

“Help Yourself!” What Can Toddlers’ Helping Failures Tell Us About the Development of Prosocial Behavior?

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Prosocial behavior emerges in the second year of life, yet it is typical for children in this period *not* to share, comfort, or help. We compared toddlers (18, 30 months) who helped with those who did not help on two tasks (instrumental helping; empathic helping). More than half of children failed to help on one or both tasks. Nonhelpers engaged in more hypothesis testing on the instrumental helping task, but more security-seeking, wariness, and playing on the empathic helping task. Across tasks, children who tended to engage in nonhelping behaviors associated with negative emotional arousal also tended to seek comfort from a parent. In contrast, children who tended to play instead of helping were less likely to exhibit negative emotional arousal or hypothesis testing, suggesting a focus on their own interests. Parents of 18-month-old nonhelpers on the instrumental task were less engaged in socializing prosocial behavior in their toddlers than were the parents of helpers. On the empathic helping task, 18-month-old nonhelpers had less mature self-other understanding than did helpers. By examining how the predominant reasons for failing to help vary with age and task, we gain a fuller perspective on the factors involved in the early development of prosocial behavior.

Prosocial behavior such as helping, sharing, nurturing, and comforting emerges early in life. By 14 months of age, toddlers who can barely walk or talk will pick up something that someone has dropped and helpfully hand it back to them (Warneken & Tomasello, 2007). At about the same age, they will sometimes hug a distressed parent (Zahn-Waxler, Radke-Yarrow, Wagner, & Chapman, 1992) and try to help with everyday household tasks such as sweeping, dusting, or loading the dishwasher (Dahl, 2015). As remarkable as such prosociality is in young children, it is worth noting that very often toddlers are not helpful even when the situation clearly calls for it (Carpendale, Kettner, & Audet, 2015).

In the current study, we examine these failures to help. By characterizing the nature of toddlers’ failures to help when another is in need, we aim to shed light on what contributes to the growth of skilled, autonomous prosocial behavior in this period. For

example, if children are more likely to play than to help when the situation calls for helping, this could suggest motivation as a factor. On the other hand, if they exhibit fear and wariness in response to another's apparent need or distress, this could suggest that emotion regulation or understanding is playing a role. By comparing toddlers who help and who do not help, and by examining how the predominant reasons for failing to help vary with age, we can gain a fuller perspective on the factors involved in the early development of prosocial behavior.

Rates of helping among toddlers vary across studies, but generally increase with age. In toddlers under two and a half years of age, the proportion of children who help ranges from 15% to 90%, with most studies reporting <50%, depending on whether helping is requested or spontaneous, how many trials children receive, the number and types of prompts or cues provided (e.g., reaching toward the needed object; verbalizing a need), and whether the task is action-based (instrumental helping) or emotion-based (empathic helping) (Brownell, Svetlova, & Nichols, 2009; Carpenter, Uebel, & Tomasello, 2013; Dahl, Schuck, & Campos, 2013; Kartner, Keller, & Chaudhary, 2010; Over & Carpenter, 2009; Pettygrove, Hammond, Karahuta, Waugh, & Brownell, 2013; Warneken & Tomasello, 2006; Warneken et al., 2007). Toddlers also often do not behave prosocially in naturalistic settings. For example, in response to peer distress in child care, toddlers under the age of two tried to help only 3% of the time (Lamb & Zakhireh, 1997), and toddlers at home tried to help a distressed friend only 12% of the time (Demetriou & Hay, 2004). Thus, in the second year of life, *not* helping when someone is in need is more typical than helping. Not until around 30 months of age do children routinely help on simple tasks. For example, Svetlova, Nichols, and Brownell (2010) found that across three types of helping, 100% of 30-month-olds helped on at least six of nine tasks and 84% helped on all nine.

As the early appearance of prosocial abilities has become empirically well established, the possible mechanisms underlying their emergence and development have received increasing attention. It is not surprising that very young children often do not help given the number of potential ways that prosocial behavior can go awry and the range of competencies required, including recognizing another's need; identifying the problem and knowing how to intervene; and being motivated to assist (Dunfield & Kuhlmeier, 2013; Kartner, Schuhmacher, & Collard, 2014; Svetlova et al., 2010). Mechanisms proposed to underlie early prosocial behavior have included an intrinsic, built-in motivation to help (Aknin, Hamlin, & Dunn, 2012; Hepach, Vaish, & Tomasello, 2012; de Vondervoort & Hamlin, 2016; Warneken et al., 2006); the development of social understanding, especially self-other differentiation and understanding of others' goals, desires, and emotions (Bischof-Köhler, 1991; Brownell, 2011; Brownell, Nichols, & Svetlova, 2013; Brownell, Svetlova, Anderson, Nichols, & Drummond, 2013; Kartner et al., 2014; Svetlova et al., 2010; Vaish, Carpenter, & Tomasello, 2009); empathic responsiveness (Eisenberg, 2005; Hoffman, 2007; Nichols, Svetlova, & Brownell, 2009), especially in concert with emotion regulation (Eisenberg, 2000; Kochanska, Murray, & Coy, 1997; Spinrad et al., 2007); and parent socialization of prosociality coupled with the desire to affiliate with others (Brownell & Early Social Development Research Lab, 2016; Brownell, Nichols et al., 2013; Brownell, Svetlova et al., 2013; Carpendale et al., 2015; Dahl, 2015; Waugh, Brownell, & Pollock, 2015). Some of these are meant to explain the early emergence of prosociality, while others are intended to explain its development over the toddler and preschool years, and others address individual differences in toddlers' propensity to behave prosocially at a

given age. Most, however, are likely to play a role in individual acts of helping in toddlers.

Various methodological approaches have been used to identify potential mechanisms in early helping, often by examining associations between child, parent, or task characteristics and toddlers' tendency to intervene when another is in need. For example, by making the task cognitively, emotionally, or physically more difficult, inferences can be made about the role of young children's social understanding (Svetlova et al., 2010), or their altruistic (Svetlova et al., 2010) or effortful motivation (Warneken et al., 2007). The current study takes a different tack and adds to established approaches by examining toddlers' behavior when they *fail* to behave prosocially.

Failures to behave prosocially can stem from either developmental or individual differences in motivation, task understanding or social understanding, or emotional reactivity or regulation. Identifying which of these is at work at particular ages or in particular contexts can yield inferences about specific contributions to the early development of helping that complement those from children's successes. This may be especially true among very young children for whom prosocial behavior is not yet normative and is undergoing rapid developmental change.

Two helping tasks were included in this study to capture a range of behavior and capability: one that is within the abilities of children as young as 18 months (instrumental helping) and one that poses some challenge to children as old as 30 months (empathic helping). Instrumental helping is thought to be easier because it relies on children's understanding of and ability to intervene in or modify another's action-based goals, understanding of which emerges during the first year of life. Empathic helping, in contrast, relies on additionally understanding others' subjective emotional states as well as the ability to regulate one's own emotion and arousal.

We identified specific behaviors of 18- and 30-month-olds when they were not helping during each task to address several questions: (1) How does nonhelping behavior vary with age, task, and for helpers vs. nonhelpers? (2) Are there consistent patterns or behavioral profiles of nonhelping behavior? and (3) How are two commonly proposed contributors to the development of helping, parent socialization of prosocial behavior and early social understanding (Brownell & Early Social Development Research Lab, 2016; Paulus, 2014), associated with children's nonhelping behavior? In taking this complementary perspective on early helping, our goal is to elucidate possible constraints on or impediments to prosocial behavior in young children and, thereby, potential contributors to increasing prosociality in the early years.

METHOD

Participants

Participants were 149 healthy, typically developing toddlers (84 males; 97 eighteen-month-olds, 52 thirty-month-olds) recruited from a medium-sized mid-Atlantic city and surrounding area. The children were participants in three separate studies of early prosocial behavior, only one of which included 30-month-olds. Eight children were not included in the analyses as they completed only one of the two helping tasks because of experimenter error, parental interference, equipment failure, or fussiness. Most children came from moderate-income families whose parents had at least some college

education; 83.9% were Caucasian, 9.4% were biracial, 4% were African American, 1.3% were Hispanic, and 1.3% identified as other.

Procedure

Procedures took place in a large laboratory playroom and were video-recorded. After a brief warm-up period, children engaged in two helping tasks (order counterbalanced) with an intervening period of freeplay: (1) instrumental helping in which an experimenter (E) “accidentally” dropped sticks out of her/his reach (after Over & Carpenter, 2009); and (2) empathic helping in which E became cold, shivered, and needed a blanket (after Svetlova et al., 2010). E maintained a neutral face and did not exhibit overt distress in either task.

During each task, E delivered a standard set of four successive cues which provided increasing information about the nature of her need. The first cue (“oops” or shivering) conveyed the need nonverbally. The second cue (“I dropped my sticks” or “I’m cold”) described the nature of the need. The third cue (“I dropped my sticks, I need them back” or “I’m cold, I need my blanket” accompanied by two distinct reaches, palm-down, toward the needed object) further described the need as well as how to alleviate it. The fourth cue (“[child’s name], can you help me get my sticks/blanket?” with a palm-up gesture toward the target object) was the most direct communication about how to help. The child was given 10 sec after each cue to help. Cues were discontinued once the child helped. If the child did not help after the last cue, the experimenter retrieved the target object and continued the session. Parents remained in the room, completing questionnaires, and were asked to refrain from encouraging their children to help.

Measures

Videos were coded to determine whether and when children helped and what they did when they were not helping. During each of the four cues, children could either help or could engage in one or more nonhelping behaviors such as seeking proximity to the parent (moves close to parent and hides or makes physical contact); wariness (stands still & looks at E for at least 3 sec with visible tension or self-soothing); hypothesis testing (looks repeatedly back and forth between the object(s) and E without wariness or tension); or playing (ignores E and plays with other objects in the room). A review of the video records identified ten such nonhelping behaviors that children exhibited relatively commonly prior to or instead of helping. The behaviors coded and the coding criteria are presented in Table 1. Each of the ten nonhelping behaviors was coded as occurring or not at each cue (total possible score = 0–4 for each behavior, per task). Multiple nonhelping behaviors could occur during a given cue (e.g., social referencing + playing). The first author and an undergraduate research assistant coded the videos, with reliability calculated on 20% of the sample (percent agreement ranged from .80 to 1.0). Coders were not able to achieve acceptable agreement for social referencing (percent agreement = .47), so it was not included in analyses.

Children received different numbers of cues based upon when they helped, which affected the possible number of nonhelping behaviors they could exhibit. For example, a child who never helped had four opportunities (cues) to exhibit each nonhelping behavior, whereas a child who helped after the second cue had only two opportunities.

TABLE 1
Coding Criteria for Each Nonhelping Behavior, Percent of Children Who Exhibited At Least One Instance, and Rate of Each Behavior Adjusted for the Number of Opportunities to Exhibit the Behavior

<i>Nonhelping Behavior</i>	<i>Definition</i>	<i>% of children</i>	<i>Mean rate (SD)</i>
Security-seeking	Child moves close to parent and does at least one of the following: hides behind him/her, climbs into his/her lap, solicits hug or reassurance, and stands immediately next to him/her making contact.	51.7	0.22 (0.28)
Social referencing	Child looks to or vocalizes to parent from a distance when not engaged in helping behavior.	18.1	0.03 (0.09)
Wary	Child stands still & looks at the experimenter; does not move for least 3 sec. The child expresses tension or self-soothing behaviors (e.g., twirling hair, sucking thumb, tugging clothing, rocking, rubbing body parts).	36.5	0.32 (0.28)
Active hypothesis testing	Child looks repeatedly back and forth between the object (s) and experimenter. No apparent wariness or tension.	62.4	0.18 (0.21)
Social approach	Child deliberately moves closer to experimenter, shows a toy or object to experimenter or sits next to experimenter	24.2	0.04 (0.09)
Mimic	Child copies the experimenter's behavior, for example, dropping the sticks, pretending to be cold, pointing, or reaching.	6.0	0.01 (0.04)
Positive emotion	Child laughs or smiles at experimenter without approaching or helping.	4.0	0.01 (0.03)
Unskilled helping	Child gives the experimenter the wrong (unneeded) object.	10.7	0.03 (0.15)
Playing	Child ignores experimenter and plays with other objects in the room (e.g., magazines; mirror) or runs around. May approach the objects, but then plays with them (e.g., uses the sticks to drum on the floor).	67.8	0.26 (0.27)
Refuse to help	Child passively refuses to help by hiding object behind them or deliberately moving the object away from the experimenter. Or child actively refuses a request for help ("no," shakes head).	5.4	0.01 (0.03)

Thus, the frequency of each child's nonhelping behavior was divided by the number of cues the child received. This yielded scores representing the proportion of times each nonhelping behavior occurred, adjusted for the number of opportunities the child had to exhibit it. Additionally, each child received a score of 1 if they helped on any cue and a score of 0 if they never helped. See Table 1 for the proportion of children who helped and the adjusted proportions of each nonhelping behavior.

Parents completed questionnaires assessing their toddlers' self-other understanding and parents' own socialization practices related to early prosocial behavior. The UCLA self-understanding questionnaire (Stipek, Gralinski, & Kopp, 1990) consists of 24 items rated on a 3-point scale (0 = definitely not; 1 = sometimes; 2 = definitely) that evaluate self-recognition, self-description, and self-evaluation in toddlers and young preschoolers (sample $M = 26.6$, $SD = 11.5$). The Prosocial Behavior Questionnaire (PBQ) was developed to assess parent socialization of toddlers' prosocial behavior (Gross et al., 2015)¹ and includes 35 items such as "Ask my child to help even if I don't really need it, just for the purpose of teaching him/her about helping"; "Praise/thank my child when s/he helps me or someone else"; and "Talk about my child's and

¹Questionnaire is available from the second author.

other people's feelings with my child." Parents rated each item on a 5-point Likert scale (0 = Not at all; 1 = Once or twice; 2 = Sometimes, a few times a month; 3 = Often, a few times a week; 4 = All the time, everyday; sample $M = 96.7$, $SD = 20.6$; Cronbach's $\alpha = .93$).

RESULTS

Preliminary analyses indicated that there were no systematic gender differences in proportions of nonhelping behaviors so gender was not further considered. Five of the nonhelping behaviors occurred infrequently and were therefore not analyzed (social approach, mimic, positive emotion, unskilled helping, and refuse to help all occurred from 1% to 4% of opportunities; see Table 1 for details).

Substantive analyses were directed to four questions: (1) differences in the propensity to help or not help as a function of age (18, 30 months) and task type (instrumental, empathic); (2) how nonhelping behavior differed between children who eventually helped and those who never helped, also as a function of age and task type; (3) whether and how nonhelping behaviors cohered into identifiable patterns; and (4) whether either parent socialization of prosocial behavior or children's self-other understanding related to being a helper vs. a nonhelper.

Propensity to help or not

Sixty-nine children (49%) helped on both tasks; 33 children (23%) helped on neither task. Thirty children (21%) helped on the instrumental, but not the empathic task; nine children (6%) helped on the empathic, but not the instrumental task ($\chi^2 = 127.797$, $p < .001$). One-way ANOVAs were conducted on whether children helped, with age (18, 30 months) as the factor. Older children were more likely to help on both instrumental, $F(1, 142) = 22.77$, $p < .001$, and empathic helping tasks, $F(1, 144) = 24.08$, $p < .001$ (instrumental $M = .94$; empathic $M = .81$, for 30-month-olds) than were younger children (instrumental $M = .59$; empathic $M = .41$, for 18-month-olds). To complement these findings, we compared the proportion of children who helped vs. failed to help on each task at each age (see Figure 1), using the chi-square

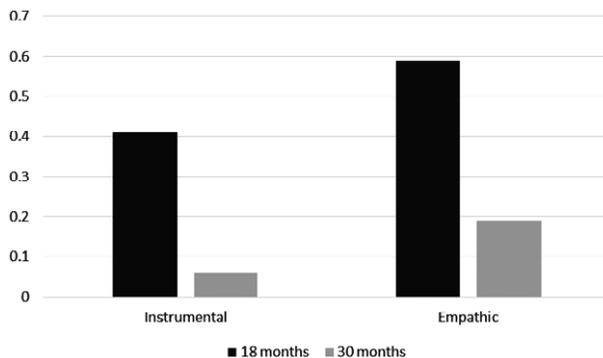


Figure 1 Proportion of children who did not help as a function of age and helping task. Proportions are adjusted for the number of opportunities each child had to exhibit the behavior.

one-sample test (Siegel, 1956). On the instrumental helping task, 30-month-olds were significantly more likely to help than not help (94% helped), $\chi^2 = 38.72$, $p < .001$; 18-month-olds were marginally more likely to help than not help (58.5% helped), $\chi^2 = 2.72$, $p = .099$). In contrast, on the empathic helping task, 18-month-olds were marginally more likely *not* to help (58.5% failed to help) than to help, $\chi^2 = 2.72$, $p = .099$, whereas 30-month-olds were again significantly more likely to help than not (19.2% did not help; $\chi^2 = 19.69$, $p < .001$). Thus, by 18 months of age children tended to help more often than not on the action-based instrumental helping task, and by 30 months of age almost all children helped on the instrumental task. On the emotion-based empathic helping task, children transitioned from predominantly not helping at 18 months of age to routinely helping by 30 months of age.

Nonhelping behavior

Focusing on the proportion of opportunities when children did not help, we first asked whether and how nonhelping behavior differed as a function of task and age, and then how it differed between helpers and nonhelpers.

Task and age differences

To examine task and age differences in nonhelping behaviors (see Figure 2) a mixed model MANOVA was conducted on the four nonhelping behaviors, with task (instrumental; empathic) as the within-subjects factor and age (18 months; 30 months) as the between-subjects factor. The multivariate tests were significant for both task, $F(4, 136) = 21.73$, $p < .001$, and age, $F(4, 136) = 14.91$, $p < .001$. As shown in Table 2, toddlers were more likely to engage in security-seeking on the empathic helping task (M instrumental = .15; M empathic = .32), as well as wariness (M instrumental = .22; M empathic = .48), and playing (M instrumental = .24; M empathic = .34) than on the instrumental task. In contrast, they were more likely to engage in active hypothesis testing on the instrumental helping task ($M = .28$) than on the empathic helping task ($M = .17$). Younger, 18-month-old toddlers were more likely to be wary ($M = .42$) and to play ($M = .41$) during the helping tasks than were 30-month-olds ($M = .28$, .17 respectively). There were no significant age differences in security seeking or active hypothesis testing.²

Helpers vs. Nonhelpers

Even those children who eventually helped the adult also exhibited nonhelping behaviors prior to the point in the task when they ultimately helped. It is important to know how children who never helped on a given task behaved differently from those who eventually did help. That is, did nonhelpers exhibit different nonhelping behaviors than helpers? Because of the small number of 30-month-olds who failed to help, especially on the instrumental helping task, analyses were conducted separately by task and age (see Table 3 for test statistics).

²Analyses conducted on nonhelping behavior that occurred prior to the fourth cue, which conveyed the most explicit information about helping, yielded nearly identical results.

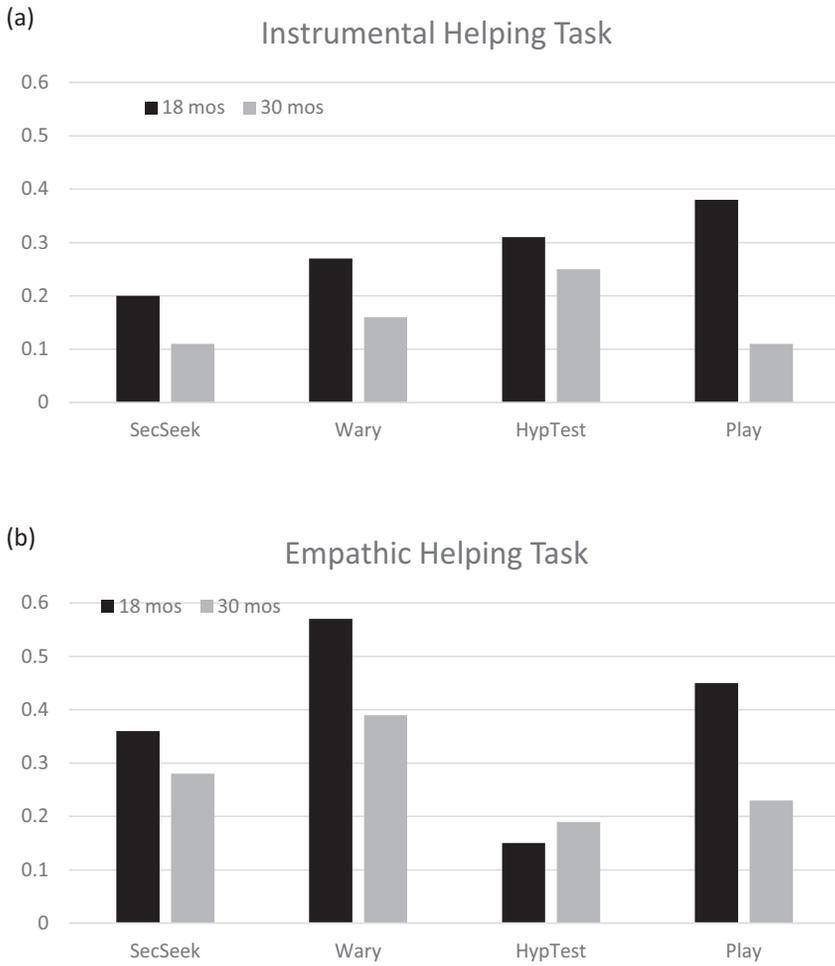


Figure 2 Nonhelping behavior (proportions) during (a) the instrumental helping task and (b) the empathic helping task as a function of age. Proportions are adjusted for the number of opportunities each child had to exhibit the behavior.

TABLE 2
Proportions of Nonhelping Behaviors as a Function of Age and Type of Helping Task

	<i>Helping task</i>				<i>Age</i>			
	<i>Instrumental</i>	<i>Empathic</i>	<i>F</i>	<i>p (η²)</i>	<i>18 months</i>	<i>30 months</i>	<i>F</i>	<i>p (η²)</i>
Security Seeking	0.15 (.030)	0.32 (.035)	18.20	.000 (.12)	.28 (.031)	.19 (.042)	2.72	.10 (.02)
Wary	0.22 (.030)	0.48 (.031)	54.42	.000 (.28)	.42 (.030)	.28 (.040)	8.20	.005 (.06)
Active Hypothesis Testing	0.28 (.034)	0.17 (.021)	9.07	.003 (.06)	.23 (.026)	.22 (.035)	.06	.80 (.00)
Playing	0.24 (.033)	0.34 (.029)	6.23	.014 (.04)	.41 (.029)	.17 (.040)	25.03	.000 (.15)

Note. Proportions are adjusted for the number of opportunities each child had to exhibit the behavior.

TABLE 3
Proportions of Nonhelping Behaviors as a Function of Age, Helpers vs. Nonhelpers, and Type of Helping Task

	18 months					30 months				
	Nonhelper	Helper	F	p	η^2	Nonhelper	Helper	F	p	η^2
Instrumental	<i>n</i> = 39	<i>n</i> = 55				<i>n</i> = 3	<i>n</i> = 47			
Security seeking	.38	.06	22.73	<.001	.196	.75	.06	24.91	<.001	.342
Wary	.42	.15	14.17	<.001	.130	.58	.13	6.89	.012	.126
Active hypothesis testing	.38	.25	2.68	ns	.029	.50	.24	1.32	ns	.018
Playing	.46	.31	2.78	ns	.030	.25	.10	.87	ns	.027
Empathic	<i>n</i> = 55	<i>n</i> = 39				<i>n</i> = 10	<i>n</i> = 42			
Security seeking	.38	.30	.88	ns	.010	.83	.14	43.30	<.001	.465
Wary	.67	.43	10.69	.002	.104	.70	.30	14.41	<.001	.224
Active hypothesis testing	.16	.16	0	ns	.00	.22	.15	.425	ns	.034
Playing	.48	.38	2.18	ns	.023	.24	.10	1.78	ns	.008

Note. Proportions are adjusted for the number of opportunities each child had to exhibit the behavior.

We asked first how nonhelpers differed from helpers on each task. As shown in Table 3, on the instrumental helping task nonhelpers differed from helpers in similar ways at each age. Specifically, nonhelpers at both ages exhibited proportionally more security-seeking on the instrumental helping task (M , 18 months = .38; M , 30 months = .75) than did helpers (M , 18 months = .06; M , 30 months = .06), and more wariness (M , 18 months = .42; M , 30 months = .58) than did helpers (M , 18 months = .15; M , 30 months = .13). On the empathic helping task, nonhelpers at both ages again exhibited more wariness (M , 18 months = .67; M , 30 months = .70) than did helpers (M , 18 months = .43; M , 30 months = .30). However, only 30-month-old nonhelpers exhibited greater security seeking (M = .83) than did helpers (M = .14) on this task. Thus, systematic differences in wariness and security-seeking distinguished nonhelpers from helpers across ages and tasks.

Second, we asked how 18-month-old nonhelpers differed from 30-month-old nonhelpers. To do so, age differences in nonhelping behavior were analyzed among the nonhelpers alone. On the instrumental helping task, there were no significant behavioral differences between 18- and 30-month-old nonhelpers, likely because there were too few 30-month-olds to detect differences. However, on the more challenging, emotion-based empathic helping task, 18-month-old nonhelpers were more likely to play (M = .48) than were 30-month-old nonhelpers (M = .24), $F(1, 63) = 9.56$, $p = .003$, whereas 30-month-old nonhelpers were more likely to engage in security-seeking (M = .83) than were 18-month-old nonhelpers (M = .38), $F(1, 63) = 9.64$, $p = .003$.

Relations among nonhelping behaviors

To determine whether children who engaged in one type of nonhelping behavior also tended to engage in particular other types, Pearson correlations were conducted among nonhelping behaviors across age and task. As shown in Table 4, children who more frequently engaged in security seeking were also more wary, both within and across

TABLE 4
Correlations Among Occurrences (Proportions) of Nonhelping Behaviors

		<i>Security seeking</i>		<i>Wary</i>		<i>Active hyp test</i>		<i>Playing</i>	
		<i>Inst</i>	<i>Emp</i>	<i>Inst</i>	<i>Emp</i>	<i>Inst</i>	<i>Emp</i>	<i>Inst</i>	<i>Emp</i>
Security seeking	Emp	.29**							
Wary	Inst	.43**	.31**						
	Emp	.25*	.32**	.34**					
Active hypothesis testing	Inst	.20*	-.01	.25**	.11				
	Emp	.24*	.09	.06	.02	.20*			
Playing	Inst	-.11	-.09	-.15	-.17†	-.19*	-.05		
	Emp	-.22*	-.19*	-.18*	-.36**	.02	-.21**	.36**	

Inst = instrumental task; Emp = empathic task.

** $p < .001$; * $p < .05$; † $p = .051$.

tasks (r 's = .25 to .43). On the instrumental, but not the empathic helping task, they were also more likely to engage in active hypothesis testing (r 's = .20, .24). In contrast, children who played instead of helping did so similarly across the two tasks ($r = .36$), but they did not seek the security of a parent or engage in hypothesis testing; indeed, they were less likely to do so (r 's = $-.17$ to $-.36$). This suggests that there may be two general profiles of nonhelping behavior, one focused on figuring out how to interpret and act in the situation when another person is in need, possibly accompanied by negative affect or uncertainty, and a second focused on self-interest or interest in one's own ongoing activity rather than other-orientation.

Correlates of nonhelping vs. helping: socialization and self-other understanding

Because there were few 30-month-olds who failed to help, analyses to examine potential parenting and child correlates of nonhelping were restricted to 18-month-olds. Helpers were compared to nonhelpers separately by task for parent socialization of prosocial behavior and self-other understanding. On the instrumental helping task, parents of 18-month-old nonhelpers reported significantly less intensive socialization related to prosocial behavior ($M = 84.39$, $SD = 21.93$) than did parents of helpers ($M = 97.51$, $SD = 19.95$), $F(1, 60) = 6.86$, $p = .01$. There were no significant differences in self-other understanding between helpers and nonhelpers on the instrumental helping task. In contrast, on the empathic helping task, 18-month-old nonhelpers had significantly lower self-other understanding scores ($M = 16.80$, $SD = 5.69$) than did helpers ($M = 21.10$, $SD = 7.97$), $F(1, 54) = 5.51$, $p = .02$, while their parents did not differ in socialization of prosocial behavior. Thus, parent socialization distinguished 18-month-old helpers from nonhelpers on the more basic and transparent instrumental helping task, whereas social understanding distinguished them on the more challenging empathic helping task.

DISCUSSION

Because prosocial behavior emerges in the second year of life and becomes more reliable and differentiated over early childhood, toddlerhood is a particularly relevant

period in which to study the development of helping. Notably, many toddlers do not help when the opportunity arises. In the current study, more than half of 1- and 2-year-olds failed to help a clearly needy adult on at least one of two helping tasks, and nearly a quarter failed to ever help, consistent with rates found in previous studies of toddler helping (e.g., Brownell et al., 2009; Carpenter et al., 2013; Dahl et al., 2013; Kartner et al., 2010; Over & Carpenter, 2009; Pettygrove et al., 2013; Warneken et al., 2006, 2007). By examining more closely these failures to help, we provide a new and complementary perspective on the early development of prosocial behavior.

As expected, the proportion of children who failed to help declined substantially between 18 and 30 months of age. At 18 months, nearly half the children did not help on an instrumental, action-based helping task, and nearly two thirds failed to do so on a more challenging empathic, emotion-based helping task. Twelve months later, at 30 months, very few children failed to help on the instrumental helping task, and fewer than a fifth did not help on the empathic helping task. Thus, during this 12-month period children progress from predominantly not helping when the circumstances favor it to being reliable helpers in a range of contexts.

We therefore identified what toddlers did when they were not helping and compared younger and older helpers and nonhelpers on each task to shed light on potential constraints on early helping and contributors to its development during this major developmental transition. Nonhelpers at both ages and on both tasks were more likely than helpers to exhibit wariness and to seek the security of a parent, reflecting some level of uncertainty and possibly discomfort or negative affect common to both ages. However, the two helping tasks elicited different types of nonhelping behavior across ages. On the action-based instrumental helping task children exhibited more active hypothesis testing when they were not helping, trying to figure out how to help the adult who had dropped her things. Nonhelping behavior on the emotion-based empathic helping task was more affect-driven, including wariness and seeking proximity to a parent. Interestingly, children were also more likely to play with the toys and other things in the room on the empathic helping task than on the instrumental helping task, behavior especially characteristic of the younger children, as discussed below.

Other findings suggest that distinct processes may explain the nonhelping behavior of 18-month-old children and 30-month-old children in instrumental and empathic helping situations. Because so few 30-month-olds failed to help, developmental constraints were likely not responsible for their behavior, suggesting that we look instead to individual differences as the source. The specific types of nonhelping behavior that predominated in the 30-month-olds, namely seeking comfort and security from a parent and wariness, point to differences in emotionality or emotion regulation as the primary constraints on helping among these older toddlers, characteristics known to interfere with prosocial interventions in later childhood as well (Eisenberg, Spinrad, & Knafo-Noam, 2015).

Many more 18-month-olds failed to help, suggesting a combination of individual and developmental differences in motivation, understanding, and skill to account for their behavior. In principle, 18-month-olds are capable of helping on instrumental tasks insofar as action-based helping situations call on their established ability to apprehend and act on others' goal-directed actions. This suggests that young toddlers' failures to help on this task may lie in differences in motivation or regulation rather than developments in skill or task understanding. That is, as the basic developmental

prerequisites for instrumental helping in terms of goal and action understanding are well in place by 18 months, these mechanisms are unlikely to contribute to helping failures. Evidence for this suggestion is provided by the finding that 18-month-old nonhelpers on this task did not differ in social understanding from helpers. The finding that 18-month-old nonhelpers were more likely than helpers to exhibit wariness or to seek a parent is consistent with individual differences in emotional sensitivity or emotion regulation (Huang, Su, & Jin, 2016). Their trend toward playing rather than helping on this task, although nonsignificant, also suggests differences in prosocial motivation. Thus, either developmental or individual differences in emotion regulation or prosocial motivation could be at work even if the development of social understanding is not.

Interestingly, parents of 18-month-old nonhelpers on the instrumental task reported that they were less engaged in socializing their toddlers' prosocial behavior than were the parents of helpers. Other recent research has reported relations between parents' interactional style and infants' ability to encode goal-directed actions (Licata et al., 2014); between parental empathy (Xu, Saether, & Sommerville, 2016) or perspective taking (Cowell & Decety, 2015) and sharing in infants and toddlers; between parents' emotion talk with their toddlers and children's helping and sharing (Brownell, Svetlova et al., 2013); and between parent scaffolding during cleanup and toddlers' helping (Hammond & Carpendale, 2015; Pettygrove et al., 2013), in line with the argument that socialization influences multiple aspects of early prosociality and does so in a multitude of ways (Brownell & Early Social Development Research Lab, 2016). In the current study we cannot determine how parent socialization of prosocial behavior may have influenced toddlers' helping and nonhelping behavior. It may contribute to developmental or individual differences in foundational competencies such as goal understanding, prosocial motivation, or emotion regulation, or it may contribute more directly to the ability to assess when others need help and to generate appropriate responses to their predicaments. We should also note that this relationship is likely bidirectional: children who are more responsive to their parents' socialization endeavors or who are more prosocial for other reasons may elicit more active or sustained socialization efforts. Further specifying the nature and effects of prosocial socialization in the early years of life is a promising area for future inquiry.

On the empathic, emotion-based helping task, which required more advanced social understanding, including of others' subjective emotional states, the majority of 18-month-olds failed to help. In keeping with the more advanced task demands, 18-month-old nonhelpers on this task also had less mature self-other understanding than helpers. Additionally, 18-month-old nonhelpers were significantly more likely to play with the stimuli or other objects in the room in lieu of helping than were 30-month-old nonhelpers, suggesting that younger nonhelpers were indulging their own interests. Eighteen-month-olds in a previous study similarly failed to share when given the opportunity to do so, even when sharing was without cost and the potential recipient clearly indicated her desire (Brownell et al., 2009). Hence, the decline in nonhelping behavior over the second year is accompanied by, and possibly partly governed by increasing other-orientation and decreasing self-interest in line with advances in social understanding, especially when it comes to others' emotions.

Previous research on prosocial behavior in the second year of life has similarly found associations between toddlers' self-other understanding and more complex forms of prosociality such as empathic responsiveness (Bischof-Köhler, 1991; Zahn-Waxler

et al., 1992; Nichols, et al., 2010), sharing (Brownell et al., 2009), and cooperation (Brownell & Carriger, 1990; Brownell, Ramani & Zerwas, 2006; Kartner et al., 2014), but not between self-other understanding and simpler, earlier-appearing instrumental helping (Kartner et al., 2014). The current findings for toddlers' nonhelping behavior thus lend support to the proposal that different types of prosocial behavior may originate in distinct social and social-cognitive mechanisms (Dunfield, Kuhlmeier, O'Connell, & Kelley, 2011; Kartner et al., 2014; Paulus, 2014; Paulus, Kuhn-Popp, Licata, Sodian, & Meinhardt, 2013). Taken together, the findings for 18-month-olds suggest that developmental differences account for differences in their propensity to help or not on the empathic task, perhaps rooted in developing other-orientation and self-other understanding, whereas individual or developmental differences in motivation or emotion regulation may account for differences in their propensity to help on the instrumental task, some of which may derive from parents' socialization of prosociality.

The pattern of associations found among the various nonhelping behaviors offers further support for this postulation. Two patterns were apparent across tasks and ages, an emotional profile and a self-interest profile. Children who tended to engage in nonhelping behaviors associated with negative emotional arousal, such as wariness, also tended to retreat to a parent to seek comfort or alleviate distress. On the other hand, children who tended to play instead of helping were less likely to exhibit negative emotional arousal or use hypothesis testing to try to figure out the other person's needs, consistent with a focus on their own interests rather than the emotions, needs, or desires of another. The latter pattern has not been previously described in young children and became evident only by investigating their helping failures. The current methods cannot inform us about the source of this pattern, but the findings do suggest that a motivational mechanism based in developing self-other understanding may be involved in some of young toddlers' failures to behavior prosocially.

In conclusion, the current study documents that toddlers frequently do not help when the situation calls for it. Although this is implicit in the findings of previous research, this is the first study to investigate toddlers' nonhelping behavior directly. The findings suggest that toddlers become helpers only gradually over the second year of life and that both individual differences and developmental processes are involved in the early growth of prosocial behavior. At 30 months of age most children helped, but those who did not exhibited behavior consistent with individual differences in emotional responsiveness and regulation. At 18 months, when most children did not help, failure to help was reflected in several aspects of behavior indicative of immature social understanding, motivation, and emotion regulation in some combination of individual and developmental differences, and related in part to parent socialization. These results coincide with theories that emphasize multiple mechanisms in both the child and the social environment that interact in the genesis and early development of prosocial behavior (e.g., Brownell & Early Social Development Research Lab, 2016; Carpendale et al., 2015; Paulus, 2014), rather than an innate moral or altruistic system immune to social experiences and influences (e.g., Hamlin, 2013; Wynn, 2009). They also suggest that active developmental processes during the first 2 years of life influence the motivation to help, whether it is intrinsic or not (Brownell & Early Social Development Research Lab, 2016). Teasing apart and more fully specifying how motivation, understanding, and regulation constrain early helping holds promise for providing novel insights into the mechanisms underlying the origins and growth of early-appearing prosocial behavior.

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REFERENCES

- Aknin, L. B., Hamlin, J. K., & Dunn, E. W. (2012). Giving leads to happiness in young children. *PLoS One*, 7(6), e39211.
- Bischof-Köhler, D. (1991). The development of empathy in infants. In M. E. Lamb, & H. Keller (Eds.), *Infant development: Perspectives from German speaking countries* (pp. 245–273). Hillsdale, NJ: Erlbaum.
- Brownell, C. A. (2011). Early developments in joint action. *Review of Philosophy and Psychology*, 2, 193–211.
- Brownell, C., & Carriger, M. (1990). Changes in cooperation and self-other differentiation during the second year. *Child Development*, 61, 1164–1174.
- Brownell, C., & Early Social Development Research Lab (2016). Prosocial behavior in infancy: The role of socialization. *Child Development Perspectives*, 10, 222–227.
- Brownell, C., Nichols, S., & Svetlova, M. (2013). Converging developments in prosocial behavior and self-other understanding in the second year of life: The second social-cognitive revolution. In M. Banaji, & S. Gelman (Eds.), *Navigating the social world: What infants, children, and other species can teach us*. New York, NY: Oxford University Press.
- Brownell, C., Ramani, G., & Zerwas, S. (2006). Becoming a social partner with peers: Cooperation and social understanding in one- and two-year-olds. *Child Development*, 77, 803–821.
- Brownell, C. A., Svetlova, M., Anderson, R., Nichols, S. R., & Drummond, J. (2013). Socialization of early prosocial behavior: Parents' talk about emotions is associated with sharing and helping in toddlers. *Infancy*, 18(1), 91–119.
- Brownell, C. A., Svetlova, M., & Nichols, S. (2009). To share or not to share: When do toddlers respond to another's needs? *Infancy*, 14(1), 117–130.
- Carpendale, J. I. M., Kettner, V. A., & Audet, K. N. (2015). On the nature of toddlers' helping: Helping or interest in others' activity? *Social Development*, 24, 357–366.
- Carpenter, M., Uebel, J., & Tomasello, M. (2013). Being mimicked increases prosocial behavior in 18-month-old infants. *Child Development*, 84(5), 1511–1518. <https://doi.org/10.1111/cdev.12083> 23488734.
- Cowell, J., & Decety, J. (2015). Precursors to morality in development as a complex interplay between neural, socioenvironmental, and behavioral facets. *Proceedings of the National Academy of Sciences*, 112, 12657–12662.
- Dahl, A. (2015). The developing social context of infant helping in two US samples. *Child Development*, 86, 1080–1093.
- Dahl, A., Schuck, R. K., & Campos, J. J. (2013). Do young toddlers act on their social preferences? *Developmental Psychology*, 49, 1964–1970.
- de Vondervoort, J. W., & Hamlin, J. K. (2016). Evidence for intuitive morality: Preverbal infants make sociomoral evaluations. *Child Development Perspectives*, 10, 143–148. <https://doi.org/10.1111/cdep.12175>.
- Demetriou, H., & Hay, D. F. (2004). Toddlers' reactions to the distress of familiar peers: The importance of context. *Infancy*, 6, 299–318.
- Dunfield, K. A., & Kuhlmeier, V. A. (2013). Classifying prosocial behavior: Children's responses to instrumental need, emotional distress, and material desire. *Child Development*, 84, 1766–1776.
- Dunfield, K., Kuhlmeier, V. A., O'Connell, L., & Kelley, E. (2011). Examining the diversity of prosocial behavior: Helping, sharing, and comforting in infancy. *Infancy*, 16, 227–247.
- Eisenberg, N. (2000). Emotion, regulation, and moral development. *Annual Review of Psychology*, 51, 665–697.
- Eisenberg, N. (Ed.) (2005). *The development of empathy-related responding*. Lincoln, NE: University of Nebraska Press.

- Eisenberg, N., Spinrad, T. L., & Knafo-Noam, A. (2015). Prosocial development. In M. Lamb & R. M. Lerner (Eds.), *Handbook of child psychology and developmental science: Socioemotional processes* (Vol. 3, 7th ed., pp. 610–656). New York, NY: Wiley.
- Gross, R., Drummond, J., Satlof-Bedrick, E., Waugh, W. E., Svetlova, R., & Brownell, C. (2015). Individual differences in toddlers' social understanding & prosocial behavior: Disposition or socialization? *Frontiers in Psychology*, 6. <https://doi.org/10.3389/fpsyg.2015.00600>.
- Hamlin, K. (2013). Moral judgment and action in preverbal infants and toddlers: Evidence for an innate moral core. *Current Directions in Psychological Science*, 22, 186–193.
- Hammond, S. I., & Carpendale, J. I. M. (2015). Helping children help: The relation between maternal scaffolding and children's early help. *Social Development*, 24, 367–383.
- Hepach, R., Vaish, A., & Tomasello, M. (2012). Young children are intrinsically motivated to see others helped. *Psychological Science*, 23, 967–972.
- Hoffman, M. L. (2007). The origins of empathic morality in toddlerhood. In C. A. Brownell, & C. B. Kopp (Eds.), *Socioemotional development in the toddler years: Transitions and transformations* (pp. 132–145). New York, NY: Guilford Press.
- Huang, H., Su, Y., & Jin, J. (2016). Empathy-related responding in Chinese toddlers: Factorial structure and cognitive contributors. *Infant and Child Development*, Advance online publication. <https://doi.org/10.1002/icd.1983>.
- Kartner, J., Keller, H., & Chaudhary, N. (2010). Cognitive and social influences on early prosocial behavior in two sociocultural contexts. *Developmental Psychology*, 46(4), 905–914.
- Kartner, J., Schuhmacher, N., & Collard, J. (2014). Socio-cognitive influences on the domain-specificity of prosocial behavior in the second year. *Infant Behavior and Development*, 37(4), 665–675.
- Kochanska, G., Murray, K., & Coy, K. C. (1997). Inhibitory control as a contributor to conscience in childhood: From toddler to early school age. *Child Development*, 68, 263–277.
- Lamb, S., & Zakhireh, B. (1997). Toddlers' attention to the distress of peers in a daycare setting. *Early Education & Development*, 8, 105–118.
- Licata, M., Paulus, M., Thoermer, C., Kristen, S., Woodward, A. L., & Sodian, B. (2014). Mother–infant interaction quality and infants' ability to encode actions as goal-directed. *Social Development*, 23, 340–356.
- Nichols, S. R., Svetlova, M., & Brownell, C. (2009). The role of social understanding and empathic disposition in young children's responsiveness to distress in parents and peers. *Cognition, Brain, and Behavior: An Interdisciplinary Journal*, 13, 449–478.
- Nichols, S., Svetlova, M., & Brownell, C. (2010). Toddlers' understanding of peers' emotions. *Journal of Genetic Psychology*, 171, 35–53.
- Over, H., & Carpenter, M. (2009). Eighteen-month-old infants show increased helping following priming with affiliation. *Psychological Science*, 20, 1189–1193.
- Paulus, M. (2014). The emergence of prosocial behavior: Why do infants and toddlers help, comfort, and share? *Child Development Perspectives*, 8, 77–81.
- Paulus, M., Kuhn-Popp, N., Licata, M., Sodian, B., & Meinhardt, J. (2013). Neural correlates of prosocial behavior in infancy: Different neurophysiological mechanisms support the emergence of helping and comforting. *NeuroImage*, 66, 522–530.
- Pettygrove, D. M., Hammond, S. I., Karahuta, E. L., Waugh, W. E., & Brownell, C. A. (2013). From cleaning up to helping out: Parental socialization and children's early prosocial behavior. *Infant Behavior and Development*, 36, 843–846.
- Siegel, S. (1956). *Nonparametric statistics for the behavioral sciences*. New York, NY: McGraw-Hill Books.
- Spinrad, T. L., Eisenberg, N., Gaertner, B., Popp, T., Smith, C. L., Kupfer, A., & Hofer, C. (2007). Relations of maternal socialization and toddlers' effortful control to children's adjustment and social competence. *Developmental Psychology*, 43, 1170–1186.
- Stipek, D., Gralinski, H., & Kopp, C. (1990). Self-concept development in the toddler years. *Developmental Psychology*, 26, 972–977.
- Svetlova, M., Nichols, S. R., & Brownell, C. A. (2010). Toddlers' prosocial behavior: From instrumental to empathic to altruistic helping. *Child Development*, 81, 1814–1827.
- 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.
- Warneken, F., & Tomasello, M. (2007). Helping and cooperation at 14 months of age. *Infancy*, 3, 271–294.
- Warneken, F., & Tomasello, M. (2006). Altruistic helping in human infants and chimpanzees. *Science*, 311, 1301–1303.

- Warneken, F., Hare, B., Melis, A., Hanus, D., & Tomasello, M. (2007). Spontaneous altruism by chimpanzees and young children. *PLoS Biology*, *5*, 1414–1420.
- Waugh, W., Brownell, C., & Pollock, B. (2015). Early socialization of prosocial behavior: Patterns in parents' encouragement of toddlers' helping in an everyday household task. *Infant Behavior and Development*, *39*, 1–10.
- Wynn, K. (2009). Constraints on natural altruism. *British Journal of Psychology*, *100*, 481–485.
- Xu, J., Saether, L., & Sommerville, J. (2016). Experience facilitates the emergence of sharing behavior among 7.5-month-old infants. *Developmental Psychology*, *52*, 1732–1743.
- Zahn-Waxler, C., Radke-Yarrow, M., Wagner, E., & Chapman, M. (1992). Development of concern for others. *Developmental Psychology*, *28*(1), 126–136.