



Young children (sometimes) do the right thing even when their peers do not



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ABSTRACT

Children must sometimes decide between conforming to peer behavior and doing what is right. While research shows that children have a strong inclination to act prosocially and to help conspecifics in need, many studies also demonstrate that children tend to adopt peer behavior. In two studies ($N = 96$), we investigated whether children would conform to an antisocial majority or, whether they would do the right thing even under peer pressure. Results show that if a recipient is in need, 5-year-old children act prosocially in two different contexts even when there is a strong selfish incentive not to. However, once the severity of the recipient's need is reduced, children conform to the antisocial group. The current studies suggest that children's prosocial motivation sometimes wins out against more selfish drives.

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1. Introduction

Throughout development, children are exposed both to moral exemplars and transgressors within their peer and adult social network. When a peer group engages in antisocial actions such as bullying or stealing, children have to decide between adopting its behavior, thereby gaining peer approval in some cases, or doing what is right. The present studies investigate the dynamics of such moral dilemmas.

Two conflicting motivations are of particular relevance in such contexts: a prosocial motivation and a motivation to conform. Children engage in prosocial behavior from a young age onwards and in a wide variety of situations (Dunfield & Kuhlmeier, 2013). Starting around the second year of life, children help others in instrumental tasks (Svetlova, Nichols, & Brownell, 2010; Warneken & Tomasello, 2006), provide comfort and assistance to those in emotional distress (Bischof-Köhler, 1991; Eisenberg & Fabes, 1998), and, at three years of age, start sharing collaboratively acquired resources equitably (Hamann, Warneken, Greenberg, & Tomasello, 2011). There is also some, albeit limited, evidence that young children's prosocial behaviors are specifically targeted at those individuals who need them most, for example because they are poor (Paulus, 2014).

Conformity to peer action has increasing influence on behavior from 4 years of age onward. This tendency to adopt peer behavior is evident in a child's compliance with majority influence, their overimitation of behavior, and their succumbing to peer pressure and audience effects. (Berndt, 1979 Walker & Andrade, 1996). (Claidière & Whiten, 2012; DiYanni, Corriveau, Kurkul, Nasrini, & Nini, 2015; Haun, van Leeuwen, & Edelson, 2013; Nielsen, Moore, & Mohamedally, 2012). Arguably the most striking cases of conformity are situations in which preschoolers conform to others' judgments even when they themselves

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know better (Corriveau & Harris, 2010; Corriveau, Kim, Song, & Harris, 2013; Walker & Andrade, 1996). For example, in a version of Asch's famous conformity paradigm, children often adopted a peer majority's obviously erroneous judgment (Haun & Tomasello, 2011). Importantly, children only aligned their opinions with the group's perspective when they were asked to answer publicly, i.e. in front of the peer majority. When they were questioned in private, on the other hand, children gave the correct answer, suggesting that children use conformity as a strategic tool to fit in with their peers. Studies investigating children's self-presentational behaviors provide further evidence that preschool children care about and actively attempt to shape the impressions they make on others. Converging evidence indicates that at least from the age of five onwards, children flexibly and strategically attempt to present themselves to different audiences in a favorable light (Engelmann, Over, Herrmann, & Tomasello, 2013; Fu, Heyman, Qian, Guo, & Lee, 2015; Leimgruber, Shaw, Santos, & Olson, 2012).

Beginning at preschool age, the prosocial concern for others' well being and the tendency to conform to peer behavior, can create conflict in children's everyday life. We explored whether children's prosocial propensity to help someone in need would hold when contested by a strong selfish incentive. We designed the current studies to investigate whether children act against an antisocial majority in a moral context, and to explore the role of the recipient's need in children's decision making. We chose two contexts that are relevant to prosocial behavior – stealing (Study 1) and helping (Study 2) – in which to study children's choices.

In both studies, participants were introduced to two same-age confederates who would later decide whether participants could play a game with real rewards (this was included to increase conformity pressure). Participants and confederates were then handed a cereal bar which, depending on condition, either belonged to them (helping task) or did not belong to them (stealing task). They were then shown two boxes, one belonging to them and one belonging to an absent child who was either described as hungry and thus in need (test condition), or not (control condition). Both confederates then engaged in an antisocial act and placed their food in their own box. We coded whether participants copied the majority by also placing the cereal bar in their own box or whether they chose the prosocial act and placed the food in the absent child's box.

2. Study 1

2.1. Method

2.1.1. Participants

Participants were 48 five-year-old children (age range = 60 months 2 days to 68 months 28 days; mean age = 64 months and 12 days; 24 girls, 24 boys) who were tested in their day-care centers. Twenty-four children participated either in one trial of the test or the control condition. Eleven additional children were tested but had to be excluded due to confederates misremembering their text (7 children), confederates placing the cereal bar in the wrong box (1 child), confederates addressing the participant (2 children), and experimenter error (1 child).

Each participant engaged in the study with two same-aged confederates, one of the same and one of the opposite gender (age range = 65 months 22 days to 75 months 25 days; mean age = 69 months 9 days; 10 girls, 9 boys). Children who had participated in previous studies and indicated an interest in participating in future studies were chosen as confederates. Confederates were recruited from different day-care centers than the participants to ensure they were unknown to each other and accompanied the experimenters to centers used for testing. Confederates were trained separately before testing began (see below).

2.1.2. Materials

Participants (and confederates) were asked to place a cereal bar in one of two identical boxes (17 × 24 × 16 cm). In all conditions, a picture (15 × 10 cm) of a boy or girl (matching the participant's gender) was attached to one of the boxes. Two sets of pictures were used to control for possible effects of a particular image. In addition, a fishing game was placed in one corner of the testing room. The fishing game consisted of three fishing rods and a box (72 × 45 × 14 cm) filled with three balls. Each ball contained a sticker. A video camera was hidden in the testing room and connected to a DV-Walkman, which was positioned outside the room.

2.1.3. Design and procedure

In the test condition, the experimenter (E1) – in both studies, there were two different E1s, whose contribution was kept constant across conditions – and the participant entered the room together. E1 pointed at the two confederates playing the fishing-game and told the participant: "Look, they are playing the fishing game. Everyone who plays the fishing game can win great prizes. These two children can decide later on whether you can also play the fishing game." This was the first time that participants encountered the two confederates. Throughout the study, E1 treated the confederates in the same way as the participants.

E1 then asked the children to sit at a distance of 2.5 m from a small Table (see Fig. 1). Two identical boxes were positioned on the table. Upon sitting down, each child found a cereal bar lying on her chair. The experimenter acted as if she had just spotted the cereal bars that very moment and told the children that they belong to Lisa (or Mark if the participant was a boy) who had forgotten them here. E1 pointed to Lisa's picture (attached to one of the two boxes) and told the children that Lisa did not have breakfast today so she was very hungry. E1 added that the box displaying the picture and its contents belonged to Lisa and that the other box and its contents, belonged to the three children. E1 then mentioned that she briefly

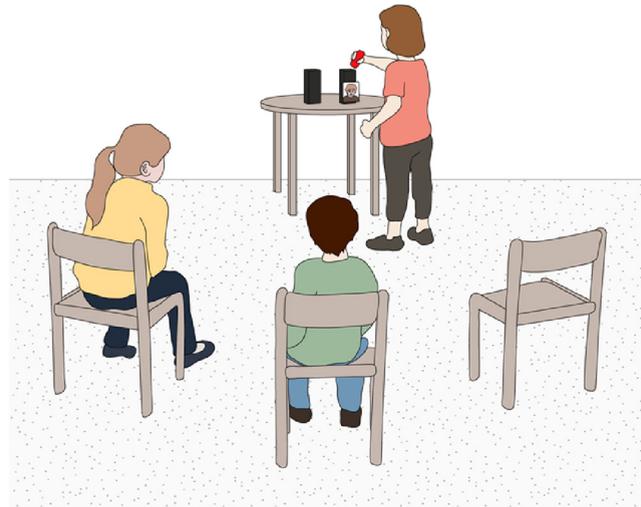


Fig. 1. Experimental setup in Study 1 and 2. The two confederates were seated on the left and center chair, the subject on the chair on the right. The box displaying a picture and its contents belonged to an absent child, the other box belonged to the three children (the group box).

had to leave the room and asked the children to get up one after the other, starting with the first confederate and ending with the participant, and put the cereal bar in Lisa's box. In addition, E1 told the children that no one else would know where they placed their cereal bars since no one could look into the boxes. Once E1 had left the room, the first confederate got up, stopped briefly in front of the two boxes and said, "I don't care whether Lisa is hungry", then placed the cereal bar in the box belonging to the three children. Then the second confederate got up, engaged in the same set of actions, and said, "I don't care about Lisa." Once the participant had placed her cereal bar in either of the two boxes, E1 (who observed the procedure from outside the room using a DV-Walkman) reentered the room and told the three children that they could all play the fishing game now. This represented the end of the trial.

The procedure of the control condition was identical to the test condition except for one modification. While E1 had said that Lisa did not have breakfast and was very hungry in the test condition, E1 said that Lisa *did* have breakfast and was not hungry in the control condition. Everything else, including the confederates' behavior and their script, remained identical between conditions.

On each testing day and before actual testing began, the procedure of the study was practiced several times with the two confederates, with a second experimenter acting as the participant. Specifically, confederates were instructed to: walk one after the other to the boxes, briefly stop in front of them, state their sentence (which was rehearsed several times), and return to their chairs. Confederates were considered skillful in their roles once they had successfully engaged in this procedure twice in a row. In addition, confederates were told not to speak to the participants.

2.1.4. Coding and reliability

Whether the participant placed the cereal bar in Lisa's box or her own box was coded live and again later from tape by the first author. A research assistant, who was unaware of the study design and hypothesis, independently coded 25% of all trials. Interrater agreement was excellent (Cohen's $\kappa = 0.88$).

2.2. Results

Fig. 2 presents the percentage of participants going against the majority in Study 1. In the test condition, significantly more children acted against the majority compared to the control condition (Chi-square test: $\chi^2(1, N=48)=9.1, p=0.003$). Specifically, 58% of children (14 out of 24) acted against the majority in the test condition, whereas only 12.5% of children (3 out of 24) did so in the control condition.

Additionally, we ran a logistic generalized linear mixed model (GLMM) to examine whether there was an effect of experimenter, kindergarten, picture used, and participant gender. None of the terms were significant (all $p > 0.3$).

2.3. Discussion

Study 1 investigated whether 5-year-old children conform to the antisocial behavior of a peer majority in a stealing context. Results show that 58% of children do the right thing even in the face of peer pressure if the moral element is emphasized due to the hunger of the absent peer. However, if the moral severity is reduced (as in the control condition), only 12.5% of children resist peer pressure. The results of the control condition suggest that in the absence of recipient need, peer pressure can lead preschoolers to act in antisocial ways. In the control condition, 21 out of 24 children kept the

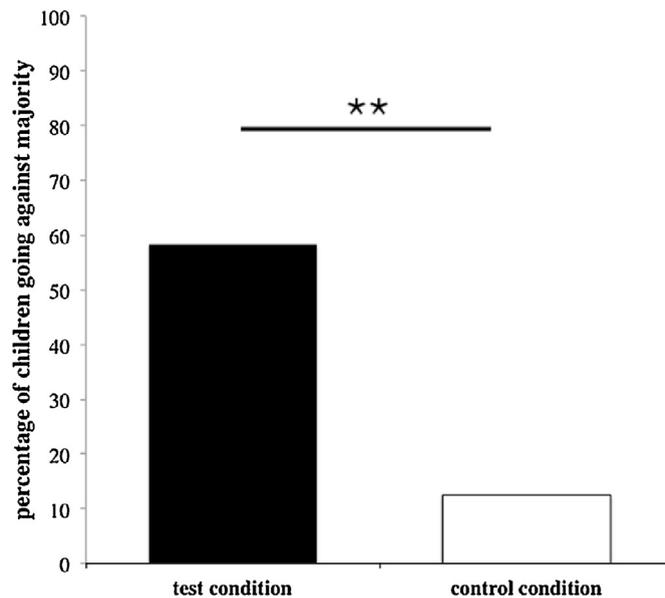


Fig. 2. Percentage of participants going against the majority in Study 1. Asterisks indicate significant differences between conditions (** $p < 0.01$).

cereal bar for themselves. In Study 2, we investigated whether the main finding of Study 1 – that preschoolers sometimes act prosocially at the cost of conformity – extends to a different context, namely that of helping. In Study 2, children were handed a cereal bar and were given the choice of either keeping it for themselves or giving it to a hungry peer. Before children made their choice, they again observed two confederates acting immorally by not sharing their food.

3. Study 2

3.1. Method

3.1.1. Participants and materials

Participants were 48 five-year-old children (age range = 60 months 7 days to 69 months 30 days; mean age = 65 months and 18 days; 24 girls, 24 boys) who were tested in their day-care centers. As in Study 1, Study 2 had two conditions, test and control, and each child participated in one trial in one of the two conditions. Nine additional children were tested but had to be excluded due to confederates forgetting their text (1 child), confederates misremembering their text (5 children), and confederates addressing the participant (3 children).

Each participant engaged in the study with two same-aged unknown confederates, one of the same and one of the opposite gender (age range = 66 months 5 days to 73 months 17 days; mean age = 68 months 22 days; 11 girls, 12 boys). Materials were identical to those used in Study 1.

3.1.2. Procedure and coding

Study 2 followed a similar procedure to Study 1. Whereas Study 1 took place in a stealing context, Study 2 revolved around helping. Two modifications were introduced. First, where children in Study 1 were told to give the cereal bar to Lisa since it belonged to her, in Study 2, the experimenter told the children that one cereal bar belonged to each of them. Second, where children in Study 1 were told to put the cereal bar in Lisa's box, in Study 2 they were told that they could either keep the cereal bar for themselves by putting it in their own box, or give it to Lisa by putting it in her box. The confederates engaged in the same set of actions as in Study 1. Additionally, the test and control condition differed in the same way as in Study 1. While children were told that Lisa did not have breakfast and was hungry in the test condition, children in the control condition were told that Lisa did have breakfast and was not hungry.

Coding was identical to Study 1 and interrater agreement was excellent (Cohen's $\kappa = 1$).

3.2. Results

Fig. 3 presents the number of participants going against the majority in Study 2. In the test condition, significantly more children acted against the majority compared to the control condition (Chi-square test: $\chi^2(1, N = 48) = 9.1, p = 0.003$). Specifically, 58% of children (14 out of 24) in the test condition acted against the majority, and 12.5% of children (3 out of 24) did so in the control condition.

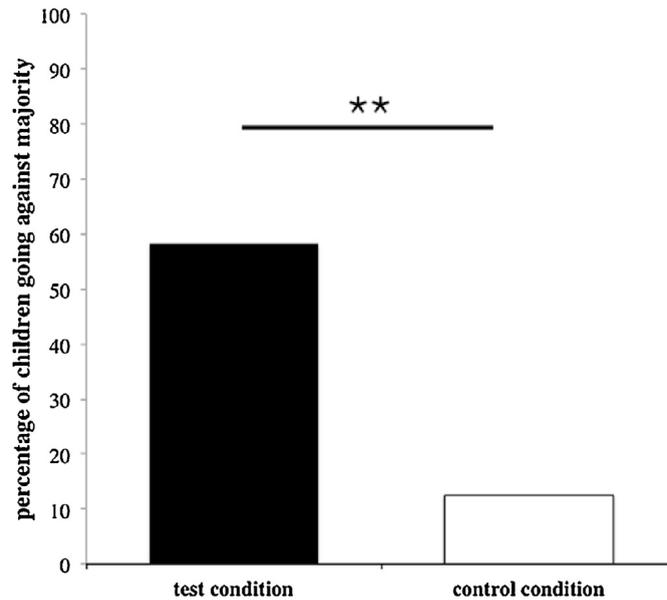


Fig. 3. Percentage of participants going against the majority in Study 1. Asterisks indicate significant differences between conditions (** $p < 0.01$).

We used a logistic generalized linear mixed model (GLMM) to determine whether there was any effect of experimenter, kindergarten, picture used, and participant gender. None of the terms were significant (all $p > 0.4$).

3.3. Discussion

Study 2 investigated whether 5-year-old children conform to an antisocial majority in a helping context, where they have to decide between keeping a cereal bar for themselves or giving it to a hungry and absent peer. The results of Study 2 replicate and extend the findings of Study 1 by showing that children also act prosocially at the cost of conformity in situations where they are free to either share or keep their own resource. In a condition where children were faced with strong moral pressure due to a hungry peer, 58% of children acted against the majority and shared their cereal bar. Once the moral pressure was reduced in the control condition, only 12.5% of children did not conform to the majority.

4. General discussion

In the present studies, we investigated preschoolers' behavior in a moral dilemma situation. Would children follow an immoral majority, or would they do the right thing even at the cost of personal rewards and peer pressure? We found that in the test conditions of both studies 58% of children were willing to sacrifice these material and social benefits in order to act morally.

Previous research has shown that children not only have a strong motivation to align their behavior and opinions to those of peer groups (Haun & Tomasello, 2011), but also to worry about the impressions they make on others (e.g. Engelmann et al., 2013). Despite these pressures, when faced with an antisocial majority in the present studies, children sometimes acted prosocially. This is noteworthy, since impressing the majority was in the children's strategic interest (the two confederates could (ostensibly) decide whether children could play a game with real rewards later on). Additionally, acting prosocially involved giving up a cereal bar. Last but not least, while the peer pressure manipulation in the current setup was real and pressing in that two actual peers were present in the same room as the participant, the moral manipulation was relatively weak as the hungry recipient was only represented through a picture.

In Study 1 and 2, test and control conditions differed across one dimension: neediness.¹ Where the potential recipient of food was described as hungry in the test conditions, in the control conditions the potential recipient was not hungry. While we found that a majority of children conformed to the antisocial behavior of a majority in the control condition of Study 1 and 2, the overall finding of both studies was that children, at least sometimes, act prosocially even at the cost of conformity. This suggests that children's prosocial motivation, potentially resulting from sympathy for a hungry recipient is, in some

¹ We originally ran a different version of the control condition in which children were asked to place a Lego piece in one of two boxes either with clear instructions about where to put it (Study 1) or with no such instructions and thus free choice (Study 2). But upon reflection (and after some outside criticism) we ran the current version, which is a much tighter control. For Study 2, the two control conditions yield the same significant result. For Study 1, the previous control condition was not significantly different from the test condition.

contexts, stronger than children's motivation to conform. This result is in line with previous research suggesting that young children are intrinsically motivated to see others helped (Hepach, Vaish, & Tomasello, 2012).

Investigating children's prosocial motivation empirically presents researchers with procedural complexities (Sperber & Baumard, 2012). Most importantly, it is crucial to attempt to rule out experimentally that children engage in prosocial behaviors for reputational reasons, or, in other words, that children do the right thing for the wrong reason. This is why here we have attempted to minimize the possibility that children thought that the experimenter or others besides the two confederates would find out about their behavior by hiding the camera, telling children that no one could look into the boxes, and having the experimenter leave the room. In addition, if children in the current study behaved prosocially only because they wanted to build a good reputation in the eyes of the experimenter, then we would have expected children to tell the experimenter about their prosocial acts. However, only two children of the full sample reported their behavior to the experimenter. Last but not least, a reputational account of the current results cannot account for the results of the control conditions. If children behaved prosocially exclusively for strategic reasons, then they should also have done so in the control conditions. After all, prosocial behavior in the control conditions might have also been an effective strategy to build up a good reputation with the experimenter.

Other than this reputational account of the current findings, one might attempt to explain participants' behavior in the test conditions by arguing that children might have placed their cereal bar in Lisa's box because the other box already contained two bars and children might have expected a share of those. It is important to stress that in this alternative explanation, children's behavior also amounts to prosocial behavior as even in this case children share something that they could have kept for themselves. While we believe that this interpretation is theoretically possible regarding Study 1 (where children did not receive clear information about what would happen to the cereal bars that they had put in the group box), we believe that it is unlikely to account for the findings of Study 2 (where each child was clearly told that if they wanted to keep their own bar they should place it in the group box).

The current findings further work on moral judgment and reasoning in preschoolers (Gummerum, Keller, Takezawa, & Mata, 2008; Turiel, 1983). Previous studies have shown that while preschool children understand conventional norms as authority and consensus-dependent (and accept changes by authorities or majorities), they conceptualize moral norms as both authority- and majority-independent (and consider even changes by authorities as unacceptable). Thus, if children are asked: "Would it be OK to steal if everyone said it was OK?", most children maintain that stealing is wrong even in the presence of a majority asserting the opposite (for an overview, see Killen & Smetana, 2014). The current results demonstrate that this is not just parroting. Children in the current studies were presented with a majority doing the wrong thing (not sharing food with a hungry child), but nevertheless stuck with the right behavior and shared their food—if the recipient was in need. Therefore, in at least some circumstances, children's moral behavior, like their moral judgment, is immune to the unethical behavior of a majority.

While the present results provide evidence that at least some children act prosocially even if their peers do not, there is no doubt that norm compliance is determined by beliefs about others' level of compliance (Ensminger & Henrich, 2014). Very little research exists regarding the extent to which young children's prosocial behavior is influenced by beliefs or knowledge about others' compliance. Future studies should explore precisely under which circumstances children's motivation to conform to others' behavior wins out over more prosocial motivations. One interesting question pertains to children's conformity to different peer groups. Research with adult participants has shown that immoral behavior spreads when adults are faced with a transgressor belonging to their own group; participants who were faced with an immoral outgroup member, on the other hand, showed lower levels of immoral behavior (Gino, Ayal, & Ariely, 2009). Whether children are more likely to engage in immoral behavior when their ingroup exhibits such behavior represents an important question for future studies. In addition, future research should investigate which situational factors make children more likely to go against an immoral majority. After all, 42% of children across the test conditions of Studies 1 and 2 conformed to the antisocial majority. One option, following work by Bryan, Master, & Walton (2014), would be to highlight the relevance of the child's decision to her moral identity for example by using noun labels such as "helper" or "stealer".

Finally, the current results are relevant to theories of human prosociality and, in particular, shed new light on the motivations underlying such behaviors. While theorists generally agree that prosociality is 'strategic' and adaptive from an evolutionary point of view, opinions diverge regarding the proximate motivations driving prosocial behavior (Sperber & Baumard, 2012). Some authors propose that the motivations underlying prosocial behavior in humans are fully explainable in strategic terms such as conformity, reputation, and reciprocity (Bateson, Nettle, & Roberts, 2006; Haley & Fessler, 2005). Others highlight that the best way to reap the benefits of prosociality is to obey genuine and intrinsically motivated prosocial concerns (Sperber & Baumard, 2012; Sterelny, 2012; Tomasello, Melis, Tennie, Wyman, & Herrmann, 2012). The results of the present study lend support to the latter class of theories. If children's prosociality were exclusively motivated by calculated concerns, we would not expect children to act prosocially at the cost of various strategic benefits. However, this is exactly the pattern of behavior shown by children in the current study. To be clear, we do not suggest that preschoolers' prosociality is not motivated by strategic concerns, such as a concern to get the approval of peers (see Engelmann et al., 2013). We do suggest, however, that strategic concerns are not the whole story. Children are genuine, that is, intrinsically motivated, prosocial actors in that they (sometimes) do what they themselves judge the right thing to do, independent of either personal rewards or the behavior of a majority.

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