Developmental Psychology

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Online First Publication, August 12, 2013. doi: 10.1037/a0033886

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0012-1649/13/$12.00 DOI: 10.1037/a0033886

BRIEF REPORT

Young Children Help Others to Achieve Their Social Goals

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From early in development, humans have strong prosocial tendencies. Much research has documented young children's propensity to help others achieve their unfulfilled goals toward physical objects. Yet many of our most common and important goals are social—directed toward other people. Here we demonstrate that children are also inclined, and able, to help others achieve their social goals. Three-year-old children observed an experimenter trying unsuccessfully to get the attention of another individual and then helped by directing the 2nd individual's attention back to the experimenter. A control condition ensured that children's responses were not motivated by a general desire to inform the 2nd individual about interesting events. A 2nd experiment showed that children distinguish between fulfilled and frustrated versions of this social goal and help appropriately on the basis of this distinction. Young children are therefore willing to intervene in a 3rd-party interaction to help it along. This result expands the range of situations in which young children are known to spontaneously help others into the social domain, thereby underscoring the pervasiveness of their prosocial motivations and identifying a critical area for further research.

Keywords: helping, prosocial behavior, third-party interactions, social goals, social interaction

Over the course of human evolution, group living has given rise to a wide variety of prosocial tendencies, such as helping and sharing with our groupmates (Gintis, Bowles, Boyd, & Fehr, 2003; Tomasello, 2009). Even young children show these prosocial tendencies (e.g., Eisenberg, Fabes, & Spinrad, 2006; Warneken & Tomasello, 2006, 2009; Zahn-Waxler, Radke-Yarrow, Wagner, & Chapman, 1992). In particular, much prior research has considered infants' and toddlers' motivations to be helpful toward others (e.g., Rheingold, 1982; Warneken, Hare, Melis, Hanus, & Tomasello, 2007; Warneken & Tomasello, 2006, 2007, 2008). The clear and consistent finding from these studies is that young children are extremely motivated to help others achieve their goals. This motivation to act in a helpful manner appears to be intrinsic, rather than generated by an expectation for external rewards (Warneken & Tomasello, 2008).

Young children help others achieve a wide range of goals toward objects. For example, they fetch out-of-reach objects for others, help them arrange or move objects, remove physical barriers for them, and point out hidden affordances of objects (Warneken et al., 2007; Warneken & Tomasello, 2006, 2007, 2008). But not all of our goals involve inanimate objects. In fact, as an "ultra-social" species (Herrmann, Call, Hernández-Lloreda, Hare, & Tomasello, 2007, p. 1360), many of our most common goals are directed toward other people. Some of our most fundamental social goals include getting the attention of, communicating with, and acting jointly with another person (although of course negative social goals, such as harming another person, are also possible).

In the present study, we investigated the ability and motivation of young children to help others achieve their social goals. To our knowledge, no prior studies have considered this issue. This is surprising, given the ubiquity of social goals in daily life. Yet social helping brings unique challenges that are distinct from those involved in physical helping and is consequently an important topic for investigation in its own right.

We thus focused on one of the most common social goals: getting another person's attention. In one condition (the Social Helping condition), 3-year-old children observed an experimenter attempting unsuccessfully to get the attention of a target individual from across a room in order to communicate with her.[1] We measured whether children would help the experimenter by directing this target individual's attention to him. In a within-subject design, each child also experienced a control condition in which

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We would like to thank Jana Jurkat, Paul Köbler, and Juliane Richter for their help with data collection and Katja Buschmann and Benjamin Sklarek for their help with coding.

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[1] Piloting with 2.5-year-olds revealed that younger children were reluctant to intervene in ongoing third-party interactions.

the experimenter performed similar actions, but delivered them toward another individual outside of the main testing area (and inaccessible to children). This condition controlled for children's baseline motivations to inform the target individual about the experimenter's behavior, for example, because it was generally interesting. In a second experiment, we probed children's understanding of the conditions under which their help might be needed.

Experiment 1

Participants

Participants were thirty-two 3-year-old children (16 girls; age range = 35 months 1 day to 37 months 0 days, M = 35 months 28 days, SD = 16.7 days). Four additional children were tested but excluded (three due to experimenter error and one whose session was ended prior to the test phase due to shyness). For both Experiments 1 and 2, children were recruited from a database of parents living in Leipzig, Germany, who had volunteered to participate in child development studies. The sample was predominantly White. No information concerning parents' socioeconomic status was collected.

Materials and Setting

The study was conducted in a 4-m × 3-m room, with a curtain running parallel to one of the long walls. In one corner of the room, near this curtain, there was a desk, but passage to the space behind the desk was blocked on both sides. In the opposite corner of the room an 80-cm × 100-cm picture stood upright on the floor. The main play area, where the warm-up took place and where the child sat at the start of each test condition, had a large rug in the center of the room. The child's caregiver sat in one of the remaining corners of the room, reading a book, and was instructed to remain silent and ignore the child if approached.

The child's main interaction partners throughout the procedure were a male experimenter (E) and a lifelike female puppet, "Lola," that was 50 cm in height (see Figure 1). The choice to use a puppet instead of another adult for Lola's role followed the example of earlier studies in which children were tested on their ability to intervene concerning others' actions. These studies used puppets because they are less imposing than people (e.g., Rakoczy, Warneken, & Tomasello, 2008).

At the start of the study, the child also had a brief interaction with a similar male puppet, "Felix." When Felix subsequently left the room by going behind the curtain, he appeared to enter an adjacent room that was not accessible to the child. During the warm-up phase a third puppet, "Max" (a hand puppet in the shape of a polar bear), briefly appeared as well. E operated Max for the short duration of his appearance. A second experimenter (E2) operated both Lola and Felix but never made eye contact or interacted directly with the child or E in any way.

Procedure

When the child and E first entered the testing room, they encountered and greeted Lola and Felix. E invited both puppets to play with him and the child; Lola agreed but Felix regretfully announced that he had to leave to go do some work. He exited the room through a gap in the curtain wall, in the corner behind the desk.

Warm-up phase. In order to demonstrate that Lola was a fully interactive and friendly social partner, the child, Lola, and E played together for about 12 min. Their games included playing catch, playing with toy cars, and putting stickers on one another. At one point, Lola suggested that her friend Max would enjoy joining them, and E brought him out. After a short time, Max became sleepy, and Lola and E put him to bed. Lola and E stated explicitly to each other, and explained to the child, that everybody would have to be quiet thereafter, so as not to wake Max. This was done to provide a plausible reason why E did not raise his voice to get Lola's or Felix's attention later in the Social Helping and Control conditions. All subsequent speech by Lola or E was whispered, except where noted below.

At the end of the warm-up phase, E announced that he would put the toys away behind the desk. Since access to the space behind the desk was blocked, he climbed over it laboriously, while Lola and the child watched. This was done to provide a reason why E remained behind the desk later, during the tests. Once there, E said he had to work and began writing in a notebook at the desk.

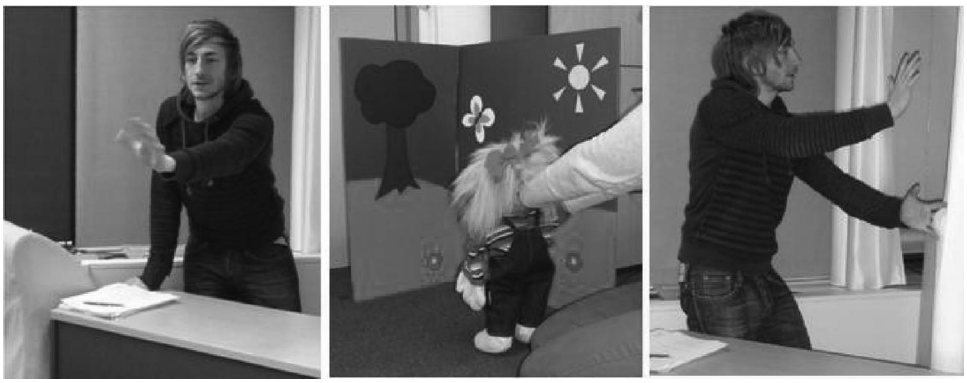

Figure 1. The experimental setup. The left-hand panel shows the experimenter (E) calling to the target individual in the Social Helping conditions of Experiments 1 and 2. The central panel shows the target individual (the puppet Lola) looking at her picture. The right-hand panel shows E calling to the other individual (the puppet Felix) in the Control condition of Experiment 1.

Instrumental Helping phase. In order to check that children were engaged with E and generally motivated to help him, we next created a situation in which the child had an opportunity to help E with a physical goal toward an object. First, Lola suggested to the child that they go look at the picture in the corner of the room. As they stood in front of the picture, Lola first commented on some of the items in it and then gazed at it silently, continuing to move her head as she looked at different parts of the picture. At this point, E "accidentally" dropped his pen on the floor in front of the desk. He reached for it unsuccessfully, while grunting and saying to himself, "My pen! I need my pen!" (Warneken & Tomasello, 2006). If children did not walk over and hand E his pen after 30 s, Lola appeared to notice the fallen pen and handed it back to E.

After receiving his pen from the child or Lola, E said thank-you loudly. Lola reminded E to keep his voice down, as Max was still sleeping. E apologized and said he would remember to keep quiet.

Test phase. Each child then experienced both the Social Helping and Control conditions (order counterbalanced across children). At the start of each condition, Lola and the child sat on the rug at the center of the room. Lola brought out a new toy (in both cases, a colorful box with two touch-activated lamps mounted on top), demonstrated it, and encouraged the child to keep playing while she returned to looking at the picture in the corner. Once Lola was standing in front of the picture, the test phase commenced.

Social Helping condition. In this condition, the test phase consisted of E attempting unsuccessfully to get Lola's attention. It lasted for a planned 80 s, or until the child directed Lola's attention to him. From behind the desk, E leaned over toward Lola, continuously waved one outstretched hand, and whispered insistently to her. Since he was whispering and she was concentrating on the picture with her back turned to him, it was plausible that Lola did not know that E was calling to her.

In order to vary the urgency of E's calls, which might give the child more opportunities to intervene on the situation, four consecutive calling blocks were established. For the first 20 s, E constantly repeated the following phrases: "Hey, Lola!" "Can't you see me?" and "Hellooo, over here!" For the next 20 s, he only called out one of these phrases every 5 s. For the next 20 s, his calling resumed the frequency of the first block, and he also stated that he had to show Lola something. At the outset of the final 20-s block, E looked to the child for the first time and commented, "Oh, I don't think she can see me." During the last 20 s, E again called out only every 5 s; after each call in this final block, E expressed confusion about Lola's nonresponse by looking and shrugging at the child.

Both E and E2 were trained to carefully monitor the child's behavior throughout the test phase. If the child attempted to get Lola's attention (see the Coding section below), E refrained from whispering while Lola responded to the child. In these instances, Lola would turn to face the child, say, "Hmm?" pause for a few seconds, and then ask, "What is it then?" If, after 7 s, the child did not do anything to direct Lola's attention to E, Lola then announced that she would keep looking at the picture and turned away. In this case, E resumed whispering at the point in the block where he had left off; consequently, the test window could run somewhat longer than 80 s. If the child did direct Lola's attention to E, however, Lola asked him what he wanted, and E showed her the paper he had been writing on. If the child had not helped by the end of the 80-s test phase, E terminated the trial by asking the child explicitly to tell Lola that he wanted to show her something.

Control condition. The Control condition was conducted in exactly the same way as the Social Helping condition, with one exception. Instead of calling to Lola, E called to Felix. Although Felix was in a separate room and was thus out of sight and inaccessible to the child, E's behavior was clear: He oriented and waved toward the gap in the wall where Felix had last been seen (keeping his face visible to the child) and addressed Felix by name.

Otherwise, E followed the same 80-s script as in the Social Helping condition and similarly paused if the child approached Lola. If the child directed Lola's attention to E, or if the 80-s phase was over, then E ended the trial by pretending to hand Felix the piece of paper.

Coding

Children's responses in the Instrumental Helping phase were counted as helpful if they picked up the pen and handed it to E (as in Warneken & Tomasello, 2006). The Instrumental Helping phase was designed to check that children were engaged with E and willing to help him generally.

For the main measure in the test phase, a primary coder examined multicamera video recordings of the Social Helping and Control conditions and noted all instances where the child sought to direct Lola's attention to E or his calling behavior. Responses in this category included establishing eye contact with Lola and then indicating E via deictic gaze, pointing toward E for Lola's benefit, physically moving Lola to turn toward E, and commenting to Lola about E's behavior, E himself, or Felix's nonresponse (e.g., "He's calling you," "[Experimenter's name]," or "Felix isn't coming," respectively).

As a secondary measure, the coder also noted instances where the child approached Lola and attempted to get her attention (regardless of whether they went on to direct her to E or not). This measure checks whether children's general motivation to interact with Lola was the same in the two conditions. Responses in this category included standing in front of Lola's line of vision, tapping her on the shoulder, and calling her by name.

A reliability coder independently scored responses from 16 of the 32 children tested for both the main and secondary measures. Since it was important that the coders be able to hear the child's vocalizations, E's ongoing calls to Felix or Lola prevented the coders from being blind to condition. However, the secondary coder was naive to the aims and hypotheses of the study. The secondary coder achieved very good reliability with the primary coder: Cohen's $\kappa = .83$ for the main measure and .93 for the secondary measure.

Results

Preliminary analyses revealed no associations between either children's sex or the order of the conditions and the frequency of directing Lola's attention to E in either the Social Helping or Control conditions (Fisher's exact tests, all $ps > .1$). The data were

consequently collapsed across these factors for further analysis. Furthermore, almost all children were generally motivated to help E: Twenty-nine of the 32 participants fetched E's dropped pen in the Instrumental Helping task.

Our main analysis showed that children directed Lola's attention to E's calling behavior significantly more often when he was addressing her than when he was addressing Felix (exact McNemar's test, $p = .002$; Mundry & Fischer, 1998; see Figure 2). Thirteen children informed Lola about E's behavior in the Social Helping condition but not in the Control condition. Only one child showed the reverse pattern, while three additional children informed Lola about E's calling in both conditions.

Children were, however, equally interested in interacting with Lola in both conditions (exact McNemar's test, $p = .687$). Fourteen children approached Lola in both conditions, and 12 children did not approached her in either condition; only four children approached Lola in the Social Helping condition but not the Control condition, and only two children showed the reverse pattern.

The behaviors that children used to inform Lola about E's calling were quite clear and appropriate. In the Social Helping condition, two children first established eye contact with Lola and then indicated E or his behavior via deictic gaze, one pointed toward E for Lola, three physically rotated Lola to face E, three pointed while making verbal reference about E or his actions, one physically rotated Lola toward E while making verbal reference, and six used a combination of deictic gaze, pointing, and verbal reference. In the Control condition, one used deictic gaze, one made verbal reference, and two both pointed and referred verbally.

For those participants who directed Lola's attention toward E, the average latency to perform this behavior was 43.4 s ($SD = 28.3$) in the Social Helping condition and 43.8 s ($SD = 30.2$) in the Control condition. Almost all of these informative behaviors occurred prior to the fourth and final calling block of the procedure, when E commented briefly on the puppets' lack of response (13 of 16 and 2 of 4 in the Social Helping and Control conditions, respectively).

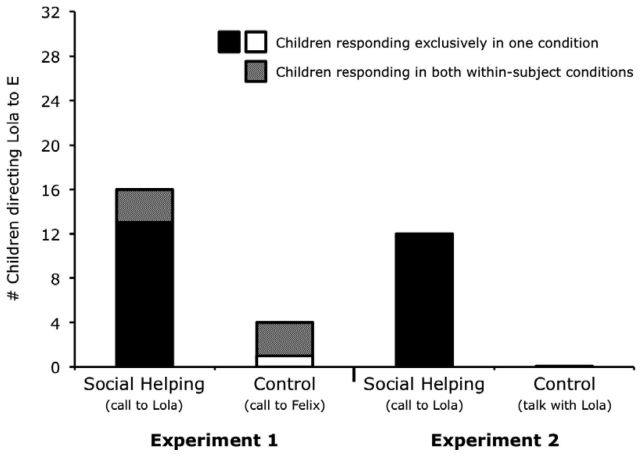

Figure 2. The number of children who directed Lola's attention to the experimenter (E) in each condition of both experiments.

Discussion

In this experiment, children helpfully informed Lola about E's desire to gain her attention. This behavior was not simply motivated by a general desire to inform Lola about E's interesting actions, because children performed it significantly less often in a Control condition, in which E directed exactly the same calling behaviors to a second, unseen puppet (Felix).

It is interesting, however, that fewer children produced helpful responses to E's frustrated social goal (16 of 32) than to his frustrated instrumental goal (29 of 32). Social helping may pose more cognitive and social challenges than instrumental helping; we return to this consideration in the General Discussion.

One possible objection to the social helping interpretation of the present data is that children may not have informed Lola about E's behavior in the Control condition because they were too distracted by his attempts to get the attention of Felix. This objection is not borne out by children's behavior. First, nearly all of the children tested (27 out of 32) looked to Lola at least once while E called to Felix, indicating that they were well aware of Lola's presence. Second, and more important, there was no difference between the two conditions in children's tendencies to approach Lola. Children were equally interested in interacting with Lola across conditions; what differed were their motivations for doing so.

A second possible objection is that, after approaching Lola, children in the Social Helping condition may have referred her to E for reasons having nothing to do with his frustrated social goal. Children may instead have told Lola about E because they had just discovered (from their new position next to Lola) that he was looking directly at the two of them. They would not have told Lola about E in the Control condition because he was facing Felix.

We would argue that the timing and nature of children's responses makes this explanation relatively implausible. If children in the Social Helping condition initially approached Lola purely to interact with her and only later realized that E was worth commenting upon, there should be a variable and sometimes lengthy delay between the moment when they gained Lola's attention and when they told her about him. If, however, they approached Lola with the express intent of informing her about E, they should do so without delay. Moreover, after gaining Lola's attention they should not need to look at E (thereby realizing that he was looking at them) before directing Lola's attention toward him.

The data from Experiment 1 strongly support the social helping account. Of the 16 children who directed Lola's attention toward E in the Social Helping condition, 13 did so promptly after the first time that they gained her attention for themselves in that condition (e.g., only three of these children ever gained Lola's attention and then did something other than tell her about E). Moreover, when these 16 children directed Lola's attention to E, 11 began doing so either as they approached her or simultaneous with her response to their attention-getting behavior, and the remaining five did so within 1,400 ms after she had responded to them. Of those five who waited for Lola to complete her response before telling her about E, all maintained their gaze on Lola until beginning their referential act. Children's plans to tell Lola about E were thus

formed prior to seeking her attention, and their communications about him were not the inadvertent consequence of catching his line of sight.[2]

However, in order to deal with this possibility more thoroughly, we conducted a second experiment, in which E both looked at Lola and talked to her for the entire trial but in which children should understand that their help is not needed.

Experiment 2

Experiment 2 further explored children's social helping behavior by investigating their ability to recognize when their help is unnecessary. Children experienced the same Social Helping condition as in Experiment 1. In a new Control condition, however, Lola briefly replied to E's speech toward her. The subtle difference between these two conditions provides a strong test of the alternative account offered in the Discussion section of Experiment 1, in which children may have informed Lola about E only as an incidental result of his attentional orientation. Since E looked at Lola and talked to her in both conditions, differential responding to these two scenarios would have weighed heavily against this alternative.

Experiment 2 also investigated the sophistication of the intentional understanding that children drew upon in deciding whether to help in social scenarios. If children were disposed to provide only useful information and considered whether Lola were already aware of E's intention to communicate with her, they should have refrained from telling her about E in the Control condition. If, however, their behavior in the Social Helping condition were due to general motivations either to communicate about being the target of another person's attention (i.e., the alternative considered in the preceding section) or to comment upon salient events without regard for another person's awareness of them, children should still have directed Lola's attention toward E.

Participants

Participants were thirty-two 3-year-old children (16 girls; age range = 35 months 3 days to 36 months 20 days, M = 35 months 28 days, SD = 15.4 days). Four additional children were tested but excluded (one due to experimenter error and three whose session was ended prior to the test phase due to inability to concentrate on the experimental situation or fear of the Lola puppet).

Materials and Procedure

The setup and procedure for Experiment 2 were very similar to those for Experiment 1. The child, child's caregiver, and main experimenter (E) entered the study room and greeted Lola, who was operated by a second experimenter (E2). The Felix puppet was not used, but the Max puppet was again operated by E. E was a female experimenter whose behavior was closely modeled upon that of Experiment 1's E. E2 was the same person as in the previous experiment.

Warm-up phase. The sequence of the warm-up phase was the same as in Experiment 1, with one exception. For half of the participants, Max became sleepy and went to bed as before. For the other half, however, he announced that he had to clean up his house, and E placed him behind the façade of a toy house next to her desk. In this latter version, there was no discussion about the need for quiet, and E and Lola continued to speak at regular volume.

Instrumental Helping phase. All children experienced the Instrumental Helping phase, conducted as in Experiment 1. For those children for whom it had been established that Max was sleeping, E thanked the child or Lola loudly for giving assistance and was again reminded by Lola not to wake up Max. For those children for whom it had been established that Max was cleaning his house, E expressed his thanks at the same volume but with no subsequent admonition by Lola.

Test phase. Each child then experienced both the original Social Helping condition and a new Control condition. Children who had witnessed Max go to sleep during the warm-up phase received the Social Helping condition first, followed by a brief transition phase in which Max woke up and entered his house, and then they received the Control condition. Children who had witnessed Max enter his house during the warm-up phase received the Control condition first, followed by a transition phase in which Max went to sleep, and then they received the Social Helping condition. During each transition phase, the need for further quiet or the permissibility of regular volume levels was remarked upon by E and Lola.

Social Helping condition. The Social Helping condition was run exactly as it had been in Experiment 1. E called softly to Lola while she examined the picture. Lola's back was turned to E, and she appeared unaware of E's efforts to communicate with her.

Control condition. In the new Control condition, E talked to Lola at regular volume about the picture. Lola again kept her back to E and continued to look at the picture, but she also responded verbally to E's comments a small number of times. The same criteria for determining when Lola should respond to the child's attention-getting or communicative behaviors were used for both the Social Helping and Control conditions.

During the Control condition, the form and extent of E's speech and behavior were closely matched to their counterparts in the Social Helping condition. E spoke for a planned 80 s or until the child directed Lola's attention to her. From behind the desk, E leaned toward Lola with an arm outstretched, pointing at different features of the picture (physically matching the waving motions produced by E in the Social Helping condition).

As in the Social Helping condition, E followed a sequence of four consecutive 20-s blocks of speech toward Lola that varied the rate of her comments in order to provide more opportunities for the child to intervene. The first block established that Lola was aware of, and engaged by, E's speech: E commented to Lola that she was looking at the picture, Lola replied briefly in affirmation, E ob-

[2] This argument concerns the apparent organization of children's communicative behaviors in the Social Helping condition; it does not require that these behaviors be more organized than communicative behaviors performed by children in the Control condition, who may have had legitimate, if different, communicative motives. In fact, to provide a complete report, we note that the four children in the Control condition who referred Lola to E also did so using well-organized behaviors. All four directed Lola to E immediately after the first time they gained her attention; further, although all four first waited for Lola's response to their attention-getting behavior (contrary to most in the Social Helping condition), their communications suggest planning: All occurred within 800 ms of Lola's response and without looking away from Lola between getting her attention and directing it to E.

served that the picture was one of her favorites, Lola agreed, and E suggested that they continue to look at the picture. During the second block, E commented on the picture once every 5 s ("Lola, it's so pretty!" "How beautiful," "Ah, Lola, the colors!" "Super . . .") with no response required by, or obtained from, Lola. The third block began with another comment by E about the picture ("Ah, Lola, the butterflies are so pretty"), to which Lola replied ("Yeah, but my favorites are the flowers"), and continued with a series of comments by E about other details of the picture. Lola did not reply to these further comments, but she did subtly orient her head to look at the part of the picture highlighted by E's speech. At the start of the fourth block, matching the Social Helping procedure, E turned and spoke to the child ("I think Lola really likes this picture"); still without looking away from the picture, Lola confirmed, "Yes, I do." For the remainder of the fourth and final block, E made four additional comments to Lola about the picture and its beauty, each one separated by 5 s and a smile toward the child. Lola did not reply to these.

In sum, 16 of E's 17 comments were clearly addressed to Lola. Nine of these comments to Lola included her name, which both emphasized that Lola was the addressee and roughly matched the number of times that E used Lola's name while calling to her in the Social Helping condition. Although Lola remained silent for most of the procedure, her four very brief replies (three when addressed directly, one when referred to in E's comment to the child) demonstrated that she was aware of, and engaged by, E's speech.

Coding

Coding was performed as in Experiment 1. A naïve reliability coder independently scored responses from 16 of the 32 children tested for both the main and secondary measures. The secondary coder achieved excellent reliability with the primary coder: Cohen's $\kappa = 1.0$ for the main measure and .88 for the secondary measure.

Results

Preliminary analyses revealed no associations between either children's sex or the order of the conditions and the frequency of directing Lola's attention to E in either the Social Helping or Control conditions (Fisher's exact tests, all ps $> .27$). The data were consequently collapsed across these factors for further analysis. Twenty-seven of the 32 participants fetched E's dropped pen in the Instrumental Helping task.

Our main analysis showed that children directed Lola's attention to E's communicative behavior significantly more often when Lola appeared unaware of it than when she responded to it (exact McNemar's test, $p < .001$; see Figure 2). Twelve children informed Lola about E's behavior in the Social Helping condition, but none did so in the Control condition.

Children were, however, similarly interested in interacting with Lola in both conditions (exact McNemar's test, $p = .267$). Nine children approached Lola in both conditions, while nine did so in the Social Helping condition but not the Control condition, and four children showed the reverse pattern.

As in Experiment 1, the behaviors children used in the Social Helping condition to inform Lola about E's calling were unambiguously referential. Six children first established eye contact with Lola and then indicated E or her behavior via deictic gaze, one pointed toward E for Lola, two pointed while also referring via deictic gaze, and three used a combination of deictic gaze, pointing, and verbal reference. For those children who directed Lola's attention toward E, the average latency to do so was 57.7 s (SD = 20.7), and six of these 12 children did so before E's brief comment about Lola's lack of response.

Analysis of the timing of children's attention-getting and communicative behaviors also suggests that their responses were coherent and planned. Of the 12 children who directed Lola's attention toward E in the Social Helping condition, 10 did so promptly after the first time that they approached her. Moreover, three of these 12 began their communicative behaviors about E either as they approached Lola or simultaneous with her response to their attention-getting behavior, while the remaining nine produced their communicative behaviors within 1,700 ms after she had responded (and maintained their gaze on Lola between getting her attention and directing it).

Discussion

Experiment 2 demonstrates that 3-year-old children help others socially only when they actually need help. They can do this despite the rather similar surface appearance of different situations: In both the Social Helping and Control conditions, E faced Lola, pointed or waved in her direction, and continuously talked to her. It appears that Lola's infrequent and brief replies in the Control condition provided sufficient evidence for children that she was aware of, and engaged by, the talking E. Consequently, children correctly understood that E's goal of communicating with Lola had been fulfilled, and therefore there was no need for their social assistance in this scenario. Further, their success in making this distinction is evidence against the alternative account considered earlier.

General Discussion

These findings demonstrate that young children's motivation to help goes beyond instrumental situations (such as retrieving a fallen object for an experimenter) to more deeply social situations, such as helping two individuals to communicate. When the experimenter tried to get the attention of a lifelike puppet (Lola), children helped by directing Lola's attention toward the experimenter. Moreover, the experimenter never directly requested help from the child, and most responses occurred even before he or she ever commented to the child about Lola's lack of response. Thus, 3-year-old children act spontaneously in order to help one person get another's attention.

This result confirms and extends earlier demonstrations of young children's tendency to engage in prosocial behaviors like helping. Whereas previous work has emphasized children's helpful behaviors toward a person's nonsocial, object-directed goals (e.g., Warneken et al., 2007; Warneken & Tomasello, 2006, 2007, 2008), the present study demonstrates evidence of helping a person achieve his social goal. By identifying a new range of situations in which children help others, this result underscores the pervasiveness of children's prosocial motivations.

This result also contributes to the large body of prior research documenting young children's keen interest in third-party social

interactions. In the first years of life, children follow third parties' conversations (e.g., Akhtar, Jipson, & Callanan, 2001; Gräfenhain, Behne, Carpenter, & Tomasello, 2009; Song, Onishi, Baillargeon, & Fisher, 2008) and form opinions about the individuals involved based on their pro- and antisocial actions toward one another (Hamlin, Wynn, & Bloom, 2007). The present study goes beyond this previous research by demonstrating that young children not only evaluate and learn from other people's interactions but also actively intervene in those interactions in helpful ways.

Social helping poses a number of challenges that do not arise when children help others achieve their physical goals toward objects. First, in many cases social goals are not directed toward a concrete entity but instead at another person's mental state. Understanding exactly what a person is trying to do can therefore be considerably more complex in social situations than in instrumental ones. Second, since social goals are about other people, children may need to consider how the target person will respond to their intervention and whether he or she will be happy about the consequences of the social goal; in contrast, physical objects do not care what happens to them. Third, when helping someone with a social goal requires direct actions toward another person, as in the present study, children must be bold. If children are hesitant to intervene, whether due to shyness, direct instruction, or cultural practice, their prosocial motivations may not find outlet in helpful behavior. The difficulty of these challenges most likely explains why social helping in both experiments was considerably less frequent than instrumental helping by the same children.

Interestingly, merely recognizing each of these challenges requires a certain level of cognitive ability and social sensitivity. For instance, children in Experiment 2 recognized that Lola's responses in the Control condition, however brief and infrequent, indicated that the experimenter's communicative goal had been fulfilled, despite strong surface similarities (e.g., the experimenter's talking and Lola's general silence) to the Social Helping condition, in which the experimenter's social goal was frustrated. As a second example, it is possible that younger children do not consider the preferences of anyone other than the person who needs help. It is therefore an open question whether children in the Social Helping condition of the present study reflected on whether Lola was unwilling to respond or merely ignorant of the experimenter's calling behavior. More generally, the present study establishes social helping as a behavior distinct from, but closely related to, physical helping and highlights the need for future research to investigate the development of both children's sensitivities to the unique challenges it presents and their strategies for meeting these challenges.

It thus becomes clear that, in order to fully understand the nature of human prosocial behavior, we must consider the roots of helpful participation in social interactions. The present study establishes that young children hold prosocial motivations toward other people's social goals but also identifies critical and challenging features of social helping that are important topics for future research.

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Received February 8, 2011
Revision received September 17, 2012
Accepted October 31, 2012 ■