

“CAN YOU ASK HER TO HELP?” AN EXAMINATION OF THE FACTORS THAT
PROMOTE AND DISCOURAGE PROSOCIAL INTERVENTION IN PRESCHOOL
CHILDREN

by

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Abstract

Previous research has examined young children's ability to detect who would be most likely to provide help to others in a given situation, but little is known about their ability to intervene based on this knowledge in a real-life setting. In the current study, 48 three-year-old children chose between two actors to retrieve an out-of-reach object for the Experimenter; one actor was physically incapable of providing the object (blocked by a tall barrier), and one was capable. Participants' looking behaviour between the two actors during the study was also recorded and analyzed as an additional, nonverbal measure of their prediction about who would help. Approximately half of the participants in the sample actively intervened on behalf of the Experimenter, but only after a direct request for help was made. Though the other participants did not engage in this helping behaviour, they chose the unblocked actor to help the Experimenter in a subsequent interview. Children also spent more time looking at the unblocked actor. Secondary analyses indicated that shyness prevented many children in the study from asking for help on behalf of the Experimenter from one of the actors. Finally, an unexpected side bias for looking behaviour toward the actors was found that has implications for how the study design could be improved for future research.

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Chapter 1: Introduction

Engaging in prosocial behaviour (i.e., performing acts that benefit others) is a vital part of our everyday social interactions and in gaining acceptance from our peers (e.g., Eisenberg, Fabes, Karbon, Murphy, & Wosinski, 1996). Early in development, children engage in prosocial behaviour as a response to others' particular wants or needs, such as *helping* them to complete goals (instrumental needs), *sharing* desired resources with them (material desires), and *comforting* them (emotional distress) (e.g., Sveltova, Nichols, & Brownell, 2010; Dunfield, Kuhlmeier, O'Connell, & Kelley, 2011). Instrumental helping is the earliest appearing prosocial behaviour (e.g., in the second year of life; Dunfield & Kuhlmeier, 2013; Warneken & Tomasello, 2007).

Existing laboratory research has explored many facets of early prosocial behaviour, such as the age at which children engage in helping, sharing, or comforting; the characteristics of the individuals with whom children choose to engage prosocially; and the underlying evolutionary and socialization mechanisms that relate to prosocial development (e.g., Dunfield & Kuhlmeier, 2013; Kuhlmeier, Dunfield, O'Neill, 2014; Warneken & Tomasello, 2009; Warneken & Tomasello, 2014; Hammond & Carpendale, 2015). Such work has typically focused on children's direct prosociality (e.g., picking up an out-of-reach object for an experimenter). The present study, however, examined young children's ability to be *indirectly* prosocial: that is, to provide help for a person in need by getting someone else to directly help them. Specifically, the present study examined 3-year-old children's ability to both detect who would be most likely to provide help in a given situation and use that knowledge to successfully intervene on behalf of a person in need. More broadly, the goal of the present study was to contribute to our

understanding of factors that promote and discourage the early production of prosocial behaviour.

Detecting Who May Help

Being able to detect who will be most likely to provide help in a given situation is an important skill for individuals to have at any age; if a person approaches someone who is likely to help that will maximize his or her chances of getting his or her goals met. The ability to detect who will be *least* likely to help is also an important skill; if a person can recognize when someone is unlikely to help, he or she can save time and avoid rejection by looking for help elsewhere. Even young children may possess such skills. Some abilities that would serve as a foundation for evaluating potential helpers have been found to emerge as early as infancy. First, infants appear to be able to recognize helping behaviour and when it is most likely to occur. For example, they have been found to selectively reach for individuals who have helped others in the past over those who have not helped or have actively harmed them (e.g., Hamlin, Wynn, & Bloom, 2007; Hamlin & Wynn, 2011). Köster, Ohmer, Nguyen, & Kärtner (2016) found that 9-month-old infants expected a person to retrieve a toy for a character who had dropped it behind a barrier instead of for one who had dropped its toy within reach; specifically, when the potential helper leaned forward as though she was about to intervene, participants tended to look toward the character who needed help.

As young children begin to engage in helping behaviour themselves, the detection of helping behaviour appears to motivate them to selectively act prosocially toward prosocial others. For example, 4-year-old children distributed the majority of a small number of treats to a puppet that had previously helped another (e.g., by picking up something he dropped) over one that had harmed him (e.g., by hitting him; Kenward & Dahl, 2011). Three-year-olds in a 2010

study by Vaish, Carpenter, and Tomasello showed a similar selectivity; most chose to retrieve an out-of-reach object for a person who had previously been seen helping another individual (e.g., by fixing her necklace) instead of one who had harmed her (e.g., by breaking her necklace). Finally, 3-year-old children presented with a helpful puppet who informed them about hidden pictures (e.g., “I know, it’s an *apple!*”) and one who refused to help (e.g., “I know, but I’m not telling!”) later retrieved an out-of-reach object for the helpful puppet and also provided him with requested information (Dunfield, Kuhlmeier, & Murphy, 2013).

Sometimes individuals fail to help because they are physically *incapable* of providing it. The foundational skills that would be needed to detect whether a person is physically capable of providing help also appear to begin to develop in infancy. In the first year of life, infants begin to understand physical limitations and the effects they may have on goal-directed behaviour. Infants recognize that agents typically move toward goals in efficient ways, such as by reaching for an accessible object instead of one that is blocked by a barrier (8-month-olds, Luo 2010; 16-month-olds, Scott & Baillargeon, 2013) and moving toward a goal in a straight line instead of jumping (9-month-olds, Csibra, Gergely, Bíró, Koós, & Brockbank, 1999). Relatedly, infants appear to develop an understanding of how physical limitations may affect an individual’s ability to interact with them; infants who were nine months and older (but not 6-month-olds) showed more patience with an adult who was trying and failing to provide them with toys than with one who teasingly offered it to them and refused to follow through (Behne, Carpenter, Call, & Tomasello, 2005). By two years of age, the ability to recognize when individuals are limited in their pursuit of goals by physical barriers may be developed well enough to allow children to make prosocial decisions based on this knowledge. For example, 21-month-olds have been found to help an individual who had previously intended to be prosocial towards them, even when she had failed

to do so (i.e., when the toys she was trying to provide participants rolled out of reach; Dunfield & Kuhlmeier, 2010).

Thus, it appears that young children can detect when someone *has* helped or has attempted to do so in the past. They may also be able to detect when someone has the ability to provide help in the present. For example, preschool children can predict who an individual will ask for help based on potential helpers' physical abilities. When asked which friend a protagonist doll would ask for help in a variety of situations, three-and-a-half- to five-year-old children believed that he would be more likely to ask the friend who was physically capable of providing it (e.g., a doll who was tall enough to reach his toy on a high balcony) than one who was physically incapable (a short doll), but two-and-a-half-year-olds did not (Paulus & Moore, 2011). The present study extends this finding and considers the following: when presented with two actors of differing physical ability (i.e., one who could easily reach a desired object and another who was blocked from it by a barrier), who would 3-year-old children ask to help a third person? Thus, the current study asked not only whether preschool children could detect who would be most likely to provide help based on physical ability, but also whether they would act on that knowledge.

Acting on the Knowledge of Who Can Help

The current study differs from most research on helping behaviour in young children in the type of helping required of participants: past research has explored children's ability to provide direct instrumental help to others (e.g., retrieving an out-of-reach object for them), while the present study examines whether preschool children can intervene on behalf of a person in need by encouraging someone *else* to help her (i.e., indirect helping). Such prosocial intervention would require not only that children be able to detect who could provide the help required, but

also to approach and interact with the potential helper. Intervening on behalf of another person may be more challenging for young children than directly providing help to someone in need because most direct forms of instrumental helping require little engagement with others (e.g., after retrieving an object that was out of a person's reach, the child could simply place it close to her and step away), while indirect helping involves mediating between two individuals by clearly conveying the problem to a potential helper.

One reason that intervening on behalf of another person may be difficult for young children is that they are shy. This may be especially true in laboratory research if the individuals with whom the child would need to interact are unfamiliar adults, as is the case in most prosociality experiments with young children. Thus, in the current, study shyness was examined as one factor that could prevent the preschool children in the sample from providing indirect help to our Experimenter in need. Generally, very shy participants (e.g., those that become upset or 'fussy' when a researcher attempts to interact with them) may be excluded from final analyses in research because they are reluctant to complete the study tasks and so are assumed not to give assent, but some studies retain children who are more moderately shy as part of their samples. In at least one experimental study of early prosocial behaviour, a measure of shyness was included: 18- and 24-month-old children's proximity to the experimenter rather than their mother during testing was examined in relation to their helping (Hammond & Carpendale, 2015). It was found that children who more quickly left their mothers' side to approach the experimenter were also quicker to offer to help him later in the study.

The current study operationalized shyness as a tendency to not directly interact with unfamiliar adults and make requests of them. This measure of shyness mapped on to the particular helping task that was used in the study (i.e., requesting that someone help a person in

need). In addition, participants who were too shy to get help by approaching one of our actors were given a second opportunity to indirectly choose a helper by answering an interview question at the end of the study. Thus, the current study was able to assess whether participants could detect which actor would be most likely to help without requiring that they directly request help from an actor.

The Current Study

In the present study, the early development of indirect helping behaviour was examined by testing 3-year-old children's detection of who could provide help to a person in need and their use of this knowledge to successfully intervene on behalf of that person. Because this is a type of helping behaviour that has not been studied extensively in past research, the current study also considered one factor, shyness, that may impede children from providing indirect help even when they have detected a capable helper. The ability to detect who could help was measured here in two ways. One was based on a looking measure used by Beier, Carpenter and Tomasello (2010). In that study, 2-year-olds were found to spend more time looking toward a friend of a person in need than an acquaintance, possibly anticipating that the friend would be the one to provide help. In the current study, participants' looking behaviour toward each of the two actors (one who was blocked from reaching a desired object by a barrier and one who was unblocked) was recorded. It was predicted that children would look more toward the unblocked actor than the blocked actor in these tasks, suggesting that they recognized which actor would be more likely to act based on their physical abilities. For some children, the detection of who could help was also measured as a verbal response to a direct question from the person in need (i.e., "Who should we ask for help?") at the end of the testing session. To examine children's actual intervening behaviour (indirect helping), their requests (either verbal or nonverbal) for help from

one of the actors were measured. Further analyses were conducted to examine instances of not intervening as either a failure to detect the appropriate potential helper or a hesitancy to interact with her.

Chapter 2: Methods

Participants

Forty-eight preschool children were included in the study, ranging in age from 38 months 12 days, to 47 months 27 days (3.2 to 3.11 years) and with a mean of 41.5 months. Twenty-three of the participants were male and 25 were female. Seventeen additional participants were tested but not included in the final analyses due to actor-specific errors (8), technical errors (1), and participant factors (8), which are described in detail in Table A of Appendix B. Participants were contacted for the study through the Developmental Psychology Participant Database at Queen's University, which primarily recruits families from the Kingston, Ontario, area at community events. Children received a small toy and a certificate as acknowledgment of their participation.

Materials

A graphic representing the layout of the testing room is included in *Figure 1*, below. At the front of the testing room there was a box of toys to the right and a small stool in the centre for participants to sit on during the study tasks. The two barriers, made from foam core board, were lined up against the wall beside the toy box at the start of the study; they have been included in the graphic in their final positions, where they were placed by the Experimenter during Part 1 of the study (although the left-right position of barrier 1 was counterbalanced). Two small yellow desks sat in the middle of the room, 35 inches apart and spaced equally between the child's stool, for the actors to kneel behind when they were in the room. Crayons and paper were hidden

underneath these desks for the actors to use at certain points in the session. At the back of the room, two shelves were hung at a height that could be reached by the Experimenter and actors, but not the young participants. On the top shelf eight small toys (an equal number each of animals and cars) were lined up, four on either side, for the actors to give the child during Part 1 of the study. There were also two other small toys placed closer to the centre of the shelf for the actors to attempt to reach after the barriers had been put in their final positions. In the middle of the top shelf a camera was hidden in a striped box and a rubber duck, which was the out-of-reach object for the Experimenter during the main study tasks, sat on top of this box. On the lower shelf there were two toys and a clock that the Experimenter could use to keep time during the study tasks. When participants first entered the room, various toys from the toy box (puzzles, puppets, a hammer and pegs set, pop-up eggs, and cars) were laid out on the floor near the front of the room. A wooden stick, which was called a 'special wand' by the Experimenter and was used during Part 2 of the study, was also included with these toys.

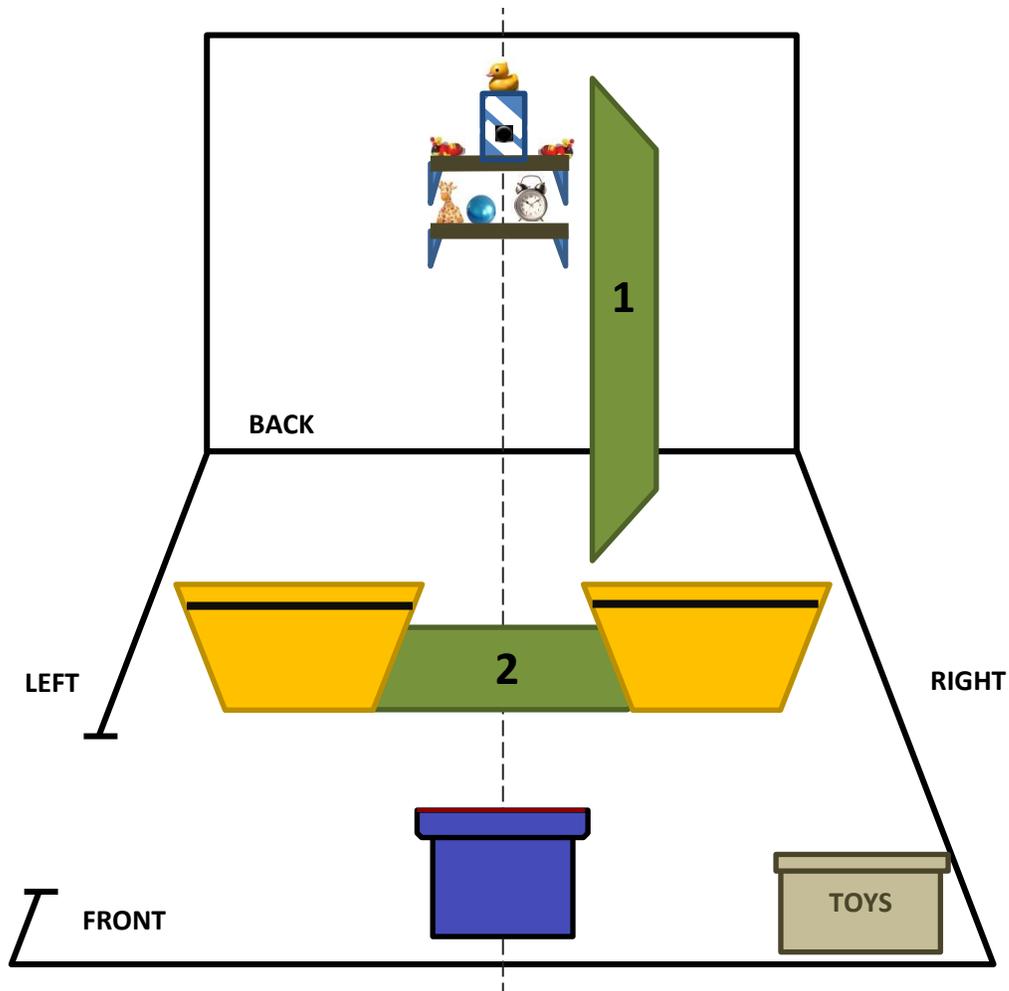


Figure 1. Layout of testing room, with the two barriers in their final position.

Procedure

The session consisted of three parts: a warm-up and two testing phases. Table 1 below summarizes the measures that were taken during each of the study periods.

Warm-up. The study began with a warm-up in which the Experimenter and the participant sat on the floor of the testing room and played together with the toys that had been laid out. At this time, the Experimenter also showed the child how to use a ‘special wand’ to point to and label objects around the room, which he or she would use in a later task. The length

Table 1

Summary of Study Measures

<u>Study Period</u>	<u>Measure</u>
Warm-up	
Part 1	
Introduction to actors	Shyness
Room set-up	
Help needed	Looking behaviour ¹ (Detection of who can help)
Comprehension check	Who can reach the shelf? (Recognition of actors' physical abilities)
Part 2	
Help needed	Looking behaviour ¹ (Detection of who can help)
	Prosocial intervention
Help requested	Looking behaviour ¹ (Detection of who can help)
	Prosocial intervention
Interview	Who should we ask to get the duck? ² (Detection of who can help)

¹First look to an actor and the amount of time spent looking toward each actor

²If child did not intervene earlier in Part 2

of the warm-up period varied per child; on average participants in the sample spent 6 minutes warming up with the Experimenter (range: 4.5 to 11 minutes). After the warm-up period, the Experimenter asked for permission to invite friends of hers to play with them, cueing the actors

to enter. The Experimenter and child put away the warm-up toys while the actors came in and took their positions kneeling behind the yellow desks in the centre of the room.

Part 1. At the start of the first testing phase of the study, the Experimenter introduced the actors and both waved in a friendly way to the child. She then told the child that her friends had toys to give and led him or her to stand beside the desk of the actor on the right. The child was given the opportunity to speak to the actor when the Experimenter said, “Can you ask her to get the toys off the shelf for us?” If the child did not make this request either verbally or with gestures within a few seconds, the Experimenter asked the actor to get the toys instead. Whether the child spoke to one, both, or neither of the actors at this stage of the study was used as an indicator of their shyness in the study analyses. Scores ranged from 0-2, with children who did not speak to either actor receiving a score of 0, indicating that they were most shy, those who spoke to only one of the actor receiving a score of 1, indicating that they were moderately shy, and those who spoke to both actors receiving a score of 2, indicating that they were least shy.

After the request was made, the actor drew the child’s attention to her (“[*Child’s name*], look!”), stood up, took one of the toys from her side of the top shelf, and knelt back down to offer it to the child. If the child did not take the toy immediately, the Experimenter encouraged him or her to take it up to three times before taking it from the actor’s hand and offering it to the child herself. The child was given approximately 5 seconds to examine or play with the toy before the Experimenter suggested putting it away and the actor went up to get another, performing the same actions as for the first. After all of the toys had been taken from that side of the shelf, the Experimenter guided the child to stand beside the desk of the actor on the left and the same procedure was repeated. Most children in the sample took all four toys from both actors

(41), though more children took all four toys from the actor on the left (45) than from the first actor on the right (41).

Next, the Experimenter led the child back to the front of the room and asked him or her to sit on a small stool in the centre. Seventeen participants did not want to sit on the stool and they were encouraged to sit on the floor instead, on top of a mark that had been taped there. The child was positioned in this way to allow the camera hidden on the top shelf to capture where he or she looked during the next tasks. When the child was seated, the Experimenter announced that she was going to ‘decorate’ the room. She took a tall barrier (number 1 in *Figure 1*, above) and placed it between one actor and the shelves at the back of the room, saying in a thoughtful way, “Maybe I’ll put it here,” and then moved it between the other actor and the shelf (“No, I think I’ll put it here”). This switch was meant to make it clear that one actor was not being blocked for any particular reason. The identity and left-right positioning of the blocked actor was counterbalanced. Preliminary analyses indicated that participants’ performance was not affected by the identity of the blocked actor. Next, the Experimenter took a small barrier (number 2) and placed it horizontally between the actors’ desks as a deterrent to the child from moving past that point and out of the camera’s view. She also brought out a container of toys, which she began putting on the lower shelf, with her back turned toward the child.

While the Experimenter was occupied, each actor, one at a time, announced to the child that she was going to get another toy from the top shelf. The blocked actor attempted to reach for the toy on her side of the shelf, but gave up after a couple of seconds: “I *can’t* reach the toy on the shelf. Oh, I think play with that later.” The unblocked actor took the toy on her side of the shelf and announced, “I can reach the toy on the shelf,” before she too decided that she would play with it later and returned it to the shelf. After each actor knelt back down behind her desk,

the Experimenter turned to the child and restated that actor's physical state ("Oh, I guess she can't/can still reach the shelf, now") to ensure that the child understood that the barrier had limited one actor, but not the other.

After both actors had taken their turns and returned to their desks, the Experimenter looked up at the top shelf and noticed the rubber duck sitting on the camera box. She declared that she wanted the duck and lifted both arms to reach for it, but it was out of her grasp. After approximately one second of struggling, the Experimenter called out, "Oh, can someone help?" and continued to struggle for six seconds before giving up ("Oh, I guess I'll get that duck later") and going back to kneel by the child. Participants' looking behaviour (i.e., which actor they looked at first and the length of time they spent looking at each actor) during these six seconds was later coded from the video record of this period, which is explained in detail in the next section. Part 1 of the study ended with the Experimenter checking the child's comprehension of the actors' physical abilities by asking, "Who can reach the shelf right now?" If the child correctly identified the unblocked actor, the Experimenter confirmed their answer ("That's right, she can reach the shelf right now"), if the child incorrectly chose the blocked actor, she corrected him or her ("Actually, she can't reach the shelf because the wall is too tall"), and if the child made no response after the Experimenter asked three times, she pointed to the unblocked actor and told the child that *she* could reach the shelf.¹

Part 2. Next, the Experimenter asked the child to wait in the room with her friends while she went to get something from the other room. Almost immediately after the Experimenter had disappeared through the doorway she called out, "Oh, I need the duck *now!*" A second later she

¹If a child made a response other than one of the actors (e.g. a parent), the question was repeated as though they made no response (though these answers were recorded). When the question had to be asked a second time, it was rephrased as "Which one of *them* can reach the shelf right now?" while the Experimenter pointed toward both actors.

repeated herself (“I need the duck!”). After eight seconds had passed, the Experimenter called directly to the child, “[*Child’s name*], can you ask *her* to get the duck?” She repeated the request if the child made no response after fifteen seconds and returned to the room if no response was made after another fifteen seconds. The child’s looking behaviour toward the two actors during these periods was later coded. Specifically, participants’ looking behaviour during both Part 1 and Part 2 of the study was coded for the number of frames the child spent looking at the actor on the left, the actor on the right, at the door to the adjoining room, and elsewhere in the room. Coding was done in Windows Movie Maker, which supports coding at 30 frames per second. Looks to the left and right were re-categorized after coding was completed as looks to the unblocked and blocked actor, taking the counterbalancing of these positions into account, and then each was divided by the total number of frames recorded for each task to get the *proportion* of time that participants spent looking at the unblocked and blocked actors. This step was important for comparing performance across participants because task length varied per child due to slight variation in timing by the Experimenter in all tasks and due to large variation in responding after she requested help in Part 2. If a participant chose a helper (described below) the video was cut to just before he or she began to move toward or speak to the chosen actor to ensure that the actor selection itself was not counted as looking toward her.

If the child asked the unblocked actor to get the duck during the second part of the study, that actor said, “Sure, I’ll get the duck for her,” took the duck from the shelf, and brought it to the Experimenter in the other room. If the child asked the blocked actor to help, she also responded with, “Sure, I’ll get the duck for her,” and tried to reach the toy, but clarified that “[she couldn’t] reach the shelf” when she failed and went back to her desk. If the child did not ask either of the actors to get the duck during this period, the Experimenter returned to the room

and gave the child a short Interview, asking “Who should we ask to get the duck?” as well as additional questions about how the child evaluated the actors, which were not connected to this thesis. Participants who did not immediately choose an actor as one they could ask to get the duck were asked the question up to three times. The Experimenter clarified that she was asking about the actors (“Which one of *them*...”) at the second repetition. Because pilot testing found that many participants were reluctant to point to the actors with their fingers, the child was offered the ‘special wand’ that they played with in the Warm-up to use to point instead. At the end of the Interview the child was brought back to his or her parent and was given a small toy as a token of appreciation.

Because this is the first study of its kind to experimentally examine indirect helping in young children, other, spontaneous, reactions that participants had during the testing periods (e.g., making other suggestions for how the Experimenter could get the duck from the shelf, asking for clarification, etc.) were recorded. These other reactions are presented in detail in Appendix B.

Inter-Rater Reliability

Video-recording of the study tasks was coded by two independent raters who were trained to be consistent with each other in an iterative process using pilot data. For the data reported here, each rater coded videos from thirty participants, overlapping on twenty-five percent of the sample (12 participants) with which inter-rater reliability was calculated. Good agreement was found for all measures. Cohen’s Kappa was strong for two-category (yes/no; child/experimenter; $\kappa = .94$) and three-category (left/right/neither; $\kappa = .89$) variables and there was perfect inter-item correlation between the ratings for ordinal variables ($ICC = 1$). Cases of disagreement between the two raters on categorical and ordinal variables were resolved by a

third trained rater. Inter-rater reliability for looking behaviour was also good; averaged across tasks, $ICC = 0.88$ for looks to the left, $ICC = 0.92$ for looks to the right, $ICC = 0.79$ for looks to the door of the adjoining room, and $ICC = 0.68$ for looks elsewhere in the room. Minor disagreements were resolved by averaging the number of frames reported by the raters for each item.

Chapter 3: Results

Part 1

Shyness. At the beginning of the first testing phase of the study, participants were introduced to the two actors and encouraged by the Experimenter to ask each one to get toys for them off of a high shelf. Whether participants asked both, one, or neither of the actors to get the toys was used as a measure of their shyness when interacting with unfamiliar people. Twenty-five children in the sample spoke to neither of the actors during this task, 3 spoke to one actor, and 19 spoke to both (data for 1 participant are unavailable due to an actor moving to retrieve a toy too soon). More detail on this measure, and its relation to other measures, is provided below.

Help needed. The Experimenter was in need of help at two times during the study; in Part 1, she called out a general need for help (“I want that duck! Oh, can someone help?”) while standing at the shelf reaching for the toy duck. Participants’ looking behaviour was recorded during this period for the approximately six seconds she was trying to get the duck. Two types of looking behaviours were coded for each participant: the proportion of time spent looking toward each actor and which actor the child looked at first during the six-second period. Thirteen participants did not look at either actor during this period and were excluded from the subsequent looking analyses described here. First, a paired t-test (which also excluded one outlier whose z-

score was higher than a criterion of 3.29 ((Tabachnick & Fidell, 2013); $z = 3.37$) revealed no significant difference in the proportional amount of time that participants spent looking toward each actor. For participants' first look toward an actor, a binomial test found that the number of children who looked first at the unblocked actor (20) instead of the blocked actor (15) was not significantly different from chance ($p = .500$). More detail on these tests is given in Table 2. A significant gender difference ($t(33) = 2.08$, $p = .046$, $d = .70$, 95% CI [0.12, 11.82]) was found in children's looking behaviour during this period of the study, in that boys ($M = 13.44$, $SD = 8.41$) tended to spend a higher proportion time looking toward the blocked actor than girls ($M = 7.47$, $SD = 8.59$). There were no gender differences found in any of the other study measures.

Comprehension check. At the end of Part 1, children were asked to identify which actor could reach the shelf. Most children (36) correctly identified the unblocked actor. Of the 12 children who did not choose the unblocked actor for this question, 3 chose the blocked actor and 9 did not make a choice between them. A binomial test, excluding those who did not make a choice, found that the number of participants that chose the unblocked actor was significantly higher than chance (36 out of 39 children, $p < .001$). How participants responded to this question was significantly correlated to their later helper selection in Part 2 ($r(46) = .365$, $p = .011$), with a child's response matching his or her later selection for thirty-five children (31 chose the unblocked actor in both tasks; 1 chose the blocked actor in both tasks; 3 did not chose an actor in either task).

Although twelve participants did not 'pass' the comprehension check, all participants were included in the study's main analyses. The comprehension check was meant to ensure that all participants had a basic understanding of the actors' physical abilities going into the later study tasks; the Experimenter corrected children if they identified the blocked actor as the one

who could reach the shelf or did not respond at all to the comprehension question. It cannot be said whether the nine children who did not respond to the comprehension question understood which actor could reach the shelf. Seven of these children were shy by our measure (they spoke to neither of the actors at the beginning of Part 1), which may explain why they did not make a response in this task. Indeed, separate analyses with the thirty-six children who did ‘pass’ the comprehension check show the same pattern of results as analyses on the entire sample (Table C in Appendix B).

Part 2

Help needed. The second testing phase began with the Experimenter going into an adjoining room and calling out, for the second time in the study, a general need for obtaining the duck (“Oh, I need the duck now!”). This first period of Part 2 lasted for approximately ten seconds. Four participants did not look at either actor during this period and were excluded from subsequent looking analyses. A paired t-test found no significant difference in the proportional amount of time that participants spent looking toward each actor in this first period of the task. A binomial test on their first look to either actor did not find the number of children who looked first at the unblocked actor (24) instead of the blocked actor (20) significantly different from chance ($p = .652$). No children in the sample were found to spontaneously intervene on behalf of the Experimenter by asking an actor to provide help.

Help requested. In the second period of Part 2, the Experimenter asked the child more specifically for help (“[*Child’s name*], can you ask her to get the duck?”). Participants were given up to thirty seconds after the request was made to get help from one of the actors. Only one participant did not look at either actor during this period and was excluded from subsequent looking analyses. A paired t-test found a significant difference in the proportional amount of

time participants spent looking toward each actor, with participants in the sample tending to look more often at the unblocked actor than at the blocked actor (Table 2). Non-parametric analyses are consistent with this finding; when participants were categorized by which actor they looked more toward during this period, 33 showed a preference for the unblocked actor and 14 for the blocked actor. A binomial test found this division of participants to be significantly different from chance ($p = .008$). For *first* looks toward the actors, the number of children that looked first at the unblocked actor (27) instead of the blocked actor (20) was not significantly different from chance ($p = .382$).

Table 2

Looking Behaviour toward the Actors

	<u>Looking toward Unblocked-Blocked</u>				
	<u><i>M</i></u>	<u><i>SD</i></u>	<u><i>t</i></u>	<u><i>d</i></u>	<u><i>CI</i></u>
Part 1					
Help needed	1.36	15.92	0.50	0.09	[-4.20, 6.91]
Part 2					
Help needed	0.28	29.80	0.62	0.09	[-8.89, 9.45]
Help requested	14.52	26.33	3.78*	0.55	[6.79, 22.25]

During both the Help Needed and Help Requested periods of Part 2, participants tended to spend a higher proportion of time looking toward an actor when she was on the left side of the room than when she was on the right. This bias was observed in the first period of Part 2 (after the Experimenter simply expressed a need for help) when it was the unblocked actor on the left ($t(22) = 4.27, p < .001, d = .89, 95\% \text{ CI } [9.82, 28.39]$) and when it was the blocked actor on the

left ($t(19) = -4.25, p < .001, d = .95, 95\% \text{ CI } [-31.90, -10.84]$) and in the second period of Part 2 (after the Experimenter directly requested the child to get help) when it was the unblocked actor on the left ($t(23) = 6.92, p < .001, d = 1.41, 95\% \text{ CI } [22.02, 40.81]$), but *not* when it was the blocked actor on the left ($t(22) = -.87, p = .394, d = .18, 95\% \text{ CI } [-10.54, 4.31]$). The mean proportions of time spent looking at each actor depending on the left-right positioning of the barrier are presented in Table 3 below.

Table 3

Looking Behaviour toward the Left and Right (Mean proportion of time)

	<u>Unblocked on the Left</u>		<u>Unblocked on the Right</u>	
	<u>Left</u>	<u>Right</u>	<u>Left</u>	<u>Right</u>
Part 2				
Help needed	24.34	5.24	32.67	11.30
Help requested	37.45	5.36	18.80	16.81

There is a likely explanation for this finding: the door between the testing room and the adjoining room, where the Experimenter went at the beginning of the second part of the study, was on the left. Participants heard the Experimenter, standing on the other side of the left wall, calling through that door and this may have led them to look more often at the actor on the left than they would have otherwise due to her proximity. In support of this explanation, twenty-nine participants began the first looking period of Part 2 (i.e., immediately after the Experimenter left the testing room and called out a general need for help) by looking toward the door. Many participants also spent a substantial amount of time looking toward the door in the Part 2 looking periods: half of the sample spent at least 32% of the time looking toward the door in the first, help needed, period, and at least 19% of the time looking toward it in the second, help requested

period. No participants looked toward the door at all in Part 1 of the study, when the Experimenter was still in the testing room. It should be noted that the raters who coded children's looking behaviour were trained to distinguish between looks to the left and looks to the door. Because there was good agreement between them on these measures, it is unlikely that the number of looks to the actor on the left was inflated by incorrect recording of looks to the door as looks to that side. Other implications and explanations of this unexpected left-right difference are outlined in the Discussion section of this thesis.

During the Help Requested period of Part 2, 25 children intervened on behalf of the Experimenter by directly asking one of the actors to help her after she made her request.² A binomial test, excluding the 23 participants who did not make a selection during this period, found that the number of children who chose the unblocked actor (23 out of 25) was greater than would be expected by chance ($p < .001$).

Interview. Children who did not intervene by asking one of the actors for help in the Help Requested phase ($n = 23$), were asked to choose an actor that should be asked to get the duck upon the Experimenter's return to the room. Seventeen of these 23 children chose an actor to help in response to the Experimenter's question, and the number of children who chose the unblocked actor (14) was greater than would be expected by chance (binomial test, $p = .013$). Six children did not make a selection of one of the actors to help the Experimenter. Participants were not significantly more likely to choose a helper (whether the unblocked or blocked actor) either after help was directly requested from them or during the Interview (binomial test, $p = .280$).

²Two participants requested help from an actor non-verbally, by approaching one actor and pointing to the shelf in one case, and pointing first to the actor and then to the shelf in the other.

Shyness and Indirect Helping. Seventeen children did not provide indirect help (by intervening during the Help Requested phase), yet when asked during the Interview, all but three knew to ask the unblocked actor to help. That is, these children appeared to detect who could help, but did not intervene. One possibility is that these children were shyer than those who directly asked one of the actors for help. There is support for this explanation; most of the participants who intervened on behalf of the Experimenter during Part 2 of the study also spoke to one or both actors at the beginning of Part 1 (i.e., 17 out of 24³ participants), while most of the participants who only selected a helper during the Interview (in which they did not have to interact with the actors at all and so could make their choice from a distance) spoke to neither of the actors in Part 1 (14 out of 17 participants). This relation was found to be significant by a chi-square test of independence, in which relevant data were dichotomized by excluding moderately shy children (i.e., the three participants who spoke to only one of the actors in Part 1) from the analysis ($X^2(1, N = 38) = 15.55, p < .001$; Yates' $X^2 = 13.06, p < .001$). All six of the children who did not make a selection of a helper at all during the study also did not speak to either actor in Part 1.

Relation between Looking Behaviour and Actor Choice

Participants in this study could choose which actor should help the Experimenter in two ways: by intervening on behalf of the Experimenter and asking an actor for help or by responding to the interview question, “Who should we ask to get the duck?” Most of the participants who chose a helper in one of these two periods correctly chose the unblocked actor (23 of the 25 who intervened; 14 of the 17 who made a choice in the Interview). It would be

³The shyness indicator was missing for one participant; one of the actors moved to get the toys from before the child *could* speak to her

expected that participants who correctly identified the unblocked actor as able to help the Experimenter during the Interview would have spent more time looking toward the unblocked actor during the testing periods as both were used as measures of participants' ability to detect which actor could provide help to the Experimenter. It also would be expected that participants who successfully intervened on behalf of the Experimenter would have looked more at the unblocked actor because they would have needed to detect that she could help before they acted on that knowledge and intervened. In order to assess these relations, participants were categorized based on their looking behaviour during each of the three looking periods as those who spent more time looking toward the unblocked actor, those who spent more time looking toward the blocked actor, and those who spent an equal amount of time looking toward both actors.

Of the 23 participants in the sample who successfully intervened on behalf of the Experimenter, 6 did not look toward either actor when she needed help in Part 1 of the study. A binomial test excluding those 6 participants did not find the number of children who looked more toward the unblocked actor (11) rather than the blocked actor (6) significantly different from chance ($p = .332$). When the Experimenter needed help in the first looking period of Part 2, 5 participants did not look toward either actor. A binomial test excluding those participants also did not find the number of children who looked more toward the unblocked actor (14) instead of the blocked actor (7) significantly different from chance ($p = .189$). Finally, when the Experimenter requested help in the second looking period of Part 2, the number of children who looked more toward the unblocked actor (19) instead of the blocked actor (4) was found to be significantly different from chance ($p = .003$). The 14 participants in the sample who correctly identified the unblocked actor as the one who should be asked to help the Experimenter during

the Interview, did not show a significant preference for looking toward one actor over the other during any period of the study.

Chapter 4: Discussion

The current study examined indirect helping in a sample of three-year-old children. Preschoolers' ability to intervene on behalf of a person in need, by requesting help from someone else, was explored at two levels: whether children could detect who was physically capable of providing the required help and whether children would act on this knowledge by intervening. In this Discussion section, I will begin by reviewing the current findings that suggest that children of this age can detect who is physically capable of providing help to a person in need. Then, I will discuss the findings that suggest that although young children appear to be *capable* of indirectly helping another person, other factors exist that may discourage them from intervening. Limitations of the present study and suggestions for how procedures can be improved in future prosocial behaviour research with young children are discussed throughout this section.

Detecting Who Can Help

One of the primary goals of the current study was to test preschool children's ability to detect who could help a person in need based on the physical capabilities of potential helpers. In this case, one of the actors who could potentially help the Experimenter reach the duck on the shelf was blocked from doing so by a tall barrier. A comprehension check in Part 1 of the study found that most participants could identify the unblocked actor as being able to reach the shelf and those who could not were provided the correct answer by the Experimenter. Whether participants could take this basic knowledge one step further by detecting who could get the duck on top of the shelf for the Experimenter was assessed in two ways: first, by comparing

participants' looking behaviour toward each actor during three test periods (two in which the Experimenter expressed a general need for help and one in which she requested that participants get help for her) and then by asking those children who did not intervene on behalf on the Experimenter to identify who they should ask to get the duck.

Participants' looking behaviour was assessed by recording which actor they looked at first and how much time they spent looking toward each actor during the three looking periods. It was expected that participants would look first and spend more time looking toward the actor who was capable of providing help to the Experimenter (i.e., the unblocked actor). This expectation was partly met: although participants in the sample did not tend to look first at the unblocked actor, they did spend a significantly higher proportion of time looking toward her in the last looking period, after the Experimenter had made a direct request of them to get help. This indicates that, by the third looking period, children in the study detected who would be able to help the Experimenter.

That participants did not show a preference for looking toward the unblocked actor during the first two looking periods, when the Experimenter needed help but had not yet requested it, was unexpected. A possible explanation for this finding is that the direct request for help clarified that the Experimenter's need for the out-of-reach toy *could* be met by one of the actors. Although the majority of children passed the comprehension check of who could reach the shelf, perhaps they did not fully recognize that that actor could also reach the *duck* on the shelf *for* the Experimenter until she suggested that one of the actors could (i.e., "Can you ask *her* to get the duck?"). A second possibility stems from the study design, itself. The two periods in which help was needed were shorter than the period in which help was requested: the latter could last up to thirty seconds, while the first two periods lasted only six and ten seconds respectively.

Participants may have needed more time to determine who could help the Experimenter than the first two periods provided. Not only were these periods shorter than the help requested period, they also both served to *introduce* the Experimenter's need to the participants (i.e., that she could not reach the duck when it was right in front of her in the first case and that she needed it while in the next room in the second). If children spent some of the first two periods working out what the Experimenter needed, it would have reduced the amount of time that they might have spent looking toward the actor that they believed could help. The short length of time chosen for these looking periods was meant to ensure that the participants did not perceive the unblocked actor as *unwilling* to help (because neither actor attempted to help the Experimenter even though they could hear her crying out). Future research using such a paradigm could present the actors as occupied with some task (like colouring or reading) to extend the period in which participants' looking behaviour is recorded without either of the actors appearing unhelpful.

Further considerations of the looking measure. Although the actor who was blocked by the tall barrier was counterbalanced between the left and right side of the room, participants in the sample tended to spend more time looking toward the actor on the left than the actor on the right during the two looking periods of Part 2 of the study. Part 2 of the study began with the Experimenter going into an adjoining room before calling her need for the duck. That the adjoining room was on the left explains why participants' gaze would have been drawn to the actor on that side of the room at this time; many participants looked toward where they could hear the Experimenter's voice, the door to the adjoining room, when she was addressing them at the beginning of both looking periods in Part 2 and their eye gaze might have been naturally directed to the nearby actor on the left after looking at the door. It should also be noted that the actor on the left side of the room was always approached second when the participants were

introduced to the actors at the beginning of Part 1 of the study. It is possible that some children were warmed-up to meet the actor on the left after meeting the one on the right (and a couple participants did engage more with the actor on the left), but it is unlikely that this slight difference in familiarization to the actors would have biased participants' looking behaviour, given that the significant left-right difference was *only* found in Part 2 of the study. Thus, the positioning of the Experimenter during Part 2 is still the most likely explanation for why children in the sample tended to spend more time looking at the actor on the left side of the room during its looking periods.

That participants were drawn to look at the actor on the left during Part 2 of the study does not invalidate the use of children's looking behaviour as a measure of their ability to detect individuals who are likely to provide aid. Not only were the actor roles counterbalanced such that half of the participants saw the actor on the left blocked by the barrier and the other half saw the actor on the right blocked, but the left-side bias occurred in both looking periods of Part 2 when participants only spent more time looking at the unblocked actor in one, after a request for help had been made. Together, these results suggest that participants' looking behaviour toward the unblocked actor was not an artefact of the left-side bias observed in Part 2, but rather a response to the Experimenter's direct request for help that required that they detect who would be able to provide it. Nevertheless, future research using a similar paradigm should avoid any features that would promote more looking toward one side of the room over the other, in order to maximize the effects observed.

Acting on the Knowledge of Who Can Help

Another goal of the current study was to test whether children of this age would intervene on behalf of the Experimenter and get help from the unblocked actor. Twenty-five participants,

approximately half of the sample, attempted to intervene by approaching one of the actors to help and all but two of these children approached the unblocked actor. All of the children who intervened did so after the Experimenter directly requested help from them; none of the participants spontaneously intervened when they heard that she was in need of help. These results suggest that children of this age are capable of prosocial intervention in some contexts. Successful intervention in this study required not only that children ask an unfamiliar adult to help a person in need, but also to consider which adult would be physically capable of providing that help. Twenty-three participants in the sample were able to successfully intervene on behalf of the Experimenter. Thus, the present study extends our understanding of early prosocial behaviour, specifically of a form of helping (i.e., indirect) that has not been experimentally studied in preschool children.

That twenty-three participants in the sample did *not* intervene on behalf of the Experimenter suggests that indirect helping may be a difficult type of prosocial behaviour for this age group. The design of the current study allows us to consider some factors to explain why indirect helping was challenging for some participants in the sample. For example, it is possible that the children who did not ask the unblocked actor to help the Experimenter did not detect that she could help at that point in the study. Although 14 of these children later identified the unblocked actor as the one to ask to get the duck during the Interview, there is some evidence to support this explanation. First, some of the participants who did correctly choose the unblocked actor in the Interview did not show the same preference for looking toward her that the children who successfully intervened on behalf of the Experimenter did in the third looking period. Some of the participants who did not attempt to intervene on behalf of the Experimenter may have been confused about the request that she made at that point because it was phrased ambiguously (i.e.,

“Can you ask *her* to get the duck?”). There is anecdotal support for this claim; five children spontaneously asked “Who?” after the Experimenter made her request for help, and one child asked if she should get her own mother. Further, even during the Interview, some participants did not respond appropriately when asked for the first time, “Who should we ask to get the duck?”, yet did so after the Experimenter clarified for them by rephrasing the question as, “Which one of them should we ask to get the duck?” and pointing between the two actors.

Another possible reason why some children in the sample failed to intervene on behalf of the Experimenter is that they were hesitant to engage one of the actors to help; that is, that they were too *shy* to intervene. This explanation is supported by the finding that participants who intervened on behalf of the Experimenter tended to be less shy than those who only later responded to her question of who could help in the Interview. The 17 children in the latter group may have found informing the relatively familiar Experimenter (who had played with them for several minutes during the warm-up period at the start of the study) about which actor ‘they’ could ask to be an easier task than approaching one of the actors to help. Thus, it is likely that shyness may prevent preschool children from engaging in prosocial intervention, at least when it requires that they directly interact with an unfamiliar adult.

Finally, it is possible, although it was not directly examined in the present study, that some children did not intervene on behalf of the Experimenter because they did not feel that it was their responsibility to act while there were adults present. Although the Experimenter requested help from the participants directly (“[*Child’s name*], can you ask *her* to get the duck?”), they still may have expected one of the actors, as competent adults who could hear the Experimenter’s request, to respond to her need. There is evidence from prior research to support this explanation; for example, children in a kindergarten classroom who were asked to justify

why they did not intervene when their peers were distressed suggested that it was an adult's (i.e., the teacher's or a parent's) responsibility to intervene and not their own (Caplan & Hay, 1989). Thus, preschool children may be less likely to engage in prosocial intervention when in the presence of adults.

Broader Implications

A feature of the present study is that it was designed to *limit* the type of help that participants could provide; that is, because the out-of-reach object that the Experimenter needed was also out-of-reach for the participants themselves, they could not have directly helped her. For participants in the study to successfully intervene on the Experimenter's behalf, they needed to get help from a third party, the unblocked actor. Indirect helping is a way for children to engage in prosocial behaviour when they do not have the resources to do so directly. There are many instances in daily life when children may be confronted with prosocial problems that they cannot solve on their own. For example, if a peer hurts his knee on the playground, a young child who does not know first aid may indirectly help him by telling a teacher. Children can also benefit from adult involvement when they or a peer are being bullied (Craig, Pepler, & Blais, 2007). When children who are bystanders to bullying intervene directly they can sometimes exacerbate the problem (e.g., by reinforcing aggression amongst their peers by acting aggressively toward the bully; Hawkins, Pepler, & Craig, 2001), and so many school intervention programs focus on teaching children better strategies for conflict resolution, such as reporting instances of bullying to an adult (e.g., "Steps to Respect," Committee for Children, 2001). Half of the children in the current study intervened on behalf of a person in need by getting help from a nearby adult. This thesis has highlighted some factors that may prevent children of this age from engaging in indirect helping that could be further examined for

potential use in programs attempting to promote such prosocial behaviour in the preschool years.

Conclusion

In the current study's exploration of prosocial intervention in preschool children it was found that three-and-a-half-year-old children could detect who is physically capable of providing help to a person in need and that some would intervene on that person's behalf. The study contributes to our knowledge of prosocial behaviour in young children by highlighting a type of helping that may be especially challenging for them (i.e., indirect help that requires engaging with another person to help someone in need). The study began to explore the factors that may make intervention challenging for young children, such as shyness or difficulty understanding requests for help from a person in need. Future research should examine these factors as well as those that were not explored in the current study, such as not feeling responsible to get help, in order to examine the decision-making processes that underlie early prosocial behaviour, and ultimately, how prosocial intervention could be promoted in preschool children.

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Appendix A: General Research Ethics Board Approval



November 09, 2015

Ms. Tara Karasewich
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GREB Ref #: GPSYC-732-15; Romeo # 6016814

Title: "GPSYC-732-15 The Role of Prediction in Young Children's Selective Helping"

Dear Ms. Karasewich:

The General Research Ethics Board (GREB), by means of a delegated board review, has cleared your proposal entitled "GPSYC-732-15 The Role of Prediction in Young Children's Selective Helping" for ethical compliance with the Tri-Council Guidelines (TCPS 2 (2014)) and Queen's ethics policies. In accordance with the Tri-Council Guidelines (Article 6.14) and Standard Operating Procedures (405.001), your project has been cleared for one year. At the end of each year, the GREB will ask if your project has been completed and if not, what changes have occurred or will occur in the next year.

You are reminded of your obligation to advise the GREB of any adverse event(s) that occur during this one year period (access this form at <https://eservices.queensu.ca/ROMEO.Researcher.Admin/>; click on "Events"; under "Create New Event" click on "General Research Ethics Board Adverse Event Form"). An adverse event includes, but is not limited to, a complaint, a change or unexpected event that alters the level of risk for the researcher or participants or situation that requires a substantial change in approach to a participant(s). You are also advised that all adverse events must be reported to the GREB within 48 hours.

You are also reminded that all changes that might affect human participants must be cleared by the GREB. For example you must report changes to the level of risk, applicant characteristics, and implementation of new procedures. To submit an amendment form, access the application at <https://eservices.queensu.ca/ROMEO.Researcher.Admin/>; click on "Events"; under "Create New Event" click on "General Research Ethics Board Request for Amendment of Approved Studies". Once submitted, these changes will automatically be sent to the Ethics Coordinator, Ms. Gail Irving, at the Office of Research Services for further review and clearance by the GREB or GREB Chair.

On behalf of the General Research Ethics Board, I wish you continued success in your research.

Yours sincerely,

A handwritten signature in black ink that reads "Joan Stevenson".

Joan Stevenson, Ph.D.
Chair
General Research Ethics Board

c: Dr. Valerie Kuhlmeier, Faculty Supervisor
Ms. Stephanie Woolridge, Ms. Nina Buchenrieder, Ms. Ellen Babb, Ms. Inderpreet Gill, Research Assistants
Dr. Stanka Fitneva, Chair, Unit REB
Ms. Marie Tooley, Dept. Admin.

Appendix B: Supplementary Material

Table A

Data Exclusion Summary

<u>Source</u>	<u>Description</u>	<u>Number of participants dropped</u>
Actor	Deviation from script	7
	Toy knocked off of the shelf	1
Technical	Camera failed to record	1
Participant	Child did not assent to complete the study	3
	Parent present in the room during the study	1
	Child did not pay attention during Familiarization	3
	Child's sibling had the same name as one of the actors ¹	1
Total		17

¹This error was avoided in all other instances by changing the actors' names in advance

Other Reactions

Table B provides a summary of other participant reactions that were recorded during the testing periods of the study. More detail on these reactions and their relation to other responses that the participants made during the study is provided below.

Table B

Other Reactions

<u>Study Period</u>	<u>Suggestions for Reaching Shelf</u>				<u>“I Can’t”</u>	<u>“Who?”</u>
	<u>Child</u>	<u>Parent</u>	<u>Superhero</u>	<u>Chair</u>		
Part 1						
Help needed	2				3 ¹	
Comprehension check	1	5 ²	1		4 ¹	
Part 2						
Help needed				1		
Help requested		1			5	5
Interview		1 ²				

¹One child responded with some version of “I can’t” in both periods

²One child suggested getting a parent to help in both periods

Part 1. When the Experimenter was struggling to reach the duck on the shelf during Part 1 of the study, one child attempted to intervene by engaging the unblocked actor to help, but was interrupted by the Experimenter giving up and turning back around. That child later asked the unblocked actor to help in Part 2 of the study, after the Experimenter made a direct request for help. Two other participants in this period tried to help the Experimenter themselves by announcing that they were going to help, coming up to the small barrier between the actors’ desks, and jumping upwards. Both children later answered the comprehension question correctly

by saying that the unblocked actor could reach the shelf. Finally, three children spontaneously announced that they could not help the Experimenter (e.g. “I can’t reach, I’m too little”) during this period. Two of these children correctly answered the comprehension question while the other never gave a response to it.

When first asked the comprehension question “Who can reach the shelf right now?” one participant responded that they could, but correctly chose the unblocked actor when the Experimenter asked a second time (and rephrased the question as “Which one of *them* can reach the shelf right now?”). Five participants suggested that a parent or other relative could reach the shelf when first asked who could. Three of these children correctly chose the unblocked actor when the question was clarified for them, while the other two never identified one of the actors as being able to reach the shelf. One participant suggested that a superhero could reach the shelf (because, “He’s the biggest!”), then correctly identified the unblocked actor. Finally, four participants initially responded that they *could not* reach the shelf themselves. One of these children had announced this previously while the Experimenter was struggling to reach the duck, and that child did not end up identifying an actor who could reach the shelf. The other three did later choose an actor in the comprehension check; two chose the unblocked actor and one chose the blocked actor.

Part 2. When the Experimenter left the testing room and first called out that she needed the duck, one participant began to suggest that they get a chair to reach it (“We just need a chair to climb –”) and was interrupted by the Experimenter calling out her request for help. This child then asked the unblocked actor directly to help. The Experimenter’s request for help was designed to be somewhat ambiguous (“Can you ask *her* to get the duck?”), and this seems to have been confusing for a few participants in the sample given their reactions in the period

following the request. Specifically, one child asked whether the Experimenter meant her mother and four participants called out “Who?” Although the Experimenter did not clarify for them, all of these children later chose the unblocked actor to help (2 when alone with the actors and 4 during the Interview). Five participants said or shook their head, “No,” after the Experimenter made her request. Three of these children later chose an actor to help when prompted in the Interview (two choosing the unblocked actor and one the blocked actor), while the other two never selected a helper. What these five children had in common was shyness: none of them spoke to either actor when prompted to during Part 1 of the study. Finally, when asked during the Interview, “Who should we ask to get the duck?” one child suggested that they ask one of his relatives (it was unclear whether he said ‘brother’ or ‘mother’). He did not choose either actor to during this period, even after the Experimenter clarified, “Which one of *them* should we ask to get the duck?”

Table C

Analyses for Participants who Passed the Comprehension Check

<u>Study Period</u>	<u>Measure</u>	<u>M</u>	<u>SD</u>	<u>t</u>	<u>Actor Choice (%)</u>			<u>p</u>
					<u>Blocked</u>	<u>Unblocked</u>	<u>N</u>	
Part 1								
	Help needed							
	Proportion of looks	3.49	16.33	1.28			36	.208
	First Look				40.7	59.3	27	.442
Part 2								
	Help needed							
	Proportion of looks	-.56	25.37	-.13			36	.896
	First Look				50.0	50.0	32	1.000
	Help requested							
	Proportion of looks	11.03	19.42	3.41			36	.002*
	First Look				48.6	51.4	35	1.000
	Prosocial intervention				95.0	5.0	20	<.001*
	Interview							
	Should get the duck				92.3	7.7	13	.003*