shapes for a shape sorter; a set of vehicles), so that children had multiple opportunities to share several different types of toys; one task involved food (e.g., crackers, Cheerios). To reduce the motivational barrier to sharing, the child always had an abundance of toys. E began each task by seating the child and AE next to each other and distributing the toys equally so that each had 4 – 6 individual toys to play with. After 60 s, E gathered up all the toys and placed them all in front of the child. AE then began a series of four progressively more explicit cues about her desire for some toys, each lasting 5 – 7 secs. First, using nonverbal cues, she audibly sighed several times, looked sad with downturned mouth and upturned eyebrows, and alternated gaze between the child's toys and the empty space in front of her (cue 1). Next, she verbalized her desire while she made eye contact with the child and then alternated gaze between the child's toys and the empty space in front of her (cue 2). Next, she indicated her desire gesturally by reaching effortfully but unsuccessfully toward the child's toys with palm down and outstretched fingers, saying "I can't reach them," and alternating gaze between the child and the child's toys (cue 3). Finally, she made an explicit request, turning her palm up and holding it out to the child while making eye contact (cue 4). If the child did not share following cue 4, E returned and gave one of the child's toys to AE to demonstrate sharing (cue 5). If the child shared at any point, AE discontinued the cues, briefly thanked the child, and began to play with the toy(s) the child had given her (see Brownell, Iesue, et al., in press, for additional procedural details).

Sharing was scored if the child actively gave a toy to AE by moving it within AE's reach or depositing it in her hand. The child received a sharing score from 0 – 5 for each task, corresponding to the cue at which sharing occurred (0 = did not share; 5 = shared immediately upon AE nonverbal cue). Higher scores thus indicated more skilled and spontaneous responding, i.e., earlier sharing, with fewer cues. Scores were averaged over the six tasks to create an average sharing score for each child. Behavior was coded from video records by assistants who were blind to hypotheses and trained to reliability with a primary coder (one of the authors). Reliability was calculated for each coder with the primary coder on 30% of the video records, with Kappa's ranging from .94 to .98.

Helping

In the helping study E acted as the person in need. Nine helping tasks were administered in counterbalanced order using a Latin square design (see Table 2 for overview of tasks). Free play episodes were alternated with helping episodes. For each task, E demonstrated difficulty or distress which could be alleviated by giving her a particular object that was out of her reach but within the child's reach. During warm-up, AE played together with the child and demonstrated the various objects to be sure that children understood their use and to control for possible differential exposure prior to the study. The object needed was a clip in three of the tasks, a cloth or blanket in three of the tasks, and a toy or stuffed animal in three of the tasks.

Three conditions (instrumental helping; empathic helping; altruistic helping) were varied within subjects, with 3 tasks each. The tasks were similar across conditions in terms of the object needed and the helping behavior required, but each condition featured different social-cognitive and motivational demands. In the instrumental helping condition, the child had to infer and act on E's action-related goal. Here, E had difficulty completing goal-oriented actions involving objects that had been dropped or misplaced; the child could help by giving the needed object to E. This condition emphasized the interrupted action, not E's internal state. In the empathic helping condition, the child had to infer E's emotion or internal state. Here, E demonstrated three different negative internal states (sadness, cold, frustration); the child could help by giving an object to E that would alleviate the state or comfort her. This condition emphasized the adult's distress; the child's help served to

alleviate the distress instead of completing an interrupted action. The altruistic helping condition was identical to the empathic helping condition except that the child had to give something of his or her own to help or comfort E, which had been brought from home or given to the child during warm-up. This condition was therefore the most demanding (see Svetlova, et al., 2010, for additional procedural details including task descriptions).

On each task E provided up to eight progressively more explicit cues, for 5 – 7 secs each, about her need or emotion and what could be done to help or comfort her. The first two cues communicated the adult's subjective state first posturally and vocally, then verbally; the third cue stated the general need; the fourth cue drew the child's attention to the target object by labeling it; the fifth cue alternated gaze between the object and the child, as a nonverbal request; the sixth cue was a more explicit nonverbal request in which E reached out and gestured toward the object; the seventh cue was a general plea for help; and the final cue was a specific verbal request for the object. Once the child brought the needed object, E stopped providing cues and used the object as intended, describing her end state (e.g., "Now I'm warm").

Helping was scored when the child gave the needed object to E. Children received a helping score from 0 – 8 for each task, corresponding to the cue at which helping occurred (0 = did not help; 8 = helped immediately upon E's first, nonverbal cue). Higher scores thus indicated more skilled responding, i.e., earlier helping with fewer cues, requiring less communicative support to initiate a prosocial response. Scores were averaged over the 9 tasks to create an average helping score for each child; separate scores were also calculated for each type of helping (instrumental; empathic; altruistic) by averaging over the 3 tasks in each condition. Behavior was coded from video records by assistants who were blind to the study's hypotheses and trained to reliability with a primary coder (one of the authors). Reliability was calculated for each coder with the primary coder on 21% of the video records, resulting in a weighted Kappa of .89.

Results

Preliminary analyses for sex differences revealed no significant effects for any measure in either study, so all analyses were collapsed over sex. There were also no differences in either study as a function of task order, and in the sharing study there were no differences as a function of toy type or food. There were modest correlations among the different types of helping, controlling for age (instrumental \times empathic helping, $r = .29$, $p = .04$; instrumental \times altruistic helping, $r = .24$, $p = .08$; empathic \times altruistic helping, $r = .38$, $p = .005$).

Preliminary analyses showed that the various measures of parents' talk during book reading were generally unrelated to one another in both samples (tables available upon request). Because the proportion scores for parent talk were slightly positively skewed in both samples, analysis were conducted on arcsine transformed scores; the findings did not substantively differ from those using untransformed scores, so we report the results from the untransformed data to facilitate interpretability.

Age differences

As expected, age differences emerged in both studies for several measures of parental talk during book reading (see Table 3). In the sharing study, total amount of talk about the books did not differ by age, but parents of older children (24-month-olds) used proportionally more Emotion Label eliciting and Explanation eliciting as well as Total Elicitation than did parents of younger children (18-month-olds). In the helping study, there were likewise no age-related differences in total talk about the books, but parents of older children (30-month-olds) used proportionally more Emotion Label eliciting, Explanation eliciting, and Total

Elicitation, as well as Emotion and Mental State labeling, than did parents of younger children (18-month-olds).

Because we were interested in how parental talk about emotions and internal states was related to prosocial responding during this period when prosocial behavior is emerging, rather than age differences in prosocial responding, the primary analyses controlled for age (see Brownell, Iesue, et al., in press, and Svetlova, et al., 2010, for reports of age differences in helping and sharing behavior). Furthermore, because age was highly correlated with children's vocabulary (MacArthur CDI total score; r 's = .73 & .86, in sharing and helping samples respectively), controlling for age in the analyses also controlled for children's language, in addition to other unmeasured characteristics associated with age such as attention, compliance, amount of exposure to books, and so on. Results are reported for each study separately.

Sharing sample

To examine associations between children's sharing and parents' emotion talk, partial correlations, controlling for age, were calculated between the sharing scores and the several measures of parental emotion-related talk. As shown in Table 4, parents who more often elicited children's talk about emotions had children who shared more quickly, with fewer cues from the adult. In contrast, parents' production of emotion-related talk was unrelated to children's sharing. Results were nearly identical for analyses of how often children shared (out of 6 opportunities) instead of their average sharing score.

For the content of parents' talk, sharing scores were related both to parents' Emotion Label eliciting and to their Emotion Explanation eliciting (see Table 5 for correlations). Sharing was unrelated to parents' Emotion labeling or explaining, Desire labeling or explaining, labeling of Mental or Internal states, or Empathy inductions.

To determine if parents' efforts to elicit their children's talk about emotions were uniquely associated with children's sharing, a hierarchical linear regression was conducted predicting children's sharing scores, with age entered on the first step, followed by parents' production of emotion talk, and then by parents' elicitation of emotion talk. The full model explained 50% of the variance in sharing scores, $F(3, 28) = 9.98, p < .001$, with age accounting for about half of that (26%). Parents' production of emotion talk did not add significant variance above and beyond children's age. However, elicitation of emotion talk increased the variance accounted for by 19%, $F_{change}(1,25) = 9.56, p = .005$. Thus parental elicitation of children's emotion talk contributed uniquely to early sharing, predicting it above and beyond both child age and parent production of emotion talk.

Helping sample

Patterns were more complex in the helping sample, varying by condition (instrumental, empathic, or altruistic helping). As with the findings for sharing, parents who more often elicited their children's talk about emotions had children who helped more quickly overall, with fewer cues from the adult (see Table 3). More specifically, eliciting children's talk about emotions was positively associated with empathic and altruistic helping, but not with instrumental, action-based helping. Results were nearly identical for analyses of how often children helped (out of 9 opportunities), rather than their average helping score.

For the content of parents' talk, children's overall helping scores were related to parents' Emotion Label eliciting but not to Emotion Explanation eliciting (see Table 5). Considered as a function of helping condition, Emotion Label eliciting was associated with Empathic helping and Altruistic helping, while it was unrelated to Instrumental helping. Parents' Mental State labeling was also significantly associated with children's overall helping. More

specifically, it was related to Altruistic helping and marginally to Empathic helping, but not to Instrumental helping. As with sharing, helping was unrelated to parents' labeling of Internal states or to Empathy inductions.

To determine if parents' efforts to elicit their children's talk about emotions uniquely predicted children's helping, two hierarchical linear regressions were conducted on children's helping scores, one on instrumental helping and one on a composite of empathic and altruistic helping (because both are emotion-related and their correlations with parent talk were similar). For each one, age was entered on the first step, followed by parents' production of emotion talk, and then by parents' elicitation of emotion talk. For instrumental helping, the full model explained 40% of the variance, $F(3,59) = 12.07$, $p < .001$, with most of that accounted for by age (38%). Neither production nor elicitation of emotion talk added significant variance above and beyond age. For empathic/altruistic helping, the full model accounted for 51% of the variance, $F(3,59) = 18.85$, $p < .001$, with 45% due to age. Production of emotion talk did not add significant variance, but elicitation of emotion talk increased the variance accounted for by 6%, $F_{change}(1,56) = 6.45$, $p = .01$. Thus, similar to sharing, parental eliciting of children's emotion talk contributed uniquely to toddlers' empathic and altruistic helping, predicting it above and beyond child age and parental production of emotion talk. In contrast, neither aspect of parental emotion talk predicted children's instrumental helping.

Discussion

To better understand the role of parental socialization in the earliest manifestations of prosocial behavior, we examined parents' discourse about others' emotions with very young children in whom prosocial behavior is still nascent. In two independent studies, parents' emotion talk with their 18- to 30-month-old children was associated with children's prosocial behavior toward another adult. While reading picture books with their toddlers, parents who more often asked children to reflect on and talk about the emotions depicted in the books had children who helped and shared with a needy adult more quickly and more often. Moreover, parents' encouragement of their children's active participation in discussing others' emotions explained helping and sharing above and beyond the child's age and how much parents themselves labeled and explained the depicted emotions. Thus, it was not how much parents talked about emotions with their toddlers that mattered, but how they talked about them, and in particular, how much they encouraged the children themselves to think about, label, and explain others' emotions.

Socialization of Early Prosocial Behavior

In the current paper we have focused on the contribution of the social context to emerging prosocial behavior because it is here that children's behavior is scaffolded, encouraged, and guided starting in early infancy. A number of investigators have suggested that parents use emotion talk to help very young children attend to, understand, and respond appropriately to others' emotions, and that such talk is both ubiquitous and salient for young children (Brown & Dunn, 1991; Dunn, Brown, & Beardsall, 1991; Garner, 2003; Taumoepeau & Ruffman, 2006; Thompson, 2006). The current findings suggest that parental discourse with young children about others' emotions may be a formative influence in the development of prosocial behavior even for toddlers who are only beginning to understand and talk about emotions. Furthermore, emotion-related discourse may influence a variety of nascent prosocial responses.

More than a third of parents' discussion of picture books with their toddlers was devoted to talk about emotions and other internal states in the current studies, roughly consistent with other research of picture-book reading in this age period (e.g., Taumoepeau & Ruffman,

2006, 2008). Whereas references to mental states such as think, know, and remember were greater with 30-month-olds than for 18-month-olds, parents' talk about emotions did not differ for children between 18 and 24 months of age, and increased only slightly by 30 months, also consistent with prior research (Taumeopeau & Ruffman, 2008). The bulk of parents' emotion-related talk was devoted to labeling and commenting on emotions, as would be expected at these young ages when emotion understanding is undergoing such pronounced development and emotion words are still being acquired (Bartsch & Wellman, 1995; Bretherton et al., 1986). Nevertheless, it was parents' efforts to engage the children themselves in labeling and explaining the characters' emotions that were associated with sharing and helping.

Interactive picture-book reading can be a valuable everyday context for learning about emotions, especially for objectifying and representing emotions, and linking them to situations, actions, and expressions (Dyer et al., 2000). Research has shown that parental talk about emotions during picture-book reading contributes to emotion understanding in one- and two-year-olds (Taumeopeau & Ruffman, 2006, 2008; Garner, 2003). It is thus possible that the associations discovered here between parental emotion talk and toddlers' prosocial behavior are mediated by the effects of emotion-related discourse on early developments in emotion understanding. Children of a given age with greater exposure to maternal talk about others' emotions and internal states may be more developmentally advanced than their age mates in recognizing the circumstances that call for a prosocial response or in knowing how to intervene on another's behalf. More advanced social understanding may then be reflected in other-oriented behavior that depends on that social understanding, such as prosocial behavior (Denham, et al., 2007; Ensor et al., 2011). Future research that includes robust measures of emotion understanding in infants and toddlers is needed to confirm such a mediational pathway.

Emotion understanding is not the only possible means by which parental discourse may affect children's emerging prosocial behavior. Socialization may also augment the motivations or dispositions that underlie and stimulate prosocial responsiveness. Parents' discussion of emotions with their young children may influence how much toddlers come to care about others' emotions and needs, producing or enhancing individual differences in tendencies toward prosociality. That is, parents who focus on others' emotions and who encourage their children to attend to and reflect on them may promote children's interest in and responsiveness to others' emotions and the motivation to alleviate them when they are negative or indicate an unresolved need. Socialization that emphasizes induction and reasoning, an affectively-based strategy in which parents help children to focus on others' needs and well-being and to recognize and acknowledge the effects of their actions on others, has been regularly shown to predict prosocial behavior in school-age children (Hastings et al., 2007) as well as empathic concern in one longitudinal study with toddlers (Zahn-Waxler et al., 1979). Since children's books often depict actions along with others' emotions and mental states (Dyer et al., 2000), parents may be especially likely to help children make the causal links explicit between emotions and actions as they help them understand and participate in story narrative.

The finding across two different studies that it was parents' encouragement of their children's active reflection on, labeling or explaining of others' emotions that were related to prosocial behavior – and not parents' own references to emotions – is consistent with either mechanism of influence. Indeed, it is plausible that parents' efforts to engage children in discussion of others' emotions during picture book reading serves both functions, promoting both social understanding and prosocial motivation.

Helping vs. Sharing

Although the primary finding was consistent across the studies, i.e., that parents' eliciting of children's talk about emotions was uniquely associated with prosocial behavior, some effects differed by type of prosocial behavior. Overall, the effects appeared to be stronger for sharing than for helping. After controlling for age and parents' production of emotion talk, parents' elicitation of emotion talk from their children accounted for nearly 20% additional variance in children's sharing, compared to 6% in empathic helping. We had no theoretical reason for predicting stronger links with sharing than with empathic helping, so can only speculate as to possible reasons. Age was more strongly related to empathic helping than to sharing, accounting for nearly twice as much variance and leaving less residual variance to be explained by other factors; this could have been partly a function of the greater age difference in the helping sample (18 vs. 30 months) than in the sharing sample (18 vs. 24 months). That age was a stronger predictor of empathic helping also suggests that it may have been more difficult than sharing, possibly requiring more advanced social understanding or perhaps different social skills. Future research that examines the generality of these differences with other tasks will be important before drawing firm conclusions about whether parental emotion discourse is more important for sharing than for helping.

As predicted, findings differed for instrumental versus empathic helping. Specifically, encouraging children to label others' emotions was associated with empathic and altruistic helping, but not with instrumental helping despite the structural similarity of the different helping tasks. Children whose parents encouraged them to attend to and label others' emotions in the picture books more readily helped an adult in distress by bringing her something she needed, even if it belonged to the children themselves. However, parental emotion talk was unrelated to children's ability to help an adult complete goal-directed actions. Instrumental helping, such as retrieving an out-of-reach object for an adult who needs it to continue an interrupted action, is likely easier for young children than empathic or altruistic helping because it depends primarily on understanding others' goals and the ability to predict action-effect outcomes in observable behavior, an early-appearing competence. Instrumental helping has been identified in toddlers as young as 14 months of age in previous research (Warneken & Tomasello, 2007). In the current study, it required less adult verbal support for children to implement it. Empathic helping, in contrast, requires more complex inferences about others' unobservable internal states. It is precisely this more complex social understanding that parents may help very young children begin to master by asking them to focus on, recognize, and think about others' emotions during picture-book reading.

In the helping study, parents' references to mental states, in addition to their emotion-related talk, were associated with altruistic helping in which children had to give up something of their own to help. Using a similar picture-book reading task, Taumoepeau and Ruffman (2006, 2008) have shown that mothers begin to talk about mental states well before toddlers use such terms themselves, and mothers' mental state references at 15 and 24 months of age were related to children's later social understanding at 33 months. Challenging young children by talking about ideas at the edge of their understanding appears to have promoted the acquisition of social understanding in those studies. The finding here, that the most demanding form of helping behavior was related to parents' mental state references with 18- to 30-month-olds may reflect a similar underlying process.

Limitations

Several features of this research limit its reach and require additional investigation. First, book-reading, and conversation more generally, are shared activities to which each partner

contributes. The current study, however, concentrated on parental input only. Thus, an important next step will be to include child contributions to the content and structure of the dyad's activity. Differences in children's participation in parent-child discourse and in producing prosocial behavior could be driven by factors such as attention or activity level, self-regulation, or differences in affiliating with or caring about others, among other things.

Second, as the current studies were cross-sectional and correlational, inferences about the causal effects of parents' emotion talk on prosocial behavior are not possible; nor can direction of effects be ascertained. Experimental studies manipulating the amount or type of parental talk about emotions will be necessary to permit such inferences. Longitudinal studies that measure and control for earlier child and parent characteristics could be another important supplement.

Third, although parent-child book reading is a common activity in western middle class families, and research has shown that it relates to a variety of outcomes, including vocabulary and literacy (Dickinson, Griffith, Golinkoff & Hirsh-Pasek, 2012; Dyer et al., 2000; Ninio, 1980, 1983), it is not universal. It is unknown to what extent parent-child talk during interactive book reading represents conversations in other everyday contexts with very young children such as joint play, mutual reminiscing, disciplinary encounters, and the like. It is also unknown how parents' emotion-related discourse during book-reading relates to other aspects of parenting or the quality of the parent-child relationship; hence, whether the current results are unique to how parents discuss emotions or whether they are a result of broader socialization styles can't be determined (but see Symons et al., 2006, for evidence of their independence).

Finally, the samples in the current studies were relatively homogenous and drawn largely from urban, middle-class neighborhoods. There is some evidence for SES differences in how much mothers talk about emotions and mental states, even with toddlers (Degotardi & Torr, 2007), but also evidence that maternal mental state talk contributes to social understanding independent of SES in older children (Symons et al., 2006). Whether the associations uncovered in the current study would hold in samples with other demographic profiles remains to be explored.

Conclusions

Socialization occurs via many routes, some direct and some indirect, and leaves its mark on many aspects of thought, language, and behavior. Beginning at birth, interactions with family members build on, catalyze, and interact with children's inherent propensities to shape how and when development occurs. In the current study we have shown that one specific type of family interaction is related to prosocial behavior during toddlerhood when prosocial responses first emerge. Parents' discussion of emotions with their toddlers is associated with early-developing prosociality – especially when parents help their children attend to, reflect on, and reason about the nature and causes of others' emotions. Moreover, it was sharing and empathic helping, i.e., those aspects of prosocial behavior that depend on the ability to understand and act on others' emotions and internal states, that were associated with parent-child emotion discourse; an earlier-emerging and simpler form of prosocial behavior, instrumental helping, which relies on responding to others' goal-directed actions, was not. In conclusion, parents who encourage toddlers' active participation in discourse about emotions appear to promote their children's readiness and ability to take action to mitigate others' emotions and desires by helping or sharing with them. Thus, in the opening months and years of life, long before children are aware of moral norms, parental socialization contributes to the development of prosociality.

Acknowledgments

This research was supported in part by grants to the first author from the National Institute of Child Health & Human Development (HD055283 & HD064972). We thank the children and parents who volunteered their time to participate in this research. Special thanks also to Ken Burkholder, Sudipta Devanath, Alonna Grigsby, Tracy Lingenfelter, Alyssa Marchitelli, Bethany McNeill, Amber Nelson, Shobhitha Ravi, Marqui Renalls, Korrye Richardson, Jamie Sardineer, and Michelle Ulloa for assistance with data collection and coding. Additional thanks to Alyssa Marchitelli and Emma Satlof-Bedrick for editorial assistance.

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Table 1

Definitions and examples for types of parental talk coded during book reading

Parental Talk	Definition
Emotion Labels <ul style="list-style-type: none"> • <u>Production</u> “The boy is happy” “He loves his ice cream” • <u>Elicitation from child</u> “Is he happy now?” “Is he happy or sad?” “How is he feeling?” 	Nouns, verbs, adjectives, or adverbs naming emotional feelings or behaviors without expansion or elaboration
Emotion Explanations <ul style="list-style-type: none"> • <u>Production</u> “The boy is sad because he dropped his ice cream” “The girl is scared because it is dark” “Oh, look, it fell so he’s all sad now” • <u>Elicitation from child</u> “Why is he sad?” “Is he sad now because he lost his ice cream?” “Does that make him happy?” 	Phrases or statements that explain or clarify the possible reason or cause for a particular emotion, or that provide background or context for the emotion to help the child understand it, or that elaborate or explain how one infers or knows that a given emotion is being experienced
Desires <ul style="list-style-type: none"> • <u>Production</u> “He wants his ice cream back” • <u>Elicitation from child</u> “What does he want now?” “Does he want it back?” 	References to wanting, needing something concrete (coded for sharing study only)
Other mental state talk “Remember when he dropped his ice cream...” “He knows he’s gonna get some”	References to the past, or to thinking, knowing, wondering, believing
Other internal state talk “He is hungry” “The little girl is tired”	References to other internal states that are not affect- or mental state-related (e.g., physiological states)
Empathy inductions “Poor little boy” “Awww”	Statements or emotion-related sounds that promote empathy with a character’s emotion

Table 2

Overview of sharing and helping tasks and the cues provided by the adult

	Task	Cues
Sharing (6 tasks)	Share toys/food with adult playmate who has none	<ol style="list-style-type: none"> 1 Nonverbal communication of desire (audible sighs, slightly sad) 2 Verbalization of desire + name what's needed ("I don't have any [shapes] to play with. I need some [shapes] so I can play too") 3 Verbalization of desire + nonverbal request via reach & gesture toward toys ("I can't reach them") 4 Explicit request ("Could I have a [shape]?") 5 Modeling (E gives AE a toy)
Instrumental Helping (3 tasks)	Get out-of-reach object for adult, needed to complete an action goal	<ol style="list-style-type: none"> 1 Nonverbal communication of general need (e.g., shivering, "brrrr") 2 Name the interrupted action or internal state (e.g., "I'm cold") 3 Verbalization of general need (e.g., "I need something to make me warm") 4 Name the object needed (e.g., "a blanket!") 5 Nonverbal request via gaze alternation between child and needed object 6 Nonverbal request via reach + gesture toward needed object 7 General verbal request (e.g., "can you help me?") 8 Explicit request (e.g., "can you bring me the blanket?")
Empathic Helping (3 tasks)	Get out-of-reach object for adult, needed to alleviate a negative internal state; object belongs to E	Same as above
Altruistic Helping (3 tasks)	Same as Empathic helping, except that object belongs to child	Same as above

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Table 3

Age differences in parents' talk about emotions and other internal states with their children in two studies, and children's prosocial behavior scores (means, standard deviations, and significance tests)

	Sharing Study (n = 29)		<i>F</i> (<i>p</i>) <i>Partial</i> <i>Eta</i> ²	Helping Study (n = 62)		<i>F</i> (<i>p</i>) <i>Partial</i> <i>Eta</i> ²
	18 mos	24 mos		18 mos	30 mos	
Total utterances	75.00 (33.86)	88.63 (39.51)	.85 (ns)	86.52 (42.87)	97.39 (39.64)	1.1 (ns)
Talk Production (proportions)						
Emotion labeling	.16 (.05)	.17 (.18)	.01 (ns)	.18 (.11)	.11 (.06)	8.6 (.005) .13
Emotion explanation	.04 (.04)	.04 (.03)	.03 (ns)	.04 (.04)	.04 (.04)	0
Desire talk production	.001 (.003)	.002 (.004)	.21 (ns)	na	na	na
Mental State talk	.02(.04)	.02 (.04)	.04 (ns)	.03 (.03)	.06 (.05)	14.2 (.001) .19
Internal State talk	.04 (.03)	.03 (.03)	.18 (ns)	.05 (.05)	.04 (.04)	.03 (ns)
Empathy induction	.04 (.04)	.02 (.02)	2.3 (ns)	.03 (.04)	.02 (.03)	1.9 (ns)
Total Production	.29 (.14)	.28 (.21)	.01 (ns)	.32 (.16)	.28 (.11)	1.3 (ns)
Talk Elicitation (proportions)						
Emotion label eliciting	.02 (.02)	.06 (.06)	4.6 (.04) .15	.02 (.03)	.11 (.08)	28.3 (.001) .32
Emotion explanation eliciting	.003 (.003)	.01 (.02)	6.3 (.02) .19	.01 (.01)	.03 (.03)	18.9 (.001) .24
Desire talk eliciting	0	.001 (.003)	1.1 (ns)	na	na	na
Total Elicitation	.02 (.02)	.08 (.08)	5.5 (.03) .17	.03 (.03)	.14 (.09)	38.7 (.001) .39
Total Talk About Emotions, Mental & Internal States (proportion)	.31 (.14)	.36 (.21)	.52 (ns)	.35 (.16)	.42 (.14)	3.3 (.08) .05
Children's Sharing/Helping	1.56 (1.05)	3.24 (1.26)	26.03 (.001)	3.25 (1.70)	5.41 (1.14)	61.99 (.001)

Note: Sharing scores could range from 0 – 5; helping scores could range from 0 – 9.

Table 4

Partial correlations (age controlled) between parents' production of emotion-related talk, parents' elicitation of child's emotion-related talk, and toddlers' sharing and helping scores

	Parents' Production of Emotion-related Talk (proportion of total talk)	Parents' Elicitation of Emotion-related Talk (proportion of total talk)
Sharing Score	.28	.43*
Helping Score, Total	-.08	.32*
Helping Score, Action Condition	-.10	.15
Helping Score, Empathic Condition	-.13	.25*
Helping Score, Altruism Condition	.03	.31*

Note:

* $p < .05$

Table 5

Partial correlations (age controlled) between the content of parents' emotion-related talk and toddlers' sharing and helping scores

	Emotion Labels - Production	Emotion Labels - Elicitation	Desire Labels - Production	Desire Labels - Elicitation	Emotion Explain - Production	Emotion Explain - Elicitation	Other Mental State Labels	Other Internal State Labels	Empathy Induction
Sharing Score	.25	.39*	.06	.09	.13	.47**	.28	.06	-.04
Helping Score, Total	-.16	.30*	--	--	-.08	.15	.30*	-.13	.01
Helping Score, Action Condition	-.15	.11	--	--	.01	.15	.12	-.16	.05
Helping Score, Empathic Condition	-.16	.27*	--	--	-.21	.04	.21 ⁺	-.15	.09
Helping Score, Altruism Condition	-.06	.29*	--	--	-.01	.16	.32*	-.02	-.09

Note: Desire talk was coded only in the sharing sample