

CHILDREN'S MORAL EVALUATIONS OF LIE-TELLING AND TRUTH-TELLING IN
MODESTY CONTEXTS

A Thesis

by

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This thesis meets the standards for scope and quality of
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ABSTRACT

Children's moral evaluations of lie-telling and truth-telling, are influenced by culture (Lee, Cameron, Xu, Fu, & Board, 1997; Lee, Xu, Fu, Cameron, & Chen, 2001). Compared with Canadian children, eleven year olds Chinese children tend to rate modest lie-telling (lies about a good deed you have done) more positively than immodest truth-telling (admit a good deed you have done) (Lee et al., 1997; Lee et al., 2001). Additionally, older Chinese children (11 year olds) were more likely to rate modest lie-telling positively than younger children (7 and 9 year olds) (Lee et al., 2001). However, research suggested that specific social context could also influence people's moral evaluations (Sweester, 1987). Previous research centered on this topic never considered a collaborative context in which children tend to show more modesty to their partner (Banerjee, 2000).

The present study bridges this gap by investigating American children's moral evaluations of lie-telling and truth-telling involving a collaborative context. All the children were recruited from an elementary lab school located in South Texas where the student body is comprised of 60 percent Hispanic population.

We found that even American children tended to rate modest lie-telling more positively than immodest truth-telling in a pro-social situation when a collaborative context was involved. Also, there was a tendency for older (10-11 year olds) children to rate the modest lie-telling more positively than younger (7-8 year olds) children. Lastly, children spent more time in making a corresponding moral evaluation when lie-telling occurred in a pro-social context. This study suggests that the explanation of the modesty effect built on cultural factors might not be complete. Specific social contexts may also have an important effect.

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Introduction

Research on children's lying can be dated back to the very beginning of developmental psychology (Lee, 2013). The first scientific paper about children's lying was published by Darwin in 1877. In his influential paper, Darwin (1877) observed and recorded his own son's lying behaviors. As Darwin (1877) described, his child could execute a carefully planned deceit at 2 years and 7 months. This work suggests that children as young as 30 months will attempt to lie (Evans & Lee, 2013). After Darwin, two other landmark works occurred. One was conducted by Piaget (1965) who focused on children's moral understanding of lying, and the other was completed by Hartshorne and May (1928) who concentrated on children's dishonest behaviors. According to Piaget (1965), telling lies is a natural inclination that "was so spontaneous and universal that we can take it as an essential part of the child's egocentric thought" (Piaget, 1965, p.139). For the child, the problem of lying represents the "clash of the egocentric attitude with the moral constraint of the adult" (Piaget, 1965, p.139). Additionally, Piaget also argued that children's knowledge about what a lie is and how to evaluate a lie is still very vague during preschool years. According to Piaget (1965), children's responses to questions about lies suggest that preschool aged children understand that a lie is a statement that is different from the truth, however, almost none of them could distinguish a lie from a mistake, a joke, or sarcasm. For instance, a child defined a lie as a "naughty word" when asked what a lie was:

What is a lie? ----It's when you say *naughty things* you oughtn't to say. ----What does 'naughty things' means? -----Saying *naughty words*. -----When I say 'fool', is that a lie? -----Yes. ----Why is it a lie? -----*Because it is a naughty word*. -----A boy once broke a cup, but he said he didn't do it, was it a lie? -----Yes. ----Why? -----*Because he had done it*. (Piaget, 1965, p.140).

Through this conversation, it is clear that children understand one of the core concepts of a lie, namely, a statement that differs from the truth (*Because he had done it*, even though he stated he did not do it). However, when provided with a specific context, such as a person thought a stranger was thirty-nine years old, but this stranger was just thirty-six; all children regarded this person's false belief as a lie, not a mistake (Piaget, 1965). This shows that even though children could grasp one of the core concepts of a lie (factuality), they overextend this concept.

More recently, researchers have focused on children's and adult's definition of lies based on either a propositional approach or a prototypical approach (Lee & Ross, 1997). A propositional approach to lies is an all-or-nothing approach. This means that only if a statement meets all the criteria of a lie, can it be regarded as a lie. For example, researchers who support this propositional approach list three criteria, namely, (a) the speaker must seriously make a statement to the listener; (b) the speaker must believe the statement made by him/herself is untrue; (c) the speaker must intend to make the listener believe the statement is true (Lee & Ross, 1997). Based on this approach, a statement will be regarded either as a lie or as not a lie. However, other researchers have raised questions about the all-or-nothing quality of the propositional approach. In contrast, the prototypical approach asserts that the all-or-nothing style recommended by the propositional approach might not be appropriate; instead, whether a statement is a lie or not depends on the degree to which it fits the criteria. Based on the prototypical approach, "there is a lie continuum with prototypical lie-telling on one end and prototypical truth-telling on the other" (Lee & Ross, 1997, p. 256). Whether a statement should be regarded as a lie depends on how close it is to prototypical lie-telling. In contrast with Piaget, Hartshorne and May (1928) proposed a concept which was termed the "Doctrine of Specificity."

Based on this concept, different social contexts may play an important role in lying or being honest. In other words, rather than being a consistent trait, honesty (dishonesty) may depend on social contexts (Lee, 2013). For example, Walper and Valtin (1992) found that even early elementary school children rated lying in a politeness context positively. Meanwhile, Sweester (1987) suggested that the concept of lying was also a sociocultural construct. For example, four and five year olds Catholic Italian children did not even consider an untruthful statement prayed by a priest as a lie (Fu, Evans, Wang, & Lee, 2008). In other words, the cultural norms and moral values of a society play an important role in the understanding of lying.

Cognitive and Cultural approaches to Lying

From the late 1980s, research on lying has increased rapidly. This is in part due to the increase in research on children's theory of mind (Lee, 2013). Theory of mind (ToM) refers to the understanding that other people may have different beliefs, desires, and intentions from oneself along with a recognition that it is this belief (or false belief), desire, and intention that determines the person's subsequent behavior (Wellman, 1992; Lee, 2013). In order to lie, the liar must intentionally instill a false belief (which differs from the truth) into the recipient's mind and understand that this false belief will determine his (recipient) subsequent behavior (Talwar & Lee, 2008). Meanwhile, the liar must also understand that the recipient's belief (false belief) now is different from his/her belief (true belief). In other words, "lying in essence is ToM in action" (Lee, 2013, p. 91).

A second area of research that has shaped how lying behaviors are studied is cross-cultural work on lying. Much research has been conducted cross-culturally to compare and contrast different types of lying and their relations to moral reasoning. For example, because of the emphasis of Chinese culture on group harmony and collective interests (Fu et al., 2008; Lee,

2013), Chinese children are more likely to tell blue-lies (lies that protect the whole community's benefits) compared to Canadian children. They are also more likely to regard blue lies more positively (Lee, 2013). For example, in their study, Fu et al. (2008) put the Chinese children in a situation that their class chose to violate the school district's rule in order to get a better position in a chess competition. When interviewed by an experimenter, those Chinese children were inclined to tell a lie to conceal their class's violation. More interestingly, some children even rated this lie positively.

The Speech Act Perspective of Lying

Utilizing speech act theory (Austin, 1962), Lee (2013) proposed a framework integrating the findings on children's lying. Speech act theory, as Austin (1962) stated, refers to the social functions of verbal speech. In other words, verbal statements do not only describe the specific events, but they are also regarded as intentional actions that serve specific social functions. For example, like a knife which can be used to cut, a speech act involves "doing things with words." Thus, lying can be deemed as "doing deceptive things with words" (Lee, 2013, p. 91). This perspective has two benefits. First, considering lying as a speech act which involves "doing deceptive things with words" suggests that lying is governed by intentionality (Lee, 2013). Second, because verbal statements can also serve social functions, lying as a form of speech act is also governed by conventionality. In fact, those two components (intentionality and conventionality) also correspond with the two approaches (cognitive and cultural) which influence the development of research on lying. In other words, the intentionality is related to the development of theory of mind and the conventionality is linked to cross-cultural influences.

The Intentionality Component

Intentionality, which mainly concerns different mental states such as beliefs and desires, plays an important role in lying. As stated above, lying is ToM in action (Lee, 2013). In order to lie, children must distinguish their own mental states from others' and intentionally instill an untrue belief in others. As Talwar and Lee (2008) suggest, this requires the acquisition of first-order belief understanding. In other words, in order to lie, children must understand that other people could have different perspectives from themselves. In their study, Young and his colleagues (2007) intended to investigate the interaction between people's moral judgment and belief attribution. Participants were presented 4 vignettes which included (1) A protagonist purposefully did a bad behavior (negative intention) and caused harmful consequence (negative outcome). For example, a person poisoned his roommate and caused his death. (2) A protagonist purposefully did a bad behavior (negative intention), however, accidentally did it wrong and caused no harm (neutral outcome). For example, a person tried to poison his roommate, but accidentally put sugar into his roommate's coffee. (3) A protagonist behaved without purpose to harm others (neutral intention and neutral outcome). For example, a person helped put some sugar into his roommate's coffee. (4) A protagonist behaved without intention to harm others (neutral intention), however, accidentally caused other's death (negative outcome). For example, a person helped put some sugar into his roommate's coffee, but accidentally put poison into it and caused his roommate's death. After reading each vignette, participants were required to rate the protagonist's behavior by clicking one of 4 buttons on a scale from "completely forbidden" to "completely permissible." Each participant's reaction time was measured. When facing a more complex task (for example, when a neutral intention was paired with a negative outcome or vice versa), participants spent more time making a moral judgment (Young, Cushman, Hauser, &

Saxe, 2007). This study suggests that an ambiguous (complex) situation required people to take the person's intention into consideration, which delayed their corresponding moral judgment.

The Conventionality Component

Conventionality refers to the recognition that specific social-cultural contexts permit or inhibit lying behaviors and influence the corresponding moral evaluations (Lee, 2013). This recognition relies on the understanding of both specific cultural preferences and personal evaluations about lying. For example, almost every society devalues lying to conceal a misdeed for personal gain (Lee, 2013), however, some societies encourage white lies (lies that protect others' feelings) and blue lies (lies that protect the whole community's benefits) (Lee, 2013). Piaget's (1965) work on children's moral development suggested that under 10 years of age children always kept an absolutist view of lying. In other words, children during this age period (under 10) regard all kinds of lying as morally wrong. But while Piaget did not take the cultural and contextual influence into consideration, recent work found that Chinese children are more likely to engage in blue lies and rate them more positively than Canadian children (Lee, 2013). Thus, in order to make an appropriate decision on whether to lie or not, children must recognize whether telling a lie is encouraged or devalued. For instance, Lee et al. (2001) conducted a study to investigate Taiwanese, mainland Chinese, and Canadian children's evaluations of lie- and truth-telling in situations consisting of pro- social (beneficial to others) and anti-social (harmful to others) behaviors. They found that both Taiwanese and mainland Chinese children rated telling someone else the good deeds he (a story character) had done (immodest truth-telling) less positively compared with their Canadian counterparts, whereas both Taiwanese and mainland Chinese children rated lying about the good deed he (a story character) had done (modest lie-telling) more positively than the Canadian children did (Lee et al., 2001). These findings could

be explained by the emphasis of traditional Chinese culture on modesty (Lee et al., 2001). In fact, according to Lee and his colleagues (2001), “this cross-cultural difference in moral judgments of modesty-related truths and lies has been referred to as the modesty effect” (p. 527). Further explanation about this modesty effect involves the Chinese culture’s emphasis on collectivism which refers to the focus on facilitating social cohesiveness and group harmony (Lee et al., 1997; Fu et al., 2010). In contrast, Western European and North American culture predominantly focuses on personal rights, promotion of self-esteem, and autonomy, which is referred to as individualism (Lee et al., 1997; Fu et al., 2010). Even though this explication of Individualism versus Collectivism is not without controversy (Fu et al., 2010), empirical evidence suggests that these constructs do represent major structural differences between Western and Eastern cultures (Oyserman, Coon, & Kemmelmeier, 2002). Additionally, as age increased, Chinese children were more likely to rate modest lie-telling positively and immodest truth-telling less positively, even negatively (Fu, Xu, Cameron, & Lee, 2007; Lee et al., 2001; Fu et al., 2010). This phenomenon is referred to as the age effect by Lee and his colleagues (2001). This age effect suggests that children’s moral evaluation may be influenced by the process of socialization, since the older a child is, the more socialized he becomes and the more social norms he internalizes.

In addition to cultural influences, specific social contexts might also have an effect on children’s moral evaluations (Talwar & Lee, 2011). As Fu and his colleagues (2010) stated, Chinese children were more likely to rate modest lie-telling in public more positively than in private. This was because acting immodestly in public was likely to harm group cohesion and harmony so that children tended to behave modestly in public (Fu et al., 2010). In another study, Talwar and Lee (2011) compared children’s lying behaviors in punitive and non-punitive

environments and found that children in a punitive environment were more likely to lie about their transgressions than children in a non-punitive environment. In summary, cultural influences, socialization, and specific social context play an important role on children's truth and lie-telling behaviors and its corresponding moral evaluations.

The Modesty and Age Effect

As stated above, the modesty effect uncovered by Lee and his colleagues (2001) may account for the Chinese participants' emphasis on group cohesion and self-effacement. Correspondingly, the age effect was interpreted as "a result of an increased exposure to Chinese cultural conventions" (Fu et al., 2007, p. 283). The age effect might also account for the development of children's social-cognitive abilities independent of particular cultural patterns of development. For instance, Banerjee (2000) suggested that understanding modesty required one to appreciate that a modest statement might elicit positive social evaluations from others. This appreciation is a cognitively demanding task and requires children to master second-order mental state understanding (I know that he will think I am kind when I make a modest statement) (Banerjee, 2000). Cai and his colleagues (2010) also found that showing modesty in public was regarded as a way for Chinese people to self-enhance. Since there is a cultural inclination of Chinese children to be modest, it is possible and reasonable to assume that Western children might detect the benefits of modesty later than Chinese children do. However, the empirical finding contradicted this assumption. A pilot study conducted by Banerjee (2000) found that the majority of British children aged 8 and 10 preferred modest self-descriptions than immodest ones. Furthermore, 75% of children who chose the modest self-description were able to give their justifications of their choices in terms of social evaluation concerns (if I am not modest, others will dislike me). This finding suggests that both Eastern and Western children appreciate

the benefits of modesty and this appreciation occurs at around the same age. More interestingly, when children worked together (collaboration), they were more likely to show modesty to their partners. In other words, being in a collaborative context may make children become more modest.

Given that this appreciation for modesty may indeed be shared by both Eastern and Western children, children's use of white and/or blue lies might also be explained by factors other than the influence of collectivism. It is reasonable to assume that different social contexts might also be responsible for children's moral evaluations on modest lie-telling and truth-telling. In other words, even Western children in certain situations could rate modest lie-telling more positively than immodest truth-telling. For example, one study conducted by Banerjee and Watling (2007) found that British children were likely to rate modesty as more appropriate for peers than for adult audiences. In their study, children were more likely to justify their judgments by considering the social evaluations (others will dislike me if I am not modest) of peers than of adults. This finding suggests that different social contexts (modesty for peers and modesty for adults in this case) may factor in children's moral evaluations.

The Present Study

As discussed above, research on children's lying behavior has focused mainly on cognitive motivational (ToM) factors, cultural factors (Individualism vs. Collectivism) as well as socialization processes which lead to children's growing ability to lie for both self-enhancing and for modesty. One additional factor that has not been systematically studied is the local social context within which children may lie. For example, Tice and her colleagues (1995) found that people tend to be more modest to friends than strangers. Furthermore, based on cross-cultural work in which the broad construct of "collectivism" has been invoked as an explanation for the

value children place on modest lie-telling (Lee et al., 1997; Lee, et al., 2001), it is worth noting that the studies reviewed above have only examined children's justifications of modest lie-telling in the context of individual behavior rather than directly examining children's justifications of modest lie-telling in a collaborative setting. Since it has been suggested that the majority of British children who chose modest responses justified their choices through concerns about social evaluations and they were more likely to show modesty when a collaborative context was involved, we propose to extend the local social context in which to test children's judgments of modest lying to an explicitly collaborative context. Adding a collaborative context may also make the whole scenario more complex. Therefore, we **hypothesize** that (1) children will rate modest lie-telling more positively than immodest truth-telling when two main characters in the story collaborate with each other (collaboration situation) to do a pro-social deed (pro-social context)-**modesty effect**. (2) Older children will rate modest lie-telling more positively than younger children when two main characters in the story collaborate with each other (collaboration situation) to do a pro-social deed (pro-social context)-**age effect**. (3) Children will spend more time in evaluating how good or bad a lie-telling or truth-telling in a pro-social context involving a collaboration situation-**complexity effect**.

Method

Participants

A total of 24 children (12 boys and 12 girls) were recruited from a public elementary lab school located in South Texas. This is a dual language school (English and Spanish) with a student body comprised of 60 percent Hispanic students. Some of the students in this school come from impoverished families. Seventeen of the 24 children were 7-8 year olds (M age = 7.7

years) and seven children were 10-11 year olds (M age=10.6 years). All the participants reported that they were comfortable in English.

Materials

Four questions (involving name, age, grade, and primary language) presented on university-owned I-pads were used to collect children's demographic information. Ten short stories (including 2 practice stories and 8 study stories) organized by the Qualtrics Survey Software followed. The practice stories are shown in Appendix A and the study stories are shown in Appendix B. For the study stories, 4 included a character who told a lie, whereas the others included a character who told the truth. Among the 4 stories involving telling a lie, 2 stories consisted of telling a lie in a pro-social situation, whereas the other 2 stories included telling a lie in a non-pro-social situation. For the two stories involving telling a lie in a pro-social situation, one story had two characters who collaborated to do a single task (collaborative context), whereas the other one had only one character (non-collaborative context).

Procedure

Children were tested in a quiet room normally reserved for parent meetings where the research assistant introduced her or himself to the child and secured the child's assent to participate in the study. Children were first introduced to practice stories (see Appendix A). After reading the first practice story with each child, the experimenter asked him/her if he/she had understood the story and clarified any questions the child had. Once the child reported that he/she understood the procedure, he/she was asked "Do you think X (the name of the character in the story) lied or told a truth?" (Categorization question) Two options were provided including "Lie" and "Truth." Once the child chose one option, he/she was then asked "Is what X said to his/her teacher/parents good or bad?" (Evaluation question). A 5-point Likert scale ranging from

“very bad” to “very good” was utilized to answer this question. Meanwhile, each child’s response time (how long it took for each child to make a decision) to this evaluative question was automatically measured by the Qualtrics program. After two practice stories during which the children were familiarized with the procedure and encouraged to ask any questions, the researcher then read each of the 8 study stories to participants (see all stories in Appendix A and B). Once children finished answering all the questions, their answers were saved by Qualtrics. Data were exported from Qualtrics to SPSS for analysis.

Results

Categorization

Children’s responses for the categorization question of each story are shown in Table 1. In order to determine whether the children’s categorization of the story characters’ behaviors (as lies or truth) was consistent with the researchers’ categorization, a Chi-Square test for goodness of fit was utilized to compare the frequency of children’s answers for each story to the predetermined correct answers. A significant effect was found $X^2(7, n=24) = 14.418, p < .05$. This indicates that children may have different understandings of specific stories compared to the predetermined correct answers. Overall, children categorized the story in a way that fit with the predetermined intention of illustrating lie-telling and truth-telling. However, for the story 1, fourteen children chose the correct answer “lie,” whereas ten children chose “truth.” For the story 3, half of the children chose the correct answer “truth” and half of the twelve children chose “lie.” This indicates that these stories presented a context in which determining whether a character told the truth (lie) was difficult for the children. More interestingly, both these two stories consisted of a collaborative pro-social context (see Appendix B), which implies that this

specific social context may make the categorization of lie- telling and truth-telling more ambiguous.

Modesty Effect

We expected to find that American children would rate modest lie-telling more positively than immodest truth-telling when a collaboration context was involved. In order to determine whether the modesty effect occurred in the current study, children's ratings of how good or bad the story character's truth-telling or lie-telling were used in a 2 (lie-telling vs. truth-telling) \times 2 (pro-social vs. non-pro-social) \times 2 (collaborative vs. non-collaborative) repeated ANOVA, in which all the three factors were within subjects factors.

The three-way (truthfulness, pro-socialness, collaboration) interaction effect was significant, $F(1, 23) = 12.77, p < .05, \eta_p^2 = .357$. In both collaboration and non-collaboration context, the ratings for truth-telling ($M = 2, M = 1.88$, respectively) in the non-pro-social situation were not statistically different (see Figure 1). Despite the level of collaboration, the rating for lie-telling ($M = 4.17, M = 4.46$, respectively) in a non-pro-social situation was not statistically different. Regardless of collaboration, telling a lie about a non-prosocial deed was negatively rated, whereas telling a truth about a non-pro-social deed was positively rated. However, the ratings for truth-telling and lie-telling in the pro-social situation were contingent on the level of collaboration. In the non-collaboration context, telling a lie about a pro-social deed was rated negatively ($M = 3.54$), whereas telling a truth about a pro-social deed was rated positively ($M = 1.79$). This replicated Lee et al (1997)'s finding, which suggested that American children, similar to Canadian children, rated immodest truth-telling more positively than modest lie-telling. In the collaboration context, however, telling a lie about a pro-social deed was rated better ($M = 2.79$) than telling a lie about a pro-social deed in a non-collaboration context ($M =$

3.54). Conversely, telling a truth about a pro-social deed ($M = 2.92$) was rated much worse than telling a truth about a pro-social deed in a non-collaboration context ($M = 1.79$). More interestingly, telling a lie about a pro-social deed was even rated more positively ($M = 2.79$) than telling a truth ($M = 2.92$) when a collaboration context was involved. This finding supports our hypothesis 1 that children may tend to rate modest lie-telling more positively than immodest truth-telling in the pro-social situation involving collaboration (see Figure 1).

Age Effect

We expected to find that older children would rate modest lie-telling more positively than younger children when a collaborative pro-social context was involved. In order to determine whether the age effect occurred in the current study, children's ratings of how good or bad the story character's truth-telling or lie-telling were used in a 2 (lie-telling vs. truth-telling) \times 2 (pro-social vs. non-pro-social) \times 2 (collaborative vs. non-collaborative) \times 2 (7-8 year olds vs. 10-11 year olds) mixed ANOVA, in which the age factor was the only between subject factor.

The four-way interaction effect (truthfulness, pro-socialness, collaboration, and age) was not significant, $F(1, 22) = 1.167, p = .292, ns$. This finding suggests that there may not be sufficient evidence in this current study to detect a difference between older and younger children's evaluations about truth-telling and lie-telling in a collaborative pro-social situation. However, there is a tendency that older children rated lie-telling more positively ($M = 2.29$) than younger children ($M = 3.00$) (see Figure 2).

Complexity Effect

We expected to find that children would spend longer time in making an evaluation when a lie-telling or truth-telling occurred in a pro-social context involving collaboration situation. In order to determine whether complexity effect was occurred in the current study, children's

response time to each evaluation question was used in a 2 (lie-telling vs. truth-telling) \times 2 (pro-social vs. non-pro-social) \times 2 (collaborative vs. non-collaborative) repeated ANOVA, which all the three factors were within subject factors.

There was a significant interaction effect between truthfulness and pro-socialness, $F(1, 23) = 6.328, p < .05, \eta_p^2 = .216$ (see Figure 3). Children were equally quick at evaluating lie-telling ($M = 6.06s$) and truth-telling ($M = 5.93s$) in a non-pro-social situation. In a pro-social situation, however, children were much slower to evaluate lie-telling ($M = 11.43s$) compared to the time to evaluate truth-telling ($M = 7.05s$). This interaction pattern was not different between collaboration and non-collaboration situations. The lack of a significant three way interaction does not support our hypothesis concerning complexity.

Discussion

The present study investigated American children's moral evaluations of lie-telling and truth-telling in both pro-social and non-pro-social situations involving collaboration (two characters collaborated to do a task) or non-collaboration (only one character did the whole task). In terms of the categorization of truth-telling and lie-telling, elementary school aged children may have more difficulty in categorizing immodest truth-telling (telling a truth about a pro-social act) involving collaboration than without collaboration. One possible reason for this could be that some children might regard the story character's answer as a "partial truth" and categorized this "partial truth" as a lie, not a truth. Conversely, children who took on a prototypical approach may still treat a partial truth as a truth. Researchers in the future could ask children to justify their answers by asking "why do you think he/she is telling a lie (truth)?" and investigate whether children do use different approach to define a lie-telling or truth-telling.

In terms of the moral evaluations of truth-telling and lie-telling, findings support our hypothesis that even Western children tend to display a modesty effect. They rate modest lie-telling more positively than immodest truth-telling when two main characters in the story collaborate (collaboration situation) to do a pro-social deed (pro-social context). This finding contradicts previous results reported by Lee et al. (1997) that only Chinese children, not Canadian children, would be influenced by this modesty effect. According to this study, Chinese culture emphasized modesty as one of the core values and this emphasis on modesty accounted for Chinese children's preference towards modest lie-telling. Their results denoted that children's moral development was depended on culture (Shweder, Mahapatra, & Miller, 1987), rather than an invariant and universal stage process (Kohlberg, 1964). However, this explanation built on cultural factor may not be fully justified by considering different social situations. By adding a collaboration situation, even Western children rated lie-telling about a pro-social deed more positively than truth-telling. This phenomenon supported the "doctrine of specificity" proposed by Hartshorne and May (1928) which indicated that different social contexts may have an effect on lying. Future research could try to replicate what we found.

According to Lee et al. (1997), older Chinese children tend to rate the modest lie-telling more positively and the immodest truth-telling less positively (even negatively) than younger children. This age effect was ascribed to children's exposure to traditional Chinese culture. In the current study, by comparing younger (7-8 year olds) with older (10-11 year olds) children's ratings (see Figure 3), there is a tendency that older children tend to rate the lie-telling involving collaboration in the pro-social situation more positively than younger children did. However, a limitation of the present study might prevent us from replicating what Lee et al. (1997) found. Compared to previous study, our sample size, especially the number of older children (10-11 year

olds), was too small. Future research with a larger sample size could investigate whether older (10-11 year olds) would rate modest lie- telling more positively than younger children do (6-7 year olds) (see Figure 3 again). Meanwhile, as Lee et al. (1997) found, seven year olds Chinese children tended to rate immodest truth-telling more positively than modest lie-telling, as their Canadian counterparts did. In our current study, even younger (7-8) children showed their preference to modest lie-telling when a collaborative pro-social context was involved. Future research can include younger (5 year olds) children to test whether children at this early age have already shown this distinction. Moreover, all the previous research (including the current one) used vignettes to elicit children's moral evaluations. This methodology might not capture the actual social mechanisms that affect children's lie and truth-telling behaviors in different social contexts. Future research should invent new methods to free children from being only passive observers and put them into an active role.

Based on the study conducted by Young and his colleagues (2007), people tended to spend longer time in processing complex (ambiguous) moral issues and making the corresponding moral judgment. In the current study, it is reasonable to predict that rating a lie (or truth) in a pro-social context involving collaboration might take longer time, based on the complexity of the issues. Lie-telling, in general, is supposed to be reprimanded, whereas truth-telling is usually encouraged by parents and teachers (Lee et al., 1997). However, telling a lie for a modesty sake might not seem as straightforwardly as concealing a misdeed to be evaluated. In addition, a collaboration situation in our current study was taken into account as well. This can increase the complexity of the issue to make an evaluation. But, we did not find this tendency. However, we did find that children tended to spend longer time in making an evaluation when a lie-telling occurred in a pro-social context. This may be because in a pro-social context, a lie-

telling may be acceptable (or even positive), which might need more time to distinguish whether telling a lie in the specific situation is acceptable or discouraged. Future research can measure Chinese children's response time to evaluate a modest lie-telling and immodest truth-telling. Another limitation of this current study is that all the children read the story in a same order. To control the order effect, future research should randomize the order of the stories.

In conclusion, the present study found that even Western children tended to rate modest lie-telling more positively than immodest truth-telling when a collaboration context was involved. In a collaboration context, being modesty is portrayed as a good trait, even in Western world (Banerjee, 2000). Telling a lie in this collaboration context serves as a sign of being modest and therefore, tend to be positively rated. This finding contradicts with previous research suggesting that only Chinese children, not Canadian children, tend to rate modest lie-telling positively. This contradiction implies that the cultural differences emphasized by Lee et al. (1997) might not be the only explanation to Chinese children's preference towards modest lie-telling. Other factors, such as different social contexts, might also have an effect (Shweder, Mahapatra, & Miller, 1987). Future research could increase the sample size and investigate whether older (10-11 year olds) would rate modest lie-telling more positively than younger children (6-7 year olds) and whether children tend to spend longer time in rating the modest lie-telling in general.

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Table 1 Categorization question

Story	Truth (persons)	Lie (persons)
1 (lie)	10	14
2 (lie)	1	23
3 (truth)	12	12
4 (truth)	22	2
5 (lie)	0	24
6 (lie)	0	24
7 (truth)	23	1
8 (truth)	23	1

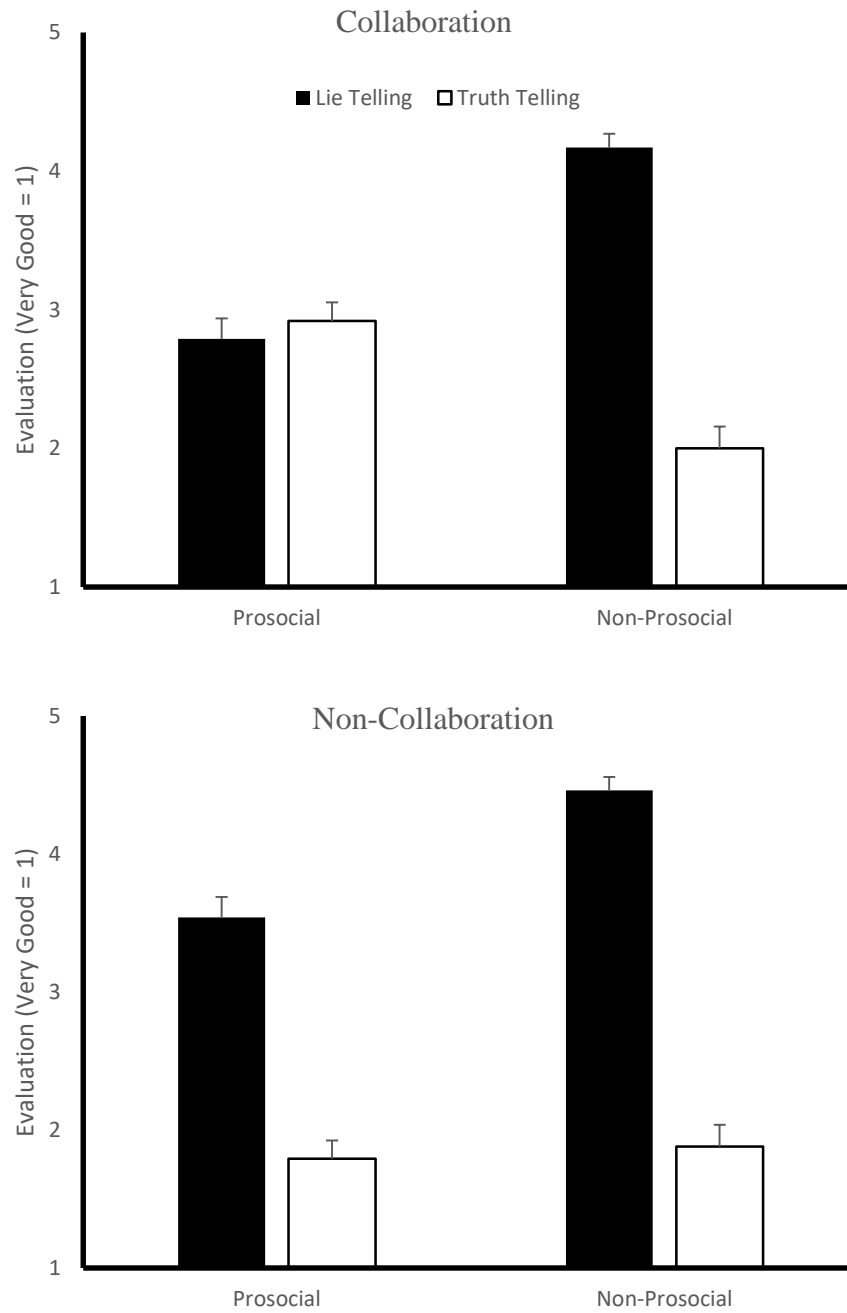


Figure 1 Mean goodness ratings for lie-telling and truth-telling by pro-social and collaboration levels

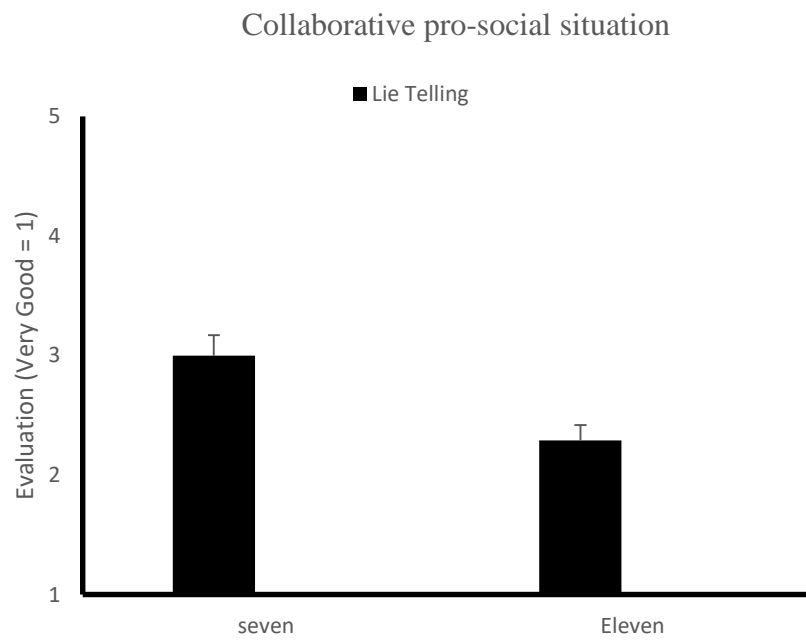


Figure 2 Mean goodness ratings of two age groups

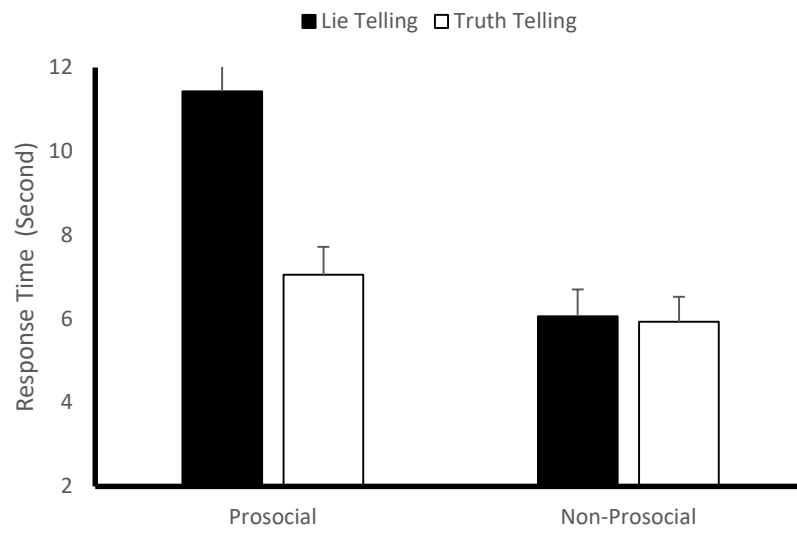


Figure 3 Mean response time for evaluating lie-telling and truth-telling in pro-social and non-pro-social situations

Appendix A

Practice Stories

- Emma decided one night that he wanted to make brownies for their whole class. The next morning, Emma took the brownies to school. As Emma was passing out the brownies to the class, her teacher said, “how nice of you to bring these for everyone. Did you make them yourself?” Emma replied, “Yes, I made it.”
- Danny and Paul were told by their father that they could not have any snacks before lunch, but they wanted some animal crackers. Danny and Paul decided to go into the kitchen when their dad was not looking, and grabbed the animal crackers. They ate the whole bag of crackers together, and then went back to their own rooms. Danny and Paul’s dad then noticed that all of the crackers were gone. He went into Danny’s room and asked him, “Do you know who ate the animal crackers?” Danny responded, “It was Paul who ate the animal crackers.”

Appendix B

Study Stories

Lying About a Prosocial Act (Modest Lies):

-With Collaboration

- Ricardo and Juan were putting a puzzle together. Once they finished, Ricardo and Juan helped each other put the puzzle pieces back into the box. After they cleaned up, Ricardo went to use the restroom. The teacher approached Juan and asked if he was the one who cleaned up the puzzle. Juan said “no, I did not do that, Ricardo did.”

-Without Collaboration

- Selena knew that her friend Mary, had lost her lunch money on the way to school, and had no money to buy her lunch. When Mary left her desk, Selena secretly put some of her own money on Mary’s desk so she could buy some lunch. When Mary found the money and told her teacher, the teacher told the class, “Mary just told me that someone has given her money so she could now buy her lunch.” The teacher asked Selena, “Do you know who left the money for Mary?” Selena said to her teacher, “No, I don’t know who left the money for Mary.”

Telling the Truth about a Pro-Social Act (Immodest Truth):

-With Collaboration

- Jennifer and her sister Lucy were playing with toys and got their room very messy while their mom was cooking dinner. They decided to clean the room together after they finished playing. Lucy left the room to go watch her favorite cartoon. Their mother then came into the room and found that the room was very clean, and asked “did you clean the room?” Jennifer said “yes, I did clean the room.”

-Without Collaboration

- Timothy and Mark are best friends at school. One day Mark was sick and had to stay home and Timothy knew Mark would not be able to complete his part of the group assignment due the next day unless Timothy took him the assignment. So, Timothy decided to take Mark the assignment to his house after school, so that Mark could work on it. The next day Mark came to school and turned in his part of the group project on time, and the teacher asked the whole class, “Who was so nice to take Mark his homework assignment yesterday so he could turn it in today?” Timothy replied “It was me, I took him his assignment.”

Lying About a Misdeed

-Collaboration

Pam and Lisa were playing with a soccer ball outside when their mom came out and said “It’s about to rain, do not bring the ball when you come inside”. When it started raining, the girls brought the ball inside and played in their room. Pam went to the kitchen and while she was gone, their mom saw the ball on the floor and asked “Who was playing with the ball inside?” Lisa told her mom, “I wasn’t, Pam was playing with it”.

-Without Collaboration

Michael and Derek were reading books in the school library. Derek excused himself to go to the bathroom, and while he was gone Michael decided to make paper airplanes. To do this, he tore some pages out of a storybook from the library. The librarian noticed that pages were missing from the storybook, and asked Michael “do you know who tore out the pages?” Michael said to the librarian, “No, I don’t know who tore them out.”

Telling the Truth about an Misdeed

-Collaboration

Ben and Carlos' mom made cookies for dessert. She told them not to eat any because they were for after dinner. They did not want to wait, so while their mother wasn't paying attention, they each took a cookie back to their bedroom and ate it. Once they were done eating, Carlos went outside to play. When their mom noticed cookies were missing, she went to their bedroom and asked Ben, "did you eat the cookies before dinnertime?" Ben replied, "yes, I did eat a cookie."

-Without Collaboration

- Anne wanted to play with a jump rope during gym class but found that one of her classmates, Sherry, was already playing with it. Anne told Sherry that she wanted the jump rope, and when Sherry said no, Anne grabbed it out of her hands which made Sherry cry. The teacher came over to see if Sherry was alright, and asked Anne, "do you know who made Sherry upset?" Anne replied, "I did."