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Brief Report

The effects of punishment and appeals for honesty on children's truth-telling behavior

Victoria Talwar*, Cindy Arruda, Sarah Yachison

Department of Educational and Counselling Psychology, McGill University, Montreal, Quebec H3A 1Y2, Canada

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ABSTRACT

This study examined the effectiveness of two types of verbal appeals (external and internal motivators) and expected punishment in 372 children's (4- to 8-year-olds) truth-telling behavior about a transgression. External appeals to tell the truth emphasized social approval by stating that the experimenter would be happy if the children told the truth. Internal appeals to tell the truth emphasized internal standards of behavior by stating that the children would be happy with themselves if they told the truth. Results indicate that with age children are more likely to lie and maintain their lie during follow-up questioning. Overall, children in the External Appeal conditions told the truth significantly more compared with children in the No Appeal conditions. Children who heard internal appeals with no expected punishment were significantly less likely to lie compared with children who heard internal appeals when there was expected punishment. The results have important implications regarding the impact of socialization on children's honesty and promoting children's veracity in applied situations where children's honesty is critical.

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Introduction

Honesty is fundamental to human verbal communication. We assume and desire others to be truthful. Socially, lying is discouraged and can have negative ramifications for relationships, and it

* Corresponding author.

E-mail address: victoria.talwar@mcgill.ca (V. Talwar).

arguably “can significantly damage the foundations of our moral character, particularly our capacity for moral growth” (Mertz, 2004, p. 171). Folklore and religion are rife with stories of those who lie and are punished for their “evil” ways such as Aesop’s Peter, who falsely cried wolf and was later punished by losing credibility. Generally speaking, lying is considered to be an inappropriate behavior, and chronic lying tends to be associated with other antisocial and delinquent “problem” behaviors in children (Bok, 1978; Gervais, Tremblay, Desmarais-Gervais, & Vitaro, 2000). Thus, research on the factors that promote honesty in children is important for answering questions about the development of morality and how to encourage truthfulness in children. The aim of the current study was to examine how appeals to tell the truth influence children’s honesty and whether expectation of punishment for a transgression attenuates the influence of such appeals.

Promoting children’s honesty

Although research has found that children’s lie-telling behavior emerges during the preschool years and develops rapidly with age (Evans & Lee, 2011; Lewis, Stanger, & Sullivan, 1989; Polak & Harris, 1999; Talwar & Lee, 2002, 2008; for reviews, see Lee, 2013; Talwar & Crossman, 2011), most research has examined children’s lie-telling in relation to children’s cognitive development. Relatively little research has examined factors that attenuate lying and promote children’s truth telling. There is some evidence that asking children to promise to tell the truth increases truth telling in children (Lyon, Malloy, Quas, & Talwar, 2008; Talwar, Lee, Bala, & Lindsay, 2002, 2004). In addition, research examining the effects of reassuring children that they will not get into trouble has found mixed results, with increases in truth telling reported but also, in some circumstances, increases in false reports or no effect at all (e.g., Lyon & Dorado, 2008; Lyon et al., 2008, 2014). However, the mechanisms for the effectiveness of such appeals are unclear. Truth promotion is premised on the notion that children’s dishonest behavior is in part determined by their perceptions of the consequences of honesty and dishonesty (Bandura, 1991; Bussey, 1992; Lyon, 2000). For example, abuse victims often report that their decision to disclose was affected by their expectations about how others would react to their disclosure and the effects of disclosure on themselves and others close to them (Anderson, Martin, Mullen, Romans, & Herbison, 1993; Goodman-Brown, Edelstein, Goodman, Jones, & Gordon, 2003). Recently, Lyon et al. (2014) reported that children were more likely to reveal another’s transgression if they believed that the instigator had confessed. Furthermore, research has shown that children’s perceptions of expected punishment can influence the likelihood that they will lie (Bussey & Grimbeek, 1995; Talwar & Lee, 2011). For instance, Talwar and Lee (2011) found that children who could expect corporal punishment for their transgressions were more likely to lie about a transgression and were better able to conceal their lie compared with children who had no expectations of corporal punishment. Thus, children’s motivation to lie may be affected by whether they expect negative consequences for disclosing the truth versus positive consequences for telling the truth.

The role of external and internal factors in influencing honesty

One way that such appeals may influence behavior is suggested by the social cognitive theory of moral action (Bandura, 1991), which proposes that people’s behavior is heavily influenced by what they believe will happen as a result of the behavior. External and internal factors shape people’s outcome expectancies and actions. Thus, external and internal factors may influence children’s decision to tell the truth. Namely, young children rely almost entirely on guidance from others to encourage their behavior. This can be through external physical factors (i.e., punishments) or external social factors (i.e., social sanctions of others such as pleasing another person) (Bandura, 1986). In addition to external social factors, children are also influenced by internal social factors (i.e., pleasing themselves by doing the “right” thing). Furthermore, the influence of external and internal factors may change with age. Over time, children internalize moral standards held by their parents and society and become increasingly influenced by internal social factors (Bandura, 1986). In this study, we examined the influence of external appeals that emphasized pleasing another person on children’s honesty as well as the influence of internal appeals that emphasized telling the truth to please oneself in children aged 4 to 8 years.

Currently, one study has found support for the relevance of [Bandura's \(1991\)](#) theory in relation to children's perceptions of honesty. [Wagland and Bussey \(2005\)](#) asked children (5- to 10-year-olds) to predict the likelihood that a hypothetical child would lie or tell the truth in different situations. The researchers discovered that when punishment was expected for the transgression, children predicted that both external encouragement (referring to the experimenter's satisfaction) and internal encouragement (referring to the child's own self-satisfaction) would increase truth-telling behavior compared with no encouragement. However, when no punishment was expected, children predicted that encouragement would not lead to changes in truth-telling behavior (i.e., neither type of appeal would have an effect). Thus, congruent with [Bandura's \(1991\)](#) model, children believed that an appeal to tell the truth would influence a story character's behavior, but only when punishment was expected ([Wagland & Bussey, 2005](#)). Although the results of that study support a social cognitive model to explain children's perceptions of honest and dishonest behavior, it is unclear how such appeals to tell the truth will influence children's actual lie- and truth-telling behavior. In both children and adults, moral knowledge appears to have limited relation to moral behavior ([Batson & Thompson, 2001](#); [Talwar & Lee, 2008](#); [Talwar et al., 2002](#)). Thus, it is important for researchers to directly investigate children's behaviors in situations where certain appeals to tell the truth are provided.

A recent study by [Lee and colleagues \(2014\)](#) lends support to the idea that positive appeals to tell the truth may influence children's behavior. They found that children who heard a folk story emphasizing the positive consequences of telling the truth were more likely to tell the truth compared with children who heard stories emphasizing the negative consequences of lying or heard neutral stories. However, this study did not directly test the impact of internal or external appeals to tell the truth on children's lying or how expectations of punishment interact with the influence of such appeals.

The current study

The aim of the current study was to examine how appeals to external versus internal standards influence children's honesty about a transgression and whether the effectiveness of such appeals is moderated by the expectation of punishment for the transgression. Children 4 to 8 years of age participated in a temptation resistance paradigm, a task that has been widely used to study children's lying behavior ([Lewis et al., 1989](#); [Polak & Harris, 1999](#); [Talwar & Lee, 2002, 2008](#)). In this task, children are instructed not to peek at a toy while they are left alone for a short period of time. Due to the highly tempting nature of this situation, most children tend to peek at the toy (e.g., [Lewis et al., 1989](#); [Talwar & Lee, 2002](#)). Children are then asked whether they peeked at the toy. Previous studies have found that the majority of children under 8 years of age will falsely deny having looked at the toy, with rates of lying ranging between 72% and 93%. Research has also reported that younger children's attempts to conceal their transgression tend to fail when the experimenter probes further using follow-up questions regarding the identity of the toy ([Polak & Harris, 1999](#); [Talwar & Lee, 2002, 2008](#)). In contrast, children 8 years of age and over are more likely to maintain their lie (i.e., feign ignorance or give a plausible response) in their subsequent responses to follow-up questions ([Talwar, Gordon, & Lee, 2007](#)). This ability to maintain one's lie in subsequent statements is referred to as semantic leakage control ([Talwar & Lee, 2002](#)). Overall, this procedure creates a situation that resembles real-life circumstances in which children may be motivated to lie to conceal a transgression ([Newton, Reddy, & Bull, 2000](#); [Wilson, Smith, & Ross, 2003](#)).

In the current study, the expectation of punishment for the transgression and appeals for internal versus external motivations for honesty were varied to examine children's truth-telling behavior. The study used a 2 (Punishment: punishment or no punishment expected) \times 3 (Appeal: no appeal, internal appeal, or external appeal) between-participants design, resulting in six conditions. Children received verbal instructions varying along these two dimensions prior to being confronted with the question of whether they had peeked at the toy. Observing children's lie-telling behavior allowed us to assess the influence of appeals to tell the truth and expected punishment on children's honesty.

Based on the previous literature, it was expected that with age children would be more likely to lie and be better at maintaining their lie during follow-up questions (i.e., have better semantic leakage control). Based on [Bandura's \(1991\)](#) social cognitive theory and [Lee et al. \(2014\)](#), it was hypothesized that there would be a main effect of appeals to tell the truth. Children would be more likely to tell the

truth if they were previously provided with internal or external appeals to tell the truth compared with children who received no appeals to tell the truth. However, based on previous research suggesting that appeals to tell the truth may be qualified by expectations of punishment (e.g., [Lee et al., 2014](#); [Talwar & Lee, 2011](#); [Wagland & Bussey, 2005](#)), it was hypothesized that appeals to tell the truth would be less effective when there was expected punishment compared with conditions where there was no punishment expected. Finally, based on [Talwar and Lee \(2011\)](#), who found that children from the corporal punishment school were better able to maintain semantic leakage control when asked follow-up questions about their transgression (i.e., peeking at a forbidden toy), we expected that children would be better at maintaining their lie when there was an expectation of punishment compared with when there was no expectation of punishment.

Method

Participants

Participants were 372 children (195 boys) 4 to 8 years of age. There were 97 4-year-olds ($M = 51.3$ months, $SD = 4.3$, 49 boys), 89 5-year-olds ($M = 62.6$ months, $SD = 5.9$, 45 boys), 91 6-year-olds ($M = 76.8$ months, $SD = 3.7$, 42 boys), and 95 7- or 8-year-olds ($M = 91.7$ months, $SD = 3.7$, 59 boys). A total of 62 children participated in each of the six conditions with mean age constant across groups (mean age range = 69.54–71.96 months, SD range = 22.99–24.24). The majority of children were from Caucasian middle- and upper middle-income families in a medium-sized North American city. All were brought to the laboratory by their parents. Parental consent and child oral assent were obtained prior to testing.

Procedure

Children were seen individually and played a guessing game with an experimenter. The child sat on a chair with his or her back to the female experimenter while she played a sound from a toy, and the child was asked to guess the toy's identity. This was done with two practice toys (e.g., a crying baby and a barking dog). Then the experimenter explained that she would need to leave the room momentarily and that they would resume the game when she returned. She placed the target toy (e.g., Mickey Mouse) behind the child on the table with an unrelated sound (i.e., music from a greeting card) that could not be used to infer the identity of the toy. The child was told, "Do not turn around to peek and look at the toy when I am gone." The experimenter then left the room for 1 min, and a hidden video camera recorded the child's behavior. When the experimenter (who was unaware of the child's peeking behavior) returned, she immediately covered the toy with a piece of cloth and instructed the child to turn around to face her. The experimenter then said a specific set of remarks to the child depending on the child's random assignment to one of six condition groups (see [Table 1](#)).

The six possible conditions combined the factor of punishment (no punishment or punishment) with the factor of appeal (internal appeal, external appeal, or no appeal). See [Table 1](#) for the specific instructions that were based on the [Wagland and Bussey \(2005\)](#) study. After the condition-specific part instructions, all children were asked the critical question, "When I was gone, did you turn around to look at the toy?" If children peeked at the toy but denied having peeked, they were categorized as lie-tellers; if they peeked at the toy and confessed their peeking, they were categorized as confessors. The follow-up question—"What do you think the toy is?"—was asked to see whether children who lied about peeking at the toy were able to conceal their transgression and, thereby, to examine their semantic leakage control. Children who gave a correct answer (i.e., a bear) were asked, "How did you know who the toy was?" Following [Talwar and Lee \(2008\)](#), children who gave a correct answer without a plausible explanation or revealed that they had peeked received a score of 0. Children who feigned ignorance about the toy's identity or gave a plausible explanation of why they knew the correct answer (e.g., "I have that toy at home and it sings that song") received a score of 1.

Table 1

Condition-specific remarks made by experimenter prior to questioning child about peeking.

<i>No Punishment–No Appeal condition</i>
"If you peeked at the toy, it does not matter. No matter what happened, I would not be cross with you."
<i>No Punishment–External Appeal condition</i>
"If you peeked at the toy, it does not matter. No matter what happened, I would not be cross with you."
"If you tell the truth, I will be really pleased with you. I will feel happy if you tell the truth."
<i>No Punishment–Internal Appeal condition</i>
"If you peeked at the toy, it does not matter. No matter what happened, I would not be cross with you."
"It is really important to tell the truth because telling the truth is the right thing to do when someone has done something wrong. It is really important to tell the truth."
<i>Punishment–No Appeal condition</i>
"If you peeked at the toy, you will be in trouble."
<i>Punishment–External Appeal condition</i>
"If you peeked at the toy, you will be in trouble."
"Although I will be cross about peeking, if you tell the truth, I will be really pleased with you. I will feel happy if you tell the truth."
<i>Punishment–Internal Appeal condition</i>
"If you peeked at the toy, you will be in trouble."
"Although I will be cross about peeking, it is really important to tell the truth because telling the truth is the right thing to do when someone has done something wrong. It is really important to tell the truth."

Results

Preliminary analyses revealed no significant effects or interactions of gender, and the data were collapsed for this factor in the subsequent analyses.

Overall, 251 (67.5%) of the children peeked at the toy. Preliminary analyses were conducted to examine whether there were any significant differences in peeking behavior across conditions. For this and subsequent logistic regression analyses, the independent variables (age in months, appeal, and punishment) and the Appeal \times Punishment interaction were entered first as predictors for theoretical reasons (Menard, 2002). Additional predictors (i.e., interactions) were added individually to the model to determine whether they would contribute significantly to the model. The method employed to enter the predictors was the standard method on one step (Tabachnick & Fidell, 2013). Significance was assessed by a block chi-square test (also known as the chi-square difference test). In this test, the retention of each predictor in a model must increase the variability substantially in order to justify using a more complex model (Menard, 2002).

A logistic regression with peeking (peek = 1, no peek = 2) as the predicted variable revealed that the only significant predictor of such a variable was age (see Table 2). Table 2 displays the log ratios, standard errors, and odds ratios for this model. For every 1-month increase in age, children were 1.032 times more likely to not peek. As expected, there were no differences in peeking behavior across the six conditions.

Table 2

Logistic regression models.

	Peeked $\chi^2(4, 372) = 40.59^{**}$ Nagelkerke $R^2 = .15$			Lied $\chi^2(4, 251) = 36.80^{**}$ Nagelkerke $R^2 = .19$			Maintained lying $\chi^2(4, 166) = 22.45^{**}$ Nagelkerke $R^2 = .17$		
	<i>B</i>	<i>SE</i>	Odds ratio	<i>B</i>	<i>SE</i>	Odds ratio	<i>B</i>	<i>SE</i>	Odds ratio
Age	.032	.005	1.032 ^{**}	-.015	.007	1.010 ^{**}	.037	.009	1.037 ^{**}
Appeal	-.090	.205	1.094	.938	.254	2.556 ^{**}	-.570	.237	1.767
Punish	-.281	.375	1.325	-.205	.478	1.22	-.506	.484	1.653
Appeal \times Punish	.318	.287	1.374	-.899	.369	2.457 [*]	.924	.424	2.280

* $p < .05$.** $p < .01$.

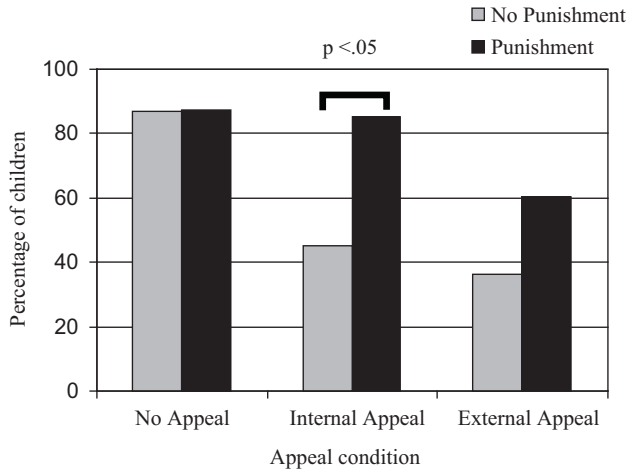


Fig. 1. Percentage of children's lying behavior as a function of Appeal \times Punishment.

Children's lie-telling behavior

Of the 251 children who peeked, 167 (66.5%) lied about peeking at the toy when later asked. All of the non-peekers truthfully denied peeking. Logistic regression analyses with peekers who lied (coded as 1) or confessed (coded as 0) as the predicted variable revealed that age, appeal, and the Appeal \times Punishment interaction were significant predictors (see Table 2). Coefficients for the logistic regression are displayed in Table 2. With every 1-month increase in age, children were 1.015 times less likely to lie. Significantly more children lied in the No Appeal conditions (87.1% $ps < .001$) compared with the External Appeal (46.4%) and Internal Appeal (65.9%) conditions. However, this was qualified by a significant Appeal \times Punishment interaction. Further inspection of the Internal Appeal conditions revealed that there was a significant difference between the Punishment and No Punishment conditions ($\beta = -2.14$, $SE = 0.86$, $p = .013$, odds ratio = .118) (see Fig. 1). Specifically, whereas the majority of children in the Punishment–Internal Appeal condition lied (86%), significantly fewer children in the No Punishment–Internal Appeal condition lied (45%). Although there was a trend for fewer children to lie in the Punishment–External Appeal condition (35%) than in the No Punishment–External Appeal condition (61%), it was not significant ($p = .144$). There were no other significant differences.

Semantic leakage control

One child could not be scored because of technical difficulties with the video and was not included in the analyses. Of the children who lied, 96 (57.8%) gave a correct answer and, thus, revealed their knowledge of the toy. Children who did conceal (42.2%) either gave the name of another toy or feigned ignorance. A logistic regression analysis with category of guess (correct = 0, incorrect = 1) as the predicted variable revealed that age was a significant predictor (see Table 2). Specifically, for every 1-month increase in age, participants were 1.037 times more likely to give an incorrect answer. There were no other significant differences.

Discussion

As expected, the current study found that overall children's lie-telling and ability to maintain their lies increased with age. As predicted, when children heard appeals to tell the truth, they were more likely to tell the truth about a prior transgression. However, as expected, the effect of appeals

depended on whether there was expected punishment. When there was no expected punishment, both internal and external appeals were effective in promoting honesty. When there was punishment, however, only external appeals were effective in promoting honesty.

Consistent with previous studies (Polak & Harris, 1999; Talwar & Lee, 2002, 2008), the current study found that the majority of children in the No Punishment–No Appeal condition lied about their peeking behavior. When compared with previous results on rates of children's lie-telling (e.g., Talwar & Lee, 2008), children in the Punishment–Internal Appeal condition lied at similar rates, whereas those in the No Punishment–Internal Appeal condition were less likely to lie compared with those who heard no appeals to tell the truth. Thus, when punishment was expected, internal appeals appeared to be less effective. Children in both the No Punishment–External Appeal condition and Punishment–External Appeal condition had lower lie-telling rates than previously found in the literature. Interestingly, external appeals continued to have significant truth-promoting effects, albeit somewhat reduced, even when paired with punishment.

It appears that children's behavior differs from their beliefs and evaluations of story characters' behaviors in hypothetical appeal and punishment scenarios. In Wagland and Bussey's (2005) study, where children gave evaluations of hypothetical stories, appeals were effective in eliciting the truth only when punishment was expected. It should be noted that in their study, few children predicted lying across the no punishment conditions (i.e., a floor effect). This may have been because the character in the story had not committed a transgression himself or herself but rather was reporting on another's transgression. The current study found that expected appeals to tell the truth were effective even when there was no punishment expected and that expected punishment only served to lessen the effect of appeals to tell the truth. These results highlight a discrepancy in some contexts among how we believe we will behave, how others should behave, and how we actually behave (Batson, Kobryniewicz, Dinnerstein, Kampf, & Wilson, 1997; Talwar et al., 2002, 2004).

These results are congruent with research suggesting that punitive and power-assertive methods of discipline may result in decreased likelihood that children will internalize rules and standards (Baumrind, Larzelere, & Cowan, 2002; Gershoff, 2002; Grusec & Goodnow, 1994; Hoffman, 2000) when compared with more inductive techniques that emphasize why it is important for children to behave in a certain way. Because young children rely mostly on the guidance of others in determining how to act (Bandura, 1986), appeals to tell the truth likely assist them in discovering what behavior is expected of them in particular situations. Because children at a young age are most concerned about pleasing adults, external appeals may have the greatest potency in motivating children to tell the truth. In the current study, children appeared to be more likely to tell the truth when doing so would please the experimenter despite expected punishment for the transgression. These appeals may have also directly appeased any concerns that children had of being punished for their transgression. With age, children internalize moral standards and may be more influenced by internal factors rather than external factors (Bandura, 1986). It may be that internal appeals will have a greater influence on older children's behavior. Notably, the efficacy of the different appeals on honesty did not interact with age in this sample. It may be that a difference would be found between appeal efficacy and age if older children and early adolescents were included in the sample. It may also be the case that children who have already internalized moral standards are less likely to commit a transgression in the first place (e.g., peek in the temptation resistance paradigm). This was not measured in the current study. Future research should examine the effects of external and internal appeals with older children and their transgressive behavior. In addition, the impact of order and phrasing of instructions on children's behavior should be further examined.

As found in previous studies (e.g., Talwar & Lee, 2008; Talwar et al., 2007), with age children were better able to maintain their lies. Contrary to Talwar and Lee (2011), who found that children in a punitive environment were better at maintaining their lies, this study found that expectation of punishment had no effect. It may be that an environment where there is continuous punishment has longer lasting effects on children's lying behavior and expectations of punishment. Interestingly, the efficacy of appeals to tell the truth did not significantly affect children's ability to maintain their lies. It may be that appeals to tell the truth only affect children's initial decision to lie or not. Once they have committed to telling a lie by giving a false denial about their peeking behavior, children try to the best of their ability to conceal their transgression. It is possible that children who hear an appeal

to tell the truth exhibit more nonverbal leakage by showing signs of shame or guilt. Future research should examine the impact of truth-promoting appeals and punishment on children's nonverbal behavior.

These results have implications for professionals who work with young children and who wish to encourage children to give truthful accurate reports. The results of this study reveal that positive consequences resulting from truth telling should be emphasized and negative consequences for transgressing should be avoided in order to promote honesty in young children. If children fear potential negative outcomes for disclosing information, they may be more reluctant to disclose. The results also suggest that children's behavior is influenced by anticipation of external sanctions (Bandura, 1991). Such factors can lead children to either conceal the truth (when expecting punishment) or tell the truth (when expecting praise for telling the truth). The current findings provide support for the suggestion that emphasizing beliefs about the importance of truth telling is effective in promoting truthful disclosures (Wagland & Bussey, 2005). Future research needs to establish whether the same influences have an effect on children's truth-telling behavior about another's transgression as well as on the disclosures of adolescents.

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