Developmental Science

Developmental Science 19:2 (2016), pp 275–283 DOI: 10.1111/desc.12304

PAPER

Young children with a positive reputation to maintain are less likely to cheat

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Abstract

The present study examined whether having a positive reputation to maintain makes young children less likely to cheat. Cheating was assessed through a temptation resistance paradigm in which participants were instructed not to cheat in a guessing game. Across three studies (total N = *361), preschool-aged participants were randomly assigned to either a reputation condition, in which an experimenter told them that she had learned of their positive reputation from classmates, or to a control condition in which they received no such information. By age 5, children in the reputation condition cheated less often than those in the control condition even though nobody was watching and choosing not to cheat conflicted with their personal interest. These findings are the first to show that informing children that they have a positive reputation to maintain can influence their moral behavior.*

Research highlights

- Three studies examined whether telling young children that they have a positive reputation among their peers would promote moral behavior.
- Children ages 3 to 5 were randomly assigned to either an experimental condition, in which they were told they had a positive reputation, or a control condition.
- Five-year-olds were less likely to cheat in a guessing game in the experimental condition than in the control condition.
- The findings suggest that by age 5, children are motivated to avoid behaviors that could put their positive reputations at risk.

Introduction

Across cultures, a central goal of the socialization process is to guide children to behave in ways that are consistent with the values of the community. However, it can often be challenging for parents and other caregivers to persuade children to follow the expected standards of behavior when doing so runs counter to the child's personal desires. The present study examines a reputation-based approach to promote compliance. We hypothesized that when young children have a sense that they have a positive reputation to maintain they will avoid behaviors that could put their reputation at risk, even when no one is watching them and when choosing not to cheat conflicts with their personal interest.

For a reputation-based approach to promote desirable behavior effectively, young children must have some understanding of the concept of personal reputation, including how an individual's behavior can influence the way he or she is perceived by others. Previous research has documented that such an understanding develops over an extended period of time during childhood, and that before about age 8 children are unaware of many of the important aspects of reputation

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management that characterize the reasoning of older children and adults (Aloise-Young, 1993; Banerjee, 2000; Banerjee, Bennett & Luke, 2010; Bennett & Yeeles, 1990; Heyman, Barner, Heumann & Schenck, 2014; Juvonen & Murdock, 1995; Watling & Banerjee, 2007). For example, young children typically do not understand that downplaying one's accomplishments and positive traits can be used as a means of enhancing one's reputation (Banerjee, 2000; Watling & Banerjee, 2007). However, it is also clear that children have some understanding of reputation in place well before age 8. By age 5, they already have some awareness of how reputations are obtained, including an understanding that individuals' reputation can be shaped by other people's firsthand experiences with them (Hill & Pillow, 2006). Young children are also aware of some of the specific factors that can influence reputations (Banerjee, 2002; Gee & Heyman, 2007). Six-year-olds appreciate that it may be advantageous to adapt how they communicate about themselves to their audience (Banerjee, 2002), and even 4-year-olds have some awareness that the same disclosure can have different reputational consequences depending on who is doing the disclosing (Gee & Heyman, 2007).

There is also a growing body of evidence showing that young children's concerns about reputation have implications for their behavior (Engelmann, Herrmann & Tomasello, 2012; Engelmann, Over, Herrmann & Tomasello, 2013; Leimgruber, Shaw, Santos & Olson, 2012; Piazza, Bering & Ingram, 2011; Ross, Smith, Spielmacher & Recchia, 2004; Shaw, Montinari, Piovesan, Olson, Gino *et al.*, 2014; Stipek, Recchia & McClintic, 1992; see Tomasello & Vaish, 2013). Five-year-olds are more generous when recipients are visible (Leimgruber *et al.*, 2012) and are in a position to reciprocate later (Engelmann *et al.*, 2013). Children as young as age 5 are also more likely to share and less likely to steal, cheat, and lie when someone is watching than when they are alone (Fu, Evans, Xu & Lee, 2012; Engelmann *et al.*, 2012; Piazza *et al.*, 2011), and children as young as 6 are less likely to be fair to others when they can do so without appearing to be unfair (Shaw *et al.*, 2014).

Taken together, the previous findings suggest that although there are clear limitations in young children's ability to understand how people can best manage their reputations, children as young as 5 already have a basic understanding of reputation. In addition, they sometimes behave strategically in ways that have the potential for reputation enhancement when they know they are being observed. Of interest in the present study is whether giving children a sense that they have a positive reputation to maintain would serve to motivate them to behave in ways that are consistent with that reputation, even when no one is watching them and when doing so conflicts with their personal desires.

The questions we address in the present research significantly extend previous research on children's reputation management in several ways. Previous work has documented that when children are aware that they are being observed they tend to behave differently, and that they are sensitive to several different social contextual cues. However, this earlier work does not address the question of whether reputational concerns affect behavior even under conditions in which children have no reason to believe anyone is watching them. If reputational concerns extend to these situations it would have important practical implications because children frequently have opportunities to make morally relevant decisions when they are not being observed, and an important goal of socialization is to help children behave in moral ways regardless of the presence of others.

In addition, prior research has not addressed the question of whether young children might care about their existing reputation. Here, we look specifically at the effects of children learning that they already have a good reputation. Our prediction is that such a notion would make children more willing to behave morally so as to maintain their reputation. However, based on existing research and theories, one might instead hypothesize that a prior good reputation would only affect behavior when children know that they are being watched, or alternatively that a prior good reputation would make children feel better about themselves and therefore less concerned about the consequences of bad behavior and less willing to behave in a moral way (see Merritt, Effron & Monin, 2010, for a related argument).

We tested our hypothesis in China, given the need to make sure that developmental theories incorporate data from non-Western samples. We used a well-established *peeking paradigm* in which children are asked to guess the identities of three toys by listening to the sounds they make. Children were told that they must guess all three toys correctly to receive a desirable prize. They were also told not to cheat by peeking at the toys. The game was configured so that children could only guess the final toy by peeking at it while the experimenter was out of the room. We manipulated reputational cues by having the experimenter inform children that they had a good reputation among their classmates.

We chose the peeking paradigm because it has been used extensively to study moral behavior among children in this age range (e.g. Ding, Omrin, Evans, Fu, Chen *et al.*, 2014; Talwar & Lee, 2002; Talwar, Lee, Bala & Lindsay, 2002). It is an engaging task that is easy for young children to understand, and it produces outcomes that are easy to assess because children's cheating

behavior can be reliably detected with the use of a hidden camera. In addition, young children typically show high rates of cheating on the traditional version of this task, which makes it possible to measure the extent to which experimental manipulations are reducing the level of cheating. Most importantly, because the goal of the game was to receive a desirable prize after guessing all three toys correctly, children would be faced with the dilemma of whether to cheat to satisfy their personal interest versus declining to cheat to maintain their positive reputation. This paradigm thus provided an ideal situation to assess whether children's concern for reputation would be so strong that they would refrain from cheating at the cost of losing a highly desirable prize.

Study 1

As a starting point for addressing our hypothesis, we compared a reputation condition, in which children were presented with strong reputational cues, to a control condition in which no reputational cues were presented. In the reputation condition, each child was first told that other students in the class had reported on his or her good reputation before the guessing game. Participants were also reminded of this information before the experimenter left the room and were told that any evidence of cheating would be reported to the other students. In the control condition, none of these cues were provided. If reputational cues are an effective way to promote compliance, children in the reputation condition should be less likely to cheat than those in the control condition. We hypothesized that we would see an effect starting at about age 5 in light of earlier evidence suggesting that children begin to show sensitivity to reputationally relevant information at around that age (Engelmann *et al.*, 2012; Engelmann *et al.*, 2013; Leimgruber *et al.*, 2012; Piazza *et al.*, 2011). We also included 3- and 4-year-olds because we were interested in determining the point at which these effects might first emerge developmentally. It is also possible that these effects could emerge at a younger age in East Asia than in Western populations due to a stronger emphasis on conforming to social norms in East Asia (Chao, 1995; Lin & Fu, 1990).

Method

Participants

There were 181 participants (88 boys) from a preschool in China: a group of 3-year-olds (N = 60, mean = 3.61 years, SD = .26, age range: 3.12 to 4.25), a group of 4-year-olds (N = 60, mean = 4.65 years, SD = .23, age range: 4.04 to 5.28), and a group of 5-year-olds (N = 61, mean = 5.62, SD = .32, age range: 4.90 to 6.25). The sample was 100% Han Chinese and the procedure was conducted in Mandarin by Chinese graduate students.

Design and procedure

The procedure took place in individual videotaped sessions at children's preschools. In a between-subjects design, children in each age group were randomly assigned to a reputation condition or a control condition for a *peeking paradigm* in which participants were instructed not to peek in a guessing game (see Talwar & Lee, 2002). Children were first told that that they were going to play a game in which they could win a prize by listening to the sounds that three animal toys make and then guessing the names of the animals, which were placed behind them out of view. Children were told that if they guessed the identities of all three toys correctly, they would receive a highly desirable prize. The experimenter then said, 'I will put an animal on the table. The animal will make a sound and you will guess. After you guess you can turn around to see if you were right. Do not turn around until after you have guessed.' The answers were obvious on the first two trials. For example, when children heard a quacking sound they easily guessed that it was a toy duck. After children successfully guessed on the first two trials, the experimenter's cell phone rang and she pretended to speak to the caller. She then explained to the child that she needed to briefly leave the room to take the call. Before leaving she placed the third toy on the table and activated the sound for it. In this case, it was a musical sound that was unrelated to the toy's identity so there was no way for children to guess the identity of the animal correctly by listening to the sound it made. Before leaving the experimenter said, 'When I'm back you can tell me what you think the animal is. Remember not to peek while I'm gone.' She then left the room for 60 seconds.

In the reputation condition, before playing the guessing game each participant was told that other students in the class had reported that he or she was a good kid: 'I know kids in your class and they told me you are a good kid.' In addition, just before the experimenter left the room she reminded children of this information: 'As I just said, the kids in your class said you are a good kid.' Finally, immediately after the experimenter gave this reminder she also issued a reputational threat: 'If I found out you peeked at the toy, I would tell the kids in your class.'

The control condition was identical except that none of the reputational cues described in the previous

paragraph were presented. Of primary interest was whether rates of cheating while the experimenter was away (as assessed by the videotape that was taken while the experimenter was out of the room) would differ by condition. Cheating was defined as the participant turning more than 90 degrees to look back at the animal that was placed behind him or her.

Results and discussion

Cheating rates

Cheating rates are shown in Figure 1 for both conditions. As can be seen from the figure, the experimental manipulation did not significantly affect the cheating of the 3-year-olds and 4-year-olds (*p*s > .10), most of whom peeked. However, the difference in cheating rates between conditions reached significance in the 5-year-old group, with 60.0% cheating in the reputation condition as compared to 90.3% in a control condition, $\chi^2_{(1,\ N\ =\ 61)} = 6.01, df = 1, p = .014$.

Cheating latencies

We also calculated cheating latencies for the children who cheated (see Table 1). As can be seen from the table, the latencies were longer in the reputation condition than in the control condition, as assessed by a Mann-Whitney U test ($z = -3.593$, $p < .001$). We used this non-parametric test because the latencies were not normally distributed. This effect was significant for the 4- and 5-year-old groups ($z = -2.244$, $p < .05$; $z = -2.328, p < .05$), but not for the 3-year-old group ($z = -1.389$, $p > .05$). Thus, although the reputational cues did not prevent 4-year-olds in the reputation condition from cheating, they at least resisted temptation to cheat for a longer period of time than did the children in the control condition.

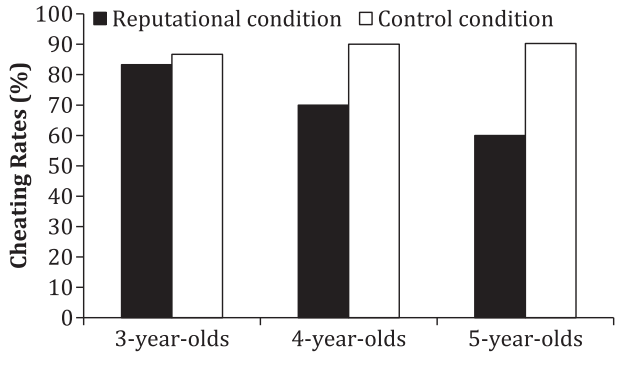

Figure 1 *Cheating rates in Study 1.*

In sum, the present experiment examined whether informing children that their classmates held a favorable view of them might motivate them to uphold their positive reputation by resisting the temptation to cheat. We found clear evidence of this in 5-year-olds, who showed substantially lower rates of cheating in the reputation condition than in the control condition. There was also some evidence that the reputation information influenced younger children: even 4-year-olds who cheated were slower to do so in the reputation condition, which suggests that the cues in the reputation condition made the 4-year-olds more reluctant to cheat, even if they ultimately cheated.

Study 2

Study 1 showed that the 5-year-old participants were less likely to cheat in a reputation condition than in a control condition in which no such information was provided. The goal of Study 2 was to better understand the nature of this effect among 5-year-olds. It is possible that the effect was seen because participants in the reputation condition were told that cheating would result in undesirable consequences. In Study 2 we examined whether reputation effects would still be observed among 5-year-olds if the children in the control condition were also told that cheating would result in undesirable consequences.

Method

Participants

There were 61 participants (30 boys) from a preschool in China. Only a 5-year-old group was included (mean = 5.62 years, *SD* = .30, age range: 4.99 to 6.24). The sample was 100% Han Chinese.

Table 1 *Means and standard deviations of latencies (seconds) to cheat*

Condition	3-year-olds	4-year-olds	5-year-olds	Total
Reputation	10.12 (12.417)	11.62 (14.382)	9.50 (14.80)	10.44 (13.575)
Control	5.92 (7.526)	4.74 (7.053)	4.79 (10.05)	5.14 (8.264)

Design and procedure

The design and procedure of Study 2 were identical to that of Study 1 except that just before the experimenter left the room she told participants in both conditions, 'I will be very upset if I learn that you have cheated.'

Results and discussion

Cheating rates

As was the case with the 5-year-olds in Study 1, cheating rates were lower in the reputation condition (56.7%) than in the control condition (83.9%), $\chi^2_{(1,\ N\ =\ 61)} = 5.42$, $p = .02$ (see Figure 2).

Cheating latencies

Latency results showed the same pattern that was observed in Study 1: among the children who cheated, cheating latencies were longer in the reputation condition (mean = 13.65 seconds, $SD = 14.79$) than in the control condition (mean = 6.23 seconds, $SD = 8.62$), $z = -2.322$, $p < .05$.

In sum, the key finding of Study 1 was replicated in Study 2: 5-year-olds were less likely to cheat after they were informed of their good reputation. This was the case even though it was made clear to the participants in the control condition that the experimenter would be upset if the participant cheated.

Study 3

The goal of Study 3 was to determine whether the reputation effect observed among 5-year-olds in Studies 1 and 2 would still be present if the reputation information were limited to references to the participant's positive reputation among classmates (with no reference to any potentially negative consequences of being caught cheating on the task). Although it would be surprising for such a small verbal manipulation to influence children's moral behavior, prior research suggests that young children's social inferences and behavior does sometimes show sensitivity to certain psychologically relevant verbal cues (Bryan, Master & Walton, 2014; Cimpian, Arce, Markman & Dweck, 2007; Cimpian & Markman, 2011; Gelman & Heyman, 1999). For example, Bryan *et al*. (2014) found that 3- to 6-year-olds were more likely to offer help in a noun condition in which they heard references to *being a helper* than in a verb condition in which they heard references to *helping*.

In addition to the new reputation and control conditions, we also added an expectancy control condition, in which the experimenter explicitly told children that they were expected to follow the rules. This condition was included to rule out the possibility that the effects associated with the reputation manipulation were due to children's perceptions of the experimenter's expectations, rather than being driven by children's concern for maintaining their reputation.

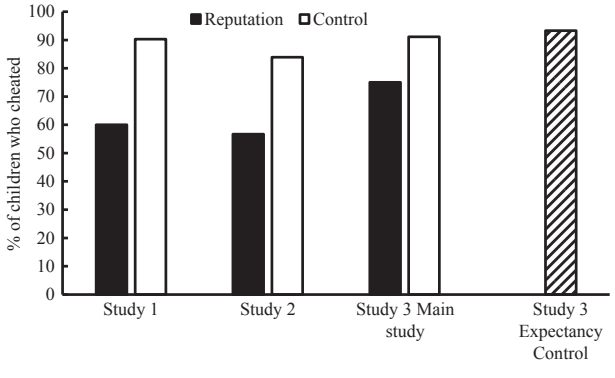

Figure 2 *Percent of 5-year-olds who cheated in Studies 1, 2, and 3.*

Method

Participants

There were 119 5-year-old participants from a preschool in China. There were 89 participants (44 boys, mean = 5.6 years, $SD = .34$, age range: 4.91 to 6.25) in the main study (44 in the reputation condition, and 45 in the control condition). An additional 30 children participated later in an extra expectancy control condition (16 boys, mean = 5.55, $SD = .29$, age range: 5.0 to 5.9). The sample was 100% Han Chinese.

Design and procedure

The design and procedure of the primary study was identical to that of Study 2 except that we omitted the warning about what would happen if the experimenter discovered the participant had cheated. Consequently, the only difference between the reputation and control conditions was that in the reputation condition the experimenter informed the participant of his or her positive reputation among peers. The additional expectancy control condition was identical to the control condition of the main study except that after children were instructed not to peek, they were told, 'I expect you will follow the rules and will not turn around and peek.'

Results and discussion

Cheating rates

As was seen among the 5-year-olds in Studies 1 and 2, cheating rates in the main study were significantly lower in the reputation condition (75.0%) than in the control condition (91.1%), $\chi^2_{(1,\ N\ =\ 89)} = 4.25$, $p = .039$ (see Figure 2). Cheating rates in the expectancy control condition were 93.3%. This rate was not significantly different from the rate of the control condition in the main study, but it was significantly higher than the rate in the main reputation condition, $\chi^2_{(1,\ N\ =\ 74)} = 4.14$, $p = .042$ (see Figure 2).

Cheating latencies

In the main study, the cheating latencies of the children who cheated were longer in the reputation condition (mean = 9.00 seconds, $SD = 11.19$) than in the control condition (mean = 6.51 seconds, $SD = 11.00$), $z = -2.02$, $p = .04$. Interestingly, the cheating latencies in the expectancy control condition (mean = 8.25 seconds, $SD = 8.30$) did not differ from those in the experimental condition, $z = -.579$, $p = .563$, but they were significantly higher than those in the control condition in the main study, $z = -2.74$, $p = .006$.

The results of Study 3 show that a significant reputation effect was still present even though the only reputational cue was that the experimenter stated that she had heard about the participant's positive reputation from his or her peers, although it should be noted that this effect was weaker than what was seen the previous studies.

The expectancy control condition helps to rule out the possibility that the results can be explained in terms of a tendency for children to simply do what they assume is expected of them because the rates of cheating were the same as those observed in the standard control condition. However, the fact that the children who cheated in the expectation control condition showed longer latencies suggests that explicitly telling the participants what was expected of them led them to be more hesitant to cheat, even though they did so eventually.

General discussion

Across three studies we tested the hypothesis that young children will show less cheating if they are informed that they have a positive social reputation to maintain. We compared rates of cheating in a peeking game among children who were randomly assigned to a reputation condition or to a control condition. In Study 1, the reputation manipulation included references to the participants' positive reputation among peers as well as a reputational threat (i.e. that classmates would be informed of any evidence of cheating), and we found clear evidence in support of the hypothesis among 5-year-olds. We also saw evidence of a reputational effect among 5-year-olds in Study 2, when the experimenter emphasized the potential negative consequences of cheating in the control condition as well in as the reputation condition. In addition, we also saw evidence of a reputational effect among 5-year-olds in Study 3, where the reputational cues were weaker (i.e. there was no reputational threat in either condition). The expectancy control condition in Study 3 further confirmed that the 5-year-olds' resistance to cheating in the reputation condition was indeed the result of reputational cues, and not simply because children were trying to comply with the experimenter's expectations. Taken together, these findings suggest that giving 5-year-olds a positive reputation to maintain can influence their moral behavior.

In contrast to the findings among 5-year-olds, younger children's rates of cheating in Study 1 were unaffected by our reputation manipulation. This lack of effect on cheating in younger children does not necessarily indicate that they are insensitive to any reputational cues. However, our results do suggest that between ages 3 and 5 there is an age-related increase in children's responsiveness to the abstract reputational cues we presented. It may be that younger children are more sensitive to more concrete cues (e.g. they might care about how they are perceived by a specific friend). It may also be that the cognitive limitations of younger children, such as those related to executive function (Zelazo, Carlson & Kesek, 2008), make it hard for them to succeed on temptation resistance tasks (Ding *et al.*, 2014) even if they are sensitive to reputational cues and are motivated to maintain their reputation. In addition, it is possible that younger children were less attentive to the reputational manipulation in Study 1.

Our findings significantly extend prior work on reputation in several ways. First, they demonstrate that children's efforts to manage their reputation are not limited to situations involving a specific individual who is present, but extend to a broader range of social contexts. Second, our findings suggest that reputationally relevant information can affect children's behavior even under conditions in which children have no reason to believe that they are being observed. Third, our findings show that 5-year-olds care about reputation maintenance to the extent that they will refrain from cheating at the cost of potentially losing a desirable prize.

Finally and most importantly, our research is the first to show that children are sensitive to information about a specific impression that others already have of them, and that simply informing children of their existing good reputation can promote moral behavior.

The latency data is another way in which our work goes beyond previous research. Overall, the behavior and latency data generally show the same pattern, with the reputation manipulation being associated with increased latencies whenever it was also associated with reduced rates of cheating. However, there were two cases in which we saw increased latencies in the absence of reduced cheating rate: among the 4-year-olds in Study 1, who showed longer latencies but not reduced cheating rates in the reputation condition, and in Study 3, in which participants in the expectancy control showed longer latencies but not reduced cheating compared to the standard control condition. This pattern of results suggests that when reputational cues do not affect children's moral behavior it may be because their intentions to act have been thwarted by their underdeveloped cognitive skills, rather than because they were insensitive to the cues entirely.

Our research adds to a growing body of work suggesting that children act in ways that have the potential to enhance their reputations (Engelmann *et al*., 2013; Leimgruber *et al*., 2012; Piazza *et al*., 2011; Ross *et al*., 2004; Shaw *et al*., 2014; Stipek *et al*., 1992). Much of the interest in studying reputation is grounded in evolutionary theories suggesting that it is adaptive for individuals to choose to work with others who are good cooperators rather than bad cooperators. Although both human infants and non-human species show evidence of preferring to interact with good cooperators, over time children also become aware that they are being judged by others, which eventually translates into a concern for their reputation, with corresponding attempts to behave in ways that are intended to influence how they are perceived by others (Engelmann *et al*., 2012).

People engage in behaviors associated with reputation management in pursuit of a range of different goals, such as for material gain, or to be seen as a valued member of the community. We argue that the latter kind of goal, which requires understanding that one can act in ways that will influence how one will be perceived by others, requires a more sophisticated level of reputational understanding. Although our study focused on behavior and did not include direct assessments of reputational understanding, it moves us one step closer to documenting this level of reputation understanding by demonstrating that children can show sensitivity to reputational cues even in the absence of any non-reputational benefits.

In Study 3 we found that a simple reference to a child's good reputation in the absence of any threat can influence moral behavior. This finding is consistent with other research suggesting that subtle differences in verbal cues about people and their behavior can have significant implications for children's social judgments and behavior (Bryan *et al*., 2014; Cimpian *et al*., 2007; Cimpian & Markman, 2011; Gelman & Heyman, 1999). For example, Cimpian *et al*. (2007) compared the effects of praise in the form of a generic sentence, such as 'You are a good drawer' with praise in the form of a non-generic sentence, such as 'You did a good job drawing.' They found that children who heard the praise in the generic sentence form responded with more negative self-evaluations and decreased persistence following subsequent mistakes than children who heard praise in the non-generic form. Cimpian *et al*. (2007) argued that the generic descriptions implied that a stable ability underlies performance, and that consequently mistakes pose a relatively greater threat. It may be that the reputation condition we used, in which children in the participant's class were described as telling the experimenter that the participant is 'a good kid', implied a similar connection between being a good person and behaving well, which in turn made breaking the rules seem like a worse thing to do.

Further research will be needed to examine the effect of reputational cues on older children. It is plausible that the effects would become even stronger after age 5 as children continue to build cognitive skills that help them to better consider how they are viewed by others (Miller, 2009) and as they learn to take a more favorable view of suppressing their desires in the service of following prohibitive rules (Lagattuta, 2005). However, it is also plausible that older children scrutinize the credibility of reputational reports to a greater extent than do younger children and may be more aware of the possibility that adults are acting in ways that are intended to promote behavioral compliance.

Further research is also needed to determine the extent to which the present findings are culturally specific. Given that children in the West are also capable of acting in ways that can protect or enhance their reputation (Engelmann *et al*., 2013; Leimgruber *et al*., 2012; Piazza *et al*., 2011; Ross *et al*., 2004; Shaw *et al*., 2014; Stipek *et al*., 1992) and also have strong concerns with obtaining positive moral evaluations (Bryan *et al*., 2014; Burhans & Dweck, 1995; Heyman, Dweck & Cain, 1992), it would not be surprising if the findings were generalizable across cultures. However, there is reason to believe that a reputation-based approach might be especially effective in East Asia where there is a strong emphasis on the concept of face, which is related to being

respected within one's community (Hwang, 1987; Li, Wang & Fischer, 2004). It is also likely that young children in East Asia receive stronger pressure to conform to social norms than do children in the West (Chao, 1995; Lin & Fu, 1990), and that reputational cues may serve as reminders of the importance of these norms as a means to maintain good standing within the community. In addition, research on self-disclosure suggests that as compared to children in China, children in the US are more strongly inclined to hide their failures from peers who have achieved success (Heyman, Fu & Lee, 2008), which provides further evidence of cross-cultural differences in reputation management. In examining potential cross-cultural differences, it will be important to consider the possibility that children growing up in Eastern and Western cultures have different sensitivities to specific reputational cues. For example, it is possible that young children in the US are so used to being described as 'good kids' across a wide range of trivial situations that they learn to ignore this information.

It should be noted that although our reputation manipulation led to a substantial reduction in cheating, most children still cheated. It is possible that some children who cared about their reputation cheated anyway because their concern was based upon a fear of receiving disapproval and they did not expect to be caught. In addition, as noted previously, limitations in executive function might make it difficult for some children to resist the temptation to cheat even when they care about maintaining a positive reputation. It will be important for future research to specifically examine the role of executive functioning by including measures that assess it directly. Also, the level of executive function required to resist cheating could be manipulated to examine the effects (e.g. by making the desirable prize more or less salient when children are deciding whether to cheat). Factors other than executive functioning could also be examined as possible predictors of responsiveness to reputational cues, such as individual differences in young children's drive to conform to social expectations.

The benefits children gain by learning to interpret positive reputational cues raise questions about what the effects of negative reputational cues might be, although this topic would be difficult to investigate in an ethical way. It might be that many children think that if they already have a negative reputation they should not bother trying to be good. However, it could also be that a negative reputation motivates certain children to disprove it.

It will be important to look more closely at the consequences of positive reputational cues on different kinds of moral behavior, including effects on negative behaviors other than cheating, and positive ones such as helping. It may be that introducing positive reputational cues could actually lead to more negative behaviors under some circumstances. For example, young children might be more motivated to lie about transgressions as a means to protect their positive reputation.

The present results add to a growing body of evidence suggesting that young children care about their reputations (Engelmann *et al*., 2013; Leimgruber *et al*., 2012; Piazza *et al*., 2011; Ross *et al*., 2004; Shaw *et al*., 2014; Stipek *et al*., 1992), and are the first to show that giving children a positive reputation to maintain can influence moral behavior. In doing so, our results point to a concrete approach that may help caregivers solve the age-old problem of convincing young children to do what is expected of them under circumstances that require them to inhibit their personal desires.

Acknowledgements

This research was supported by grants from SSHRC and NSFC 31371041 and 31470993.

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Received: 2 July 2014
Accepted: 10 February 2015