



Published in final edited form as:

Law Hum Behav. 2004 August ; 28(4): 411–435.

Children's Lie-Telling to Conceal a Parent's Transgression: Legal Implications

Victoria Talwar¹, Kang Lee^{2,4}, Nicholas Bala³, and R. C. L. Lindsay³

¹McGill University, Canada

²University of California, San Diego, California

³Queen's University, Canada

Abstract

Children's lie-telling behavior to conceal the transgression of a parent was examined in 2 experiments. In Experiment 1 ($N = 137$), parents broke a puppet and told their children (3–11-year-olds) not to tell anyone. Children answered questions about the event. Children's moral understanding of truth- and lie-telling was assessed by a second interviewer and the children then promised to tell the truth (simulating court competence examination procedures). Children were again questioned about what happened to the puppet. Regardless of whether the interview was conducted with their parent absent or present, most children told the truth about their parents' transgression. When the likelihood of the child being blamed for the transgression was reduced, significantly more children lied. There was a significant, yet limited, relation between children's lie-telling behavior and their moral understanding of lie- or truth-telling. Further, after children were questioned about issues concerning truth- and lie-telling and asked to promise to tell the truth, significantly more children told the truth about their parents' transgression. Experiment 2 ($N = 64$) replicated these findings, with children who were questioned about lies and who then promised to tell the truth more likely to tell the truth in a second interview than children who did not participate in this procedure before questioning. Implications for the justice system are discussed.

Keywords

Child Witness; Lying; Deception; Competence Examination; Promise; Credibility; Moral Understanding

With a substantial number of young children testifying in North American courts (Bala, Lindsay, Lee, & Talwar, 2000; Bruck, Ceci, & Hembrooke, 1998; Gray, 1993; Honts, 1994), researchers are seeking to address questions about the accuracy and veracity of child witness testimony. Children's truthfulness when testifying is one of the critical questions in assessing the value of their testimony. Both forensic psychologists and justice system professionals are interested in understanding whether child witnesses understand the importance of telling the truth, whether they can be coached to tell convincing lies to conceal or fabricate information, and what measures can be used to facilitate truth-telling in children.

In the last two decades, there has been extensive research on children's conceptual understanding and moral judgements of lie-telling and truth-telling (e.g., Bussey, 1992, 1999;

Lee, Cameron, Xu, Fu, & Board, 1997; Peterson, 1995; Peterson, Peterson, & Seeto, 1983; Siegal & Peterson, 1998; Wimmer, Gruber, & Perner, 1984; for review, see Lee, 2000). There has also been a growing interest in children's actual lie-telling behavior (e.g., Chandler, Fritz, & Hala, 1989; Hala, Chandler, & Fritz, 1991; Lewis, Stranger, & Sullivan, 1989; Lewis, 1993; Peskin, 1992; Polak & Harris, 1999; Talwar & Lee, 2002). However, there is limited empirical research that has directly addressed these issues in the legal context (Haugaard, 1993; Haugaard, Reppucci, Laird, & Naful, 1991; Honts, 1994; Huffman, Warren, & Larson, 1999; Lyon & Saywitz, 1999; Pipe & Goodman, 1991; Pipe & Wilson, 1994; Talwar, Lee, Bala, & Lindsay, 2002). The majority of the existing studies on children's lie-telling behavior and their conceptual knowledge of lying have primarily been motivated by trying to gain a better understanding of theoretical issues in developmental psychology. Studies of children's concept and moral judgment of lying are mainly concerned with trying to resolve the theoretical debate regarding the nature and ontogeny of morality. Research to date suggests that children's conceptual knowledge about lying and truth-telling develops as early as the preschool years (e.g., Bussey, 1992, 1999; Peterson, 1995). Most studies of children's lie-telling behavior have focused on the development of intentional understanding or theory of mind (Chandler et al., 1989; Hala et al., 1991; Lewis, 1993; Lewis et al., 1989; Peskin, 1992; Polak & Harris, 1999). These studies have found that lying behavior emerges as early as 2–3 years of age. Also, by 3 years of age children are already successful lie-tellers. Adults who rely solely on children's nonverbal behaviors often fail to detect their lies (Lewis et al., 1989; Talwar & Lee, 2002).

However, in most of these studies children were lying about their own transgressions. A more relevant issue for the justice system centers on children's tendency to lie when coached by another individual with whom they may have an important relationship, as children are frequently called as witnesses to testify about their alleged abuse by a trusted adult. Central issues for the justice system are whether a child is lying to protect a parent who is alleged to have abused the child by falsely denying that abuse occurred, or whether a child is fabricating an allegation at the behest of a parent (perhaps against the other parent during a custody dispute).

Although research has found that adults are motivated to tell lies for people other than themselves to protect another person's feelings or out of loyalty (DePaulo, Kashy, Kirkendol, Wyer, & Epstein, 1996; DePaulo, Zuckerman, & Rosenthal, 1980), very limited research has examined children's lie-telling behavior for others. The few existing studies investigating this issue have produced inconsistent findings. In a study by Greenglass (1972), children were asked by a child confederate, who had previously helped the subject child, to conceal that the confederate child had broken a vase. Greenglass found that 12-year-olds were more likely than 8-year-olds to lie to cover-up the transgression for the peer. Wilson and Pipe (1989) had an unfamiliar adult “magician” ask 5- and 6-year-olds to conceal the adult's accidental spillage of ink on a pair of gloves; after the request was made, the children did not spontaneously mention the accident when interviewed. In a similar study, after a request for nondisclosure to protect an unfamiliar adult, 6-year-olds were significantly more likely than 10-year-olds to keep a secret about damage caused by the unfamiliar adult when asked about the event (Pipe & Wilson, 1994). Bussey and colleagues (Bussey, 1993; Bussey, Lee, & Grimbeek, 1993) also found similar differences between preschoolers and older grade school children in their tendency to keep secrets. It should be noted that conceptually, secret keeping is a broader concept than lying and takes at least three forms. One is that one can fail to disclose spontaneously and volunteer a secret (which some philosophers refer to as “lying by omission”; Bok, 1978). Another is failure to disclose a secret and claim ignorance when asked directly about it. Yet another is that one not only fails to disclose a secret when directly asked about it but also makes a false statement to cover it up. It is this last alternative that we wish to address because of its significance for the justice system, specifically children's ability to make false statements in order to conceal a parent's transgression.

It should also be noted that in these studies children were asked to conceal a transgression for a stranger. In reality, children often testify against or for their relatives or other individuals with whom they have strong emotional and social relationships. Their truthful testimony may result in the impairment or even loss of such relationships. A great deal is at stake for children in these situations than in the above-mentioned experimental situations where they need to decide whether to lie or tell the truth about their own minor misdeeds or the misdeeds of a stranger. In the justice system, children are often caught between conflicting pressures. While they are informed about the obligation to tell the truth in court, they also may be pressured by a trusted adult to conceal or fabricate information. An entreaty to lie, made by an adult with whom the child has a close relationship, can call upon a range of motivations, including both loyalty and fear of negative consequences if the truth is told (Lyon, 2000).

Only two studies have examined children's disclosure of a close relative's transgression. Tye, Amato, Honts, Devitt, and Peters (1999) found that approximately half of the children between 6 and 10 years of age would lie to conceal a close relative's theft. Bottoms, Goodman, Schwartz-Kenney, and Thomas (2002) examined children between 3 and 6 years of age. They found that older children were more likely than younger children to withhold information about a parent playing with forbidden toys. However, these studies did not look at the effect brought about by the presence of the perpetrator while children were asked about the transgression. Bussey and Grimbeek (1995) examined the relationship between the presence or absence of the perpetrator who was a stranger with children's disclosure of the stranger's transgression. They found that while younger children were less likely to disclose when in the perpetrator's presence, the majority of older children disclosed both in the perpetrator's presence and absence. However, no study has examined the effect of the presence of a close relative as the perpetrator on children's truth-telling about the perpetrator's transgression, which is one of the main objectives of this study.

Examining the effect of parental presence on children's tendency to tell the truth is very important in the forensic context. On one hand, parental presence may ease child witnesses' anxiety and make their experience going through the judicial process less traumatic, thereby increasing the likelihood that they will give an accurate and truthful account. On the other hand, if parents conspire with their children to suppress critical criminal information, children may be reluctant to disclose evidence against their parents in their presence. Thus, empirical evidence regarding this issue should help the justice system to develop policies and procedures to promote truth-telling in children.

In this study, we investigated the effect of the presence or absence of the parent during questioning on children's truth-telling about their parent's transgression across a broad age range (3–11 years of age). In addition, we simulated the sequence of critical events that child witnesses usually experience from the initial witnessing of an offence to eventual testimony in court; this allowed us to examine the impact of certain specific aspects of the legal process (e.g., the competence examination) on children's inclination to disclose their parents' transgressions.

For criminal cases involving young child witnesses, there is a common sequence of salient events. Typically, a child first “witnesses” a criminal act perpetrated by a trusted adult. Often the child, a sibling, or a parent, is the victim of abuse perpetrated by the adult. Second, a child protection worker or police officer questions the child in a postevent fact-finding interview. Third, the child is called to testify in criminal court. Before the child is permitted to testify, the child undergoes a competence examination in which the judge assesses the child's conceptual knowledge about truth- and lie-telling, and the child's understanding of the importance of telling the truth in court. Once the child is found competent to testify, the child is asked to promise to tell the truth. Finally, the child testifies in court about the event. The alleged

perpetrator, who could be the parent or another close relative, has a constitutional right to be present in court, though in most jurisdictions in North America there are statutory provisions that give a judge the discretion to allow a child to testify via live closed circuit television or from behind a screen (Bala et al., 2001).

In this study, we simulated this sequence of major events that a child experiences in the justice system and manipulated some of the conditions that may be varied within the justice system, in particular, whether or not the parent is present while the child is being interviewed. There is considerable variation in how cases with child witnesses are handled by justice systems, and many children are subjected to a lengthy process and repeated interviews. However, the *sequence* of events described above is one that child witnesses usually encounter in the legal system. To avoid the negative impact of repeated interviews and memory loss due to lengthy delay, children in this study experienced the sequence of the above events in one session.

For obvious ethical reasons, it was not possible to have a parent engage in a serious transgression or act of abuse. Thus, in this study, parents, unbeknownst to the children, were instructed to commit a minor transgression (breaking a puppet) while the experimenter was absent. The parents were instructed to act as if they were distressed and worried about getting into trouble. They told their children not to tell anyone that they had broken the puppet. After the children agreed to keep the secret, they participated in the first fact-finding interview. They were asked a series of questions by the experimenter about who had broken the puppet. Children were assigned randomly to three conditions.

In the Parent present condition, children were interviewed by the experimenter in the presence of their parent; in the Parent absent condition, children were interviewed by the experimenter without the parent present. These two conditions were designed to examine whether the parent's presence had any impact on children's subsequent responses to the interviewer's questions. It was expected that children in the Parent present condition would be less willing to reveal their parent's transgression than children in the Parent absent condition. On the basis of the results of Bussey et al. (1991), we also expected that younger children would be more likely than older children to disclose their parent's transgressions.

In the third, Child absent condition, the parent broke the puppet while the child was out of the room with the experimenter. Upon bringing the child back to the room, the experimenter excused herself from the room. During her absence, the child's parent told the child about the accident and instructed the child not to tell the experimenter, just as in the other two conditions. This condition was designed to remove a possible concern that children might have in the first two conditions: the experimenter might think that the child broke the puppet because the child and parent were together in the room when the puppet was broken. By removing this concern, children might be more inclined to lie to protect their parents. After the experimenter returned to the room and discovered the broken puppet, she asked the child a number of questions about what happened to the puppet, and then left the room. It was expected that in the Child absent condition children may be more likely to conceal their parent's transgression.

After the first interview, children in all the three conditions were questioned alone by a second interviewer who asked the child conceptual questions regarding lying and truth-telling similar to those used in the judicial competence examination (Bala et al., 2000). The second experimenter also asked the child to promise to tell the truth. Finally, the child participated in the second fact-finding interview in which the second experimenter questioned the child about what had happened to the puppet.

The second objective of this study was to examine the relation between children's lie- or truth-telling behavior and their moral understanding as assessed by the competence examination procedure currently used in North American courts. In the United States and Canada, child

witnesses undergo a competence examination in court to determine whether they will be permitted to testify (Bala et al., 2000; Haugaard, 1993; Haugaard et al., 1991). In this examination, children must demonstrate understanding of the concepts of truth and lies, and of the moral implications of truth- and lie-telling. They also must give an affirmation or promise to tell the truth as a prerequisite to testifying. Children's understanding of lies and truth has played a critical role in court decisions to permit children to testify (Bala et al., 2001; Haugaard, 1993; Haugaard et al., 1991; Lyon, 2000). In *Galindo v. United States* (1993), the court stated that a child is competent to testify if he or she is able to “recall the events which are the subject of the testimony; and ... understand[s] the difference between truth and falsehood and appreciates[s] the duty to tell the truth” (pp. 206–207). In that case, the District of Columbia Court of Appeal upheld a decision that a 3-year-old was competent to testify because of the child's “repeated spontaneous insistence that she doesn't tell lies, that she does tell the truth, that she in her minds feels it was important to tell the truth and not to tell a lie” (p. 207). The same court in *Owens v. United States* (1996) upheld a trial judge's ruling that an 8-year-old was not competent to testify because “she specifically stated that she did not understand the difference between the truth and a lie” (p. 404). Thus, a basic assumption of this procedure is that children who have appropriate conceptual knowledge about truth- and lie-telling are more likely to tell the truth than those who do not (Bala et al., 2000; Haugaard, 1993; Lyon, 2000). Furthermore, it is assumed that this type of questioning about lies and truth prior to testifying will alert children to the seriousness of their testimony and promote truth-telling in the court (Bala et al., 2000; Huffman et al., 1999).

Despite extensive research on children's conceptual knowledge of lie- and truth-telling (for review, see Lee, 2000) and to a lesser extent, research on lie- and truth-telling behavior, the relationship between the two has remained largely unexplored. Talwar et al. (2001) failed to establish a significant relation between children's conceptual knowledge about lie- and truth-telling and their actual behavior. For example, although most children gave negative ratings to other children's lying, most of them lied about their own transgression. However, the researchers did find that when children were questioned about their conceptual knowledge about lying and truth-telling, and asked to promise to tell the truth, they subsequently were more inclined to confess about their own transgression. As mentioned earlier, many cases in the justice system involve children testifying for or against a socially significant adult. The findings of Talwar et al. (2001) need to be replicated in a context in which children are coached to lie by their parent. This was one of the major goals of the current research. Specifically, the current study investigated whether the lack of relation between moral understanding and behavior as well as the truth-promoting effect of the competence examination would be found when children were coached by their parent to lie about the parent's transgression.

EXPERIMENT 1

Method

Participants—A total of 137 children between the ages of 3 and 11 years of age participated. Participants were recruited from an advertisement in the local newspaper. When parents called, they were given a detailed description of the study and told about the debriefing procedure at the end of the study before they were asked if they wished to have their child participate. The majority of parents agreed to participate, with approximately 10% of callers deciding not to participate for a variety of reasons (e.g., children were too young/old, were not able to find time to do the study, did not want to participate in this study). Of those who decided to participate, none withdrew from the study. The study was again described to the parents when they came in for the study, and they signed an informed consent letter to allow their children to participate.

Children were assigned randomly to one of the three conditions, with the constraint that children in the three conditions were matched by age in years. Forty-six children participated in the Parent absent condition (mean age = 86.9 months, $SD = 29.7$ months, $Mdn = 87$ months; 22 girls and 24 boys), 46 in the Parent present condition (mean age = 87.8 months, $SD = 31.7$ months, $Mdn = 89$ months; 22 girls and 24 boys), and 45 in the Child absent condition (mean age = 90.2 months, $SD = 32.9$ months, $Mdn = 94$ months; 21 girls and 24 boys). A one-way ANOVA revealed no significant age differences among the three conditions, either in terms of mean age or variance, $F(2, 134) = 0.13, p > .05$, and Levene's Statistic (2, 134) = 0.20, $p > .05$. The majority of children were from White, middle and upper-middle income families in a medium-sized North American city. All were brought to the laboratory by their parents.

Materials—A cloth puppet was mounted on a tall glass container filled with marbles. The container was placed vertically, upside down on a glass plate so that if anyone were to pick it up, the marbles would fall out, causing the puppet to appear broken. A “do not touch” sign was placed near the puppet. A discretely placed video camera was situated to obtain a frontal view of the child's head and upper body during questioning. The hidden camera was not obvious to the children.

Procedure—One parent and one child participated in each session. The child and parent were brought to a room by the first experimenter, where the first experimenter read a warm-up story to the children. Following the story, a research assistant knocked at the door and informed the first experimenter that she had a phone call. When the first experimenter left to take the phone call, the parent, who had been coached previously, began to inspect things in the room. Before the testing session, the parent had been brought into the testing room and where they received instructions on how to behave during the transgression event. As instructed, the parent lifted up the puppet, causing the marbles to be released from the glass container. The parent acted distressed about the event, and commented to the effect: “Oh my goodness, I have broken the puppet,” while pointing out (and reading) the “do not touch” sign. The parent, as instructed earlier by the experimenter, asked the child to agree not to tell the researchers that the parent had broken the puppet so as not to get into trouble. The parents were not given a specific script to follow when coaching the child not to tell in order to keep the interaction naturalistic. Analysis of parent's coaching, however, revealed that parents' coaching was highly similar with three main instructions: The first requested children not to tell the experimenter that they broke the puppet; the second explained why they wanted their child to conceal the information; and the third was to obtain a verbal or nonverbal confirmation from their children that they were not going to report to the experimenter about what actually happened. After the child agreed not to tell, the first experimenter, who was observing on the close-circuit television, re-entered the room. In the Parent absent condition, the parents were asked to leave the room to fill out additional paperwork while the child was questioned. In the Parent present condition, the parents were asked to fill out the paperwork in the room, with their back turned to their child and the first experimenter. Having parents turn their back to the children was designed to simulate the legal situation in which child witnesses may provide evidence behind a screen. In this situation, although the accused cannot make eye contact with the children, the child is presumably aware of the presence of the accused. Thus, the present design allowed for the assessment of the effect of the parents' mere presence on children's tendency to disclose their parents' transgression.

For the Child absent condition, the procedure was identical to that of the Parent absent condition except that the child left the room with the first experimenter to get a prize for correctly answering a question to the warm-up story. While the child and the first experimenter were in another room, the parent “broke” the puppet. The experimenter brought the child back to the room but left immediately on a pretext that she had to retrieve a forgotten item. During the first experimenter's absence, the parent showed the child the broken puppet and admitted to the

child what had happened, and then asked the child not to tell because otherwise the parent would “get into trouble.” After the child agreed to conceal the information, the first experimenter returned. The parent was then asked to go into another room to fill out some forms.

Children in each condition then participated in the following phases of interviews in the same manner. For logistical reasons, as well as to ensure that children would have fresh memory of the event, the entire experiment took place in one session.

First Fact-Finding Interview: Children were asked the following critical questions: (1) “What happened to the puppet?” (2) “Did you break it?” (3) “Did your mom (dad) break it?” and (4) “Did someone else come into the room and break it?” The order of the questions “Did you break it?” and “Did your mom (dad) break it?” were counterbalanced between participants.

Competence Examination Interview: After the child responded to the critical questions, there was another knock on the door and the first experimenter left, purportedly to take a phone call. The child's parent in the Parent present condition also left the room at this point. The second experimenter entered the room to “fill in” for the first one. Four female experimenters acted as the first and second interviewers and their role as the first or second interviewer was counterbalanced between participants.

The second experimenter asked each child questions in a simulated competence examination that was modeled after the types of questions commonly used in actual court competence examinations (Bala et al., 2000; Huffman et al., 1999; Lyon & Saywitz, 1999; Talwar et al., 2001). The second experimenter told the child a story designed to assess children conceptual knowledge about truth- and lie-telling. The story character (Katy) ate a candy that her teacher had told her not to eat. When Katy's teacher returned, she asked Katy if she had eaten the candy. Children were asked, (1) “What do you think Katy should say?” Then they were told that Katy had actually denied eating the candy. Children were then asked the following questions: (2) “Is what Katy said a lie or the truth?” (the order of lie and truth were counterbalanced between participants; 3a) “Is what Katy said good or bad?” (3b) “Is it a little or very good/bad?” and “Why?”

The second experimenter also told the children a story that put them in an imaginary situation. In the hypothetical story the child is told by his/her mother not to climb any trees. The child goes out to play with friends and climbs a big oak tree. Upon returning home, the child is asked by his/her mother, “Did you climb any trees?” The second experimenter then asked the child, (4) “What would you say?” and “Why?” In addition, the second experimenter asked: (5) “Do you know what a promise is?” Regardless of their answers to the competence inquiry questions, the children were told what a promise is and asked to promise to tell the truth for the questions to be asked in the second fact-finding interview.

Second Fact-Finding Interview: After the child promised to tell the truth, the second experimenter asked the child the same critical questions used in the first fact-finding interview. The child was then given a prize and thanked for participating and doing a good job of answering the researcher's questions. The child was then debriefed about the purpose of the study with the parent's participation. The experimenter explained to the child that the puppet was not really broken and that the parent was not really in trouble for breaking the puppet. The parents participated in a discussion with the child about the importance of telling the truth. The parent was then given a debriefing package that gave them information and discussed various issues concerning children and lying. A university research ethics review committee approved this study's methodology and debriefing procedure. Furthermore, nearly all the parents returned to the lab with their children for other studies related to lying and truth-telling. The parents

cited their satisfaction with the debriefing procedure for this study as one of the reasons for returning.

Results

Preliminary analyses revealed no significant effects of gender on children's responses to any questions in any of the three conditions. The results for both genders were thus combined for subsequent analyses.

Children's Responses in the First Fact-Finding Interview—Children's responses to individual questions in the first interview are shown in Table 1. When asked “What happened?” about half of the children in the Parent absent and present conditions immediately reported that their parent had broken the puppet, while only 22% of the children in the Child absent condition did so. Most of the children in the Child absent condition claimed that they did not know who had broken the puppet and thus lied. A logistic regression analysis was conducted to examine whether age (in months, continuous variable) and condition (categorical variable) were significantly related to children's response to the question. The age effect was not significant, Wald ($df = 1, N = 137$) = 0.03, *ns*, but the condition effect was significant, Wald ($df = 2, N = 137$) = 8.83, $p < .05$. A priori contrasts revealed that this significant condition effect was mainly due to the difference between the Child absent condition and the other two conditions, Wald ($df = 1, N = 137$) = 8.27, $p < .05$ and Wald ($df = 1, N = 137$) = 5.36 $p < .05$, respectively.

For the question “Did your mom/dad break it?,” 80% of the children in the Parent absent condition, 67% in the Parent present condition, and 51% in the Child absent condition told the truth and reported that their parent had broken the puppet. The logistic regression analysis revealed that the age effect was not significant, Wald ($df = 1, N = 137$) = 1.77, *ns*. The condition effect was significant, Wald ($df = 2, N = 137$) = 8.14, $p < .05$. A priori contrasts again revealed that this significant condition effect was mainly due to the difference between the Child absent condition and the Parent absent condition, Wald ($df = 1, N = 137$) = 8.02, $p < .05$.

For the question “Did you break it?,” only one 10-year-old child in the Parent present condition falsely admitted that he had broken the puppet. For the question, “Did someone else come in and break the puppet?” only one child in the Parent absent condition, two in the Parent present condition responded “yes” and lied, and three in the Child absent condition said they believed that someone else had broken it. The logistic regression analysis showed that the age effect was not significant, Wald ($df = 1, N = 137$) = 3.54, *ns*, and the condition effect was also not significant, Wald ($df = 2, N = 137$) = 1.46, *ns*.

Children's Responses in the Second Fact-Finding Interview—Children's responses to individual questions in the second interview are shown in Table 1. When the second experimenter asked “What happened?,” 85% of the children in the Parent absent condition, and 96% in the Parent present condition (now that the children's parents had left the room) told the truth that their parent had broken the puppet. In contrast, only 60% in the Child absent condition revealed that their parent had broken the puppet. Thus, 40% of the children in the Child absent condition still failed to tell the truth. They responded that they did not know who broke the puppet. The logistic regression analysis revealed that the age effect was not significant, Wald ($df = 1, N = 137$) = 0.86, *ns*. However, the condition effect was significant, Wald ($df = 2, N = 137$) = 15.11, $p < .01$. A priori contrasts showed that this significant condition effect was due mainly to the difference between the Child absent condition and the other two conditions, Wald ($df = 1, N = 137$) = 6.82, $p < .01$, and Wald ($df = 1, N = 137$) = 11.65, $p < .01$, respectively.

For the question “Did your mom/dad break it?,” 89% of the children in the Parent absent condition, 96% in the Parent present condition, and 69% in the Child absent condition told the

truth and reported that their parent had broken the puppet. A logistic regression analysis, with age (in months) and condition as predictors and children's response to this question as the predicted variable, revealed that the age effect was not significant, Wald ($df=1, N = 137$) = 0.72, *ns*. The condition effect was significant, Wald ($df=2, N = 137$) = 11.23, $p < .01$. A priori contrasts again revealed that this significant condition effect was due mainly to the difference between the Child absent condition and the other two conditions, Wald ($df = 1, N = 137$) = 5.40, $p < .05$, and Wald ($df = 1, N = 137$) = 8.34, $p < .05$, respectively.

For the question “Did you break it?,” no children falsely admitted that they broke the puppet. For the question “Did someone else come in and break the puppet?,” only one child in the Parent absent condition and one in the Parent present condition responded “yes” and lied, whereas nine children in the Child absent condition did the same. A logistic regression analysis, with age (in months) and condition as predictors and children's response to this question as the predicted variable, showed that the age effect was not significant, Wald ($df = 1, N = 137$) = 0.32, *ns*. The condition effect was significant, Wald ($df = 2, N = 137$) = 8.80, $p < .05$. A priori contrasts revealed that this condition effect was mainly due to the difference between the Child absent condition and the other two conditions, Wald ($df = 1, N = 137$) 4.96, $p < .05$, and Wald ($df = 1, N = 137$) = 4.91, $p < .05$, respectively.

Changes in Children's Responses in the First and Second Fact-Finding Interviews

—To examine whether children changed their responses from the first interview to the second interview, children's responses to each question were compared across the interviews using the Wilcoxon nonparametric analysis. Because the above analyses showed that age was not a significant effect for any questions, the data of children of all ages were combined. Also, because the condition was found to be consistently significant, separate analyses were performed for each condition. For the question “What happened?,” significantly more children told the truth in the second interview than in the first interview in all three conditions, $Z = 3.87, p < .001$; $Z = 4.80, p < .001$; and $Z = 3.90, p < .001$; respectively. For the question “Did your mom/dad break it?,” significantly more children told the truth in the second interview than in the first interview in all three conditions, $Z = 6.39, p < .001$; $Z = 5.94, p < .001$; and $Z = 6.05, p < .001$; respectively. However, for the other two questions (“Did you break it?” and “Did someone else come in and break it?”), there was no significant change in response from the first to second interview in any of the three conditions.

Children's Responses in the Competence Examination Interview—To examine children's answers to the questions about the moral implications of lying, a Conceptual Knowledge Score was calculated for each child based on their answers to the five questions in the competence examination interview. If children answered “yes” when asked if Katy should confess about her transgression, they received a score of 1. If children answered “a lie” to “Is what Katy said a lie or the truth?” they received a score of 1. If children answered “bad” or “very bad” to “Is what Katy said good or bad?” they received another score of 1. If children said they would confess when asked, “What would you say?” in the hypothetical story, they received a score of 1. Finally, if children defined or gave an example of a promise when asked to explain the concept, they received a score of 1. Therefore, children could receive a maximum Conceptual Knowledge Score of 5. For the Parent absent condition, the mean Conceptual Knowledge Score was 3.63 ($SD = 0.77$, minimum = 1, maximum = 5). For the Parent present condition, the mean Conceptual Knowledge Score was 3.47 ($SD 0.93$, minimum = 1, maximum = 5). For the Child absent condition, the mean Conceptual Knowledge Score was 3.80 ($SD = 0.84$, minimum = 2, maximum = 5).

A hierarchical linear regression was performed to examine whether there was any relation between children's Conceptual Knowledge Scores and condition, children's age, and children's responses to the four questions in the first fact-finding interview. The factors were entered into

the regression model in the following order: condition, age (in months), and responses to the four questions in the first fact-finding interview. The first model was not significant, R^2 change = .01, *ns*. Thus, the children in the three conditions did not score significantly differently in their Conceptual Knowledge Scores. When the age factor was entered into the regression model, the model became significant, R^2 change = .40, $p < .001$, such that older children had higher Conceptual Knowledge Scores. After partialling out the effects of condition and age, children's Conceptual Knowledge Scores were not significantly related to any of their responses to the four questions in the first fact-finding interview, R^2 change = .16, *ns*. Thus, whether children were truthful or not in the first interview was not related to their conceptual knowledge about lying, truth-telling, and promises.

A similar hierarchical regression analysis was performed to examine whether there was any relation between children's Conceptual Knowledge Scores and the factors of condition, children's age, and children's responses to the four questions in the second fact-finding interview. After partialling out the effects of condition and age, children's Conceptual Knowledge Scores were significantly related to their responses to the questions in the second fact-finding interview, R^2 change = .05, $p < .05$. Further inspections revealed that this significant effect was mainly due to children's responses to the question "Did your mom (dad) break the puppet?" Children with higher Conceptual Knowledge Scores tended to tell the truth that their parents broke the puppet, $B = .60$, $t = 2.34$, $p < .05$, part correlation = .18. The regression coefficients for the other three questions were not significantly different from zero.

Discussion

The results from Experiment 1 revealed that most children did not lie to conceal their parent's transgression, even after explicit coaching by their parent. However, a significant condition effect was found. More children lied to conceal the parent's transgression in the child absent condition than in the other two conditions. This finding suggests that children were more likely to lie at the request of a parent in a situation in which it was apparent that they would not be blamed for the transgression. On the other hand, the presence or absence of the parent during questioning did not significantly affect children's tendency to disclose their parents' transgression. This finding is partially consistent with the results of Bussey, Ross, and Lee (1991), who found that although younger children were less likely to disclose in the perpetrator's presence, the majority of older children disclosed both in the perpetrator's presence and absence.

As expected, children's moral understanding of lie- and truth-telling as assessed by the competence examination questions increased significantly with age. This is similar to the findings of previous research (Bussey, 1992, 1999; Lee et al., 1997; Siegal & Peterson, 1998; Strichartz & Burton, 1990). Interestingly, there was a significant relation between children's conceptual understanding of lie-telling, truth-telling, and promises, and their actual lie- or truth-telling behavior to conceal a parent's transgression. Children who said that one should tell the truth were more likely to tell the truth in the second fact-finding interview. Furthermore, children's truthfulness increased significantly after participating in the competence examination questioning and promising to tell the truth. This finding is similar to previous results (Talwar et al., (2002)) and suggests that the competence examination, or components of it, may have a truth-promoting effect.

However, two major issues need to be addressed. One issue concerns the interpretation of the results found in the Child absent condition. It is possible that the children in the Child absent condition who did not watch their parent breaking the toy may be less certain that the parent actually committed the transgression. Thus, the children in this condition might not have been intentionally concealing for the parent but were unclear about who had committed the transgression. The second issue concerns the fact that (In the child away condition? In all three

conditions) most children began to tell the truth as they were interviewed by the second experimenter after having discussed the moral implications of lying and truth-telling and being asked to promise to tell the truth. This increase in truth-telling may be due to two reasons. One possibility is that repeated questioning itself is sufficient to increase children's rate of disclosure. Thus, the increase in truth-telling in the second interview may be due to being asked twice about the transgression. Alternatively, the increase in truth-telling may be due to the truth-promoting effect of the competence interview and promising to tell the truth. These two issues were directly addressed in Experiment 2.

EXPERIMENT 2

A modified version of the Child absent condition procedure was used in Experiment 2. Instead of taking children out of the room during the breaking of the puppet, as in the original condition, children in the present experiment witnessed their parent breaking a puppet. However, the puppet was placed out of the child's physical reach, such that the child could not be blamed for the breaking the puppet. More importantly, upon returning and discovering the broken puppet, the experimenter, before any questioning, reassured the child that s/he could not possibly be implicated in the transgression. If the significant increase in lying among children in the Child absent condition in Experiment 1 was due to the children's lack of direct knowledge about who actually broke the puppet, having children witness their parents breaking the puppet should lead to increase in truth-telling as in the Parent present and Parent absent conditions. However, if the children in the Child absent condition were more inclined to tell a lie because they could not be blamed for the transgression, then children in the present experiment should be as inclined to lie as those in the Child absent condition.

The Child absent condition was further modified such that after the first interview, children were randomly assigned to two conditions for the second interview: they were either given the competence examination and asked to promise to tell the truth before being asked about their transgression (as in Experiment 1), or they were just asked about the transgression without the competence examination and promise. This manipulation was made to examine whether it was repeated questioning alone or the competence examination procedure that was responsible for the increase in children's truth-telling in Experiment 1.

Method

Participants—A total of 64 children between the ages of 3 and 11 years of age participated. Participants were assigned randomly to one of the two conditions, with a constraint that children in the two conditions were matched by age in years. Thirty-two children participated in the No Competence Examination condition (mean age = 89.3 months, $SD = 30.8$ months, $Mdn = 91.5$ months; 13 girls and 19 boys), and 32 in the Competence Examination condition (mean age = 86.4 months, $SD = 33.6$ months, $Mdn = 86.5$ months; 17 girls and 15 boys). A one-way ANOVA revealed no significant age differences between the two conditions both in terms of mean age and variance, $F(1, 62) = 0.13, ns.$, and Levene's Statistic (2, 62) = 0.30, $ns.$ The majority of children were from White, middle and upper-middle income families in a medium-sized North American city. All were brought to the laboratory by their parents. Parental permission was obtained prior to testing.

Materials and Procedure—The same materials and procedure from Experiment 1 were used in this study with the following modifications. The puppet was placed on top of a tall cabinet in the room. When the first experimenter left to “take a phone call,” the parent and the child were left alone in the room. The parent then broke the puppet and asked the child to agree not to tell the researchers that the parent had broken the puppet so as not to get into trouble. After the child agreed not to tell, the first experimenter reentered the room. The parent was asked to leave the room to fill out additional paperwork. The first experimenter then “noticed”

that the puppet was broken and told the child that the experimenter did not think the child could have broken it because “it is too high for you to reach.” Then the first fact-finding interview was conducted as in Experiment 1.

After the child responded to the critical questions, the second experimenter replaced the first experimenter. In the No Competence Examination condition, the second experimenter asked the child the same second fact-finding interview questions as in Experiment 1. The child was not asked any of the competence examination questions, nor was s/he asked to promise to tell the truth before the second fact-finding interview. In contrast, in the Competence Examination condition, the second experimenter asked the child the same questions as in the simulated competence examination in Experiment 1. After the child answered the competence examination questions and promised to tell the truth, the second experimenter conducted the second fact-finding interview. The parent was absent during both questioning periods. Afterwards, the child was given a prize and thanked for participating and doing a good job of answering the researcher's questions. The same debriefing procedure as that in Experiment 1 was used.

Results

Preliminary analyses revealed no significant effects of gender on children's responses to any questions in any of the two conditions. The results for both genders were combined for the subsequent analyses.

Children's Responses in the First Fact-Finding Interview—Children's responses to individual questions in the first interview are shown in Table 2. When asked “What happened?,” 39% of children immediately reported that their parent had broken the puppet. A logistic regression analysis was conducted to examine whether age (in months, continuous variable) was significantly related to children's response to the question. The age effect was not significant, Wald ($df = 1, N = 64$) = 1.3, *ns*. For the question “Did your mom/dad break it?,” 62.5% of the children told the truth and reported that their parent had broken the puppet. The logistic regression analysis revealed that the age effect was not significant, Wald ($df = 1, N = 64$) = 0.19, *ns*. For the question “Did you break it?,” only two children said they did not know and the rest denied breaking the puppet. For the question, “Did someone else come in and break the puppet?,” 10 children said they believed that someone else had broken it. Data was missing for two children and was not included in the analysis. The logistic regression analysis showed that the age effect was not significant, Wald ($df = 1, N = 62$) = 3.63, *ns*.

Children's Responses in the Second Fact-Finding Interview—Children's responses to individual questions in the second interview are shown in Table 2. When the second interviewer asked “What happened?,” 59% of the children in the No Competence Examination condition and 53% in the Competence Examination told the truth that their parent had broken the puppet. A logistic regression analysis, with the age (in months) and condition as predictors and children's response to this question as the predicted variable, revealed that neither age nor condition effects were significant, Wald ($df = 1, N = 64$) = 0.82, *ns*, and Wald ($df = 1, N = 64$) = 0.22, *ns*, respectively. For the question “Did your mom/dad break it?,” 65.6% of the children in the No Competence Examination condition and 75% in the Competence Examination condition told the truth and reported that their parent had broken the puppet. Both the age and condition effects were not significant, Wald ($df = 1, N = 64$) = 1.04, *ns*, and Wald ($df = 1, N = 64$) = 0.77, *ns*, respectively.

For the question “Did you break it?,” two children falsely admitted that they broke the puppet in the No Competence Examination condition. For the question “Did someone else come in and break the puppet?,” two children in the No Competence Examination condition and three

in the Competence Examination condition responded “yes” and lied. A logistic regression analysis showed that the age effect was significant, Wald ($df = 1, N = 64$) = 4.22, $p < 0.05$. The age effect was due to younger children (5 years or under) giving an affirmative answer while all older children said no one else came into the room. The condition effect was not significant, Wald ($df = 1, N = 64$) = 0.57, *ns*.

Changes in Children's Responses in the First and Second Fact-Finding Interviews

—To examine children's changes in their response to questions from the first to the second interview, children's responses to each question were compared across the interviews using the Wilcoxon nonparametric analysis. The data of children of all ages were combined. For the question “What happened?,” significantly more children told the truth in the second interview than in the first interview in the Competence Examination condition, $Z = -2.71, p < .01$, but there was no significant difference in the No Competence Examination condition, $Z = -0.81, ns$. For the question “Did your mom/dad break it?,” significantly more children told the truth in the second interview than in the first interview in the Competence Examination condition, $Z = -2.45, p < .05$, but there was not a significant difference for the No Competence Examination condition, $Z = -0.45, ns$. However, for the other two questions, there was no significant change in response from the first to the second interview in any of the two conditions.

Children's Responses in the Competence Examination Interview—As in Experiment 1, a Conceptual Knowledge Score was calculated for each child in the Competence Examination condition based on their answers to the five questions in the competence examination interview. For the Competence Examination condition, the mean Conceptual Knowledge Score was 4.22 ($SD = 0.97$, minimum = 1, maximum = 5). A hierarchical linear regression was performed to examine whether there was any relation between children's Conceptual Knowledge Scores and the factors of age and children's responses to the four questions in the first fact-finding interview. The age (in months) factor was entered into the regression model first, and then children's responses to the four questions in the first fact-finding interview. The first model was significant, R^2 change = .38, $p < 0.001$, such that older children had higher Conceptual Knowledge Scores. After partialling out the effects of age, children's Conceptual Knowledge Scores were not significantly related to their responses to any of the four questions in the first fact-finding interview, R^2 change = .15, *ns*. Thus, whether children were truthful in the first interview was not related to their conceptual knowledge about lying, truth-telling, and promises.

A similar hierarchical regression analysis was performed to examine whether there was any relation between children's Conceptual Knowledge Scores and the factors of age and children's responses to the four questions in the second fact-finding interview. The first model was significant, R^2 change = .40, $p < 0.001$. Older children had higher Conceptual Knowledge Scores. After partialling out the effects of age, children's Conceptual Knowledge Scores were significantly related to their responses to the questions in the second fact-finding interview, R^2 = change .34, $p < .001$. This significant effect was mainly due to children's responses to the question “Did your mom (dad) break the puppet?” Children with higher Conceptual Knowledge Scores were more likely to tell the truth about their parent having broken the puppet, $B = -0.54, t = -3.76, p < .001$.

Discussion

The results of Experiment 2 replicated the findings of Experiment 1. The majority of children told the truth about their parent's transgression. Children's moral understanding of lies and truth increased with age. Children's truthfulness increased if they participated in the competence examination and promised to tell the truth. In Experiment 2, children witnessed the

transgression and were explicitly reassured that they were not implicated in the transgression. More than half of the children told the truth despite coaching from their parents. An exploratory logistic regression was conducted to compare the rates of lying in the first fact-finding interview of children in the Parent absent and child absent condition of Experiment 1 with children in Experiment 2, who had been explicitly reassured that they were not implicated in the transgression. The rate of lying in Experiment 2 did not differ significantly from the child absent condition, Wald ($df = 1, N = 155$) = 1.39, *ns*, but was significantly lower than in the Parent absent condition, Wald ($df = 1, N = 155$) = 9.95, $p < .01$. Thus, it appears when children were not implicated in the transgression, they were more likely to conceal their parent's transgression.

Experiment 2 also found a significant increase in children's truth-telling behavior in the second interview when they participated in the competence examination and promised to tell the truth. There was a significant increase in truth-telling in the Competence Examination condition compared to those in the No Competence Examination condition. In fact, a few children in the No Competence Examination actually told the truth initially in the first interview but lied in the second interview, a pattern never seen in any of the conditions where the children were administered the competency examination prior to being interviewed. These results suggest that the competence examination and promise may have a truth-promoting effect.

GENERAL DISCUSSION

The present research yielded four major findings: (1) Many children did not lie to conceal their parent's transgression, even after explicit coaching by their parent. However, children were sensitive to the different conditions in which they were asked by their parent to lie, and adjusted their lie- and truth-telling behavior accordingly. In particular, if children were in a situation in which it was apparent that they would not be blamed for a transgression, more children were prepared to lie at the request of a parent (see Figure 1); (2) Children's moral understanding of lie- and truth-telling as assessed by the competence examination questions increased significantly with age; (3) There was a significant relation between children's conceptual understanding of lie-telling, truth-telling, and promises, and their truth-telling about a parent's transgression in the second fact-finding interview; and (4) Children's truthfulness increased significantly after participating in the competence examination questioning and promising to tell the truth.

With regard to the first major finding of the present study concerning children's actual lying behavior to conceal their parents' transgressions, several points are worth noting. First, most children in our study told the truth about their parents' transgression by the end of the experimental procedure despite the fact that their parents had explicitly asked them to lie. Most of the children told the truth even after they assured their parents that they would not tell them. In the Parent present condition, the presence of parents during questioning did not lead to a significant decrease in the number of children who told the truth about their parents' transgressions at the end of the first fact-finding interview. Similar to the results in the Parent absent condition, most children revealed their parents' transgressions to the first experimenter despite the fact that their parents were still in the room and that they had agreed to conceal the information. Interestingly, however, inspection of the videotapes revealed that many of the children in the Parent present condition chose to implicate their parents by hand gesture rather than verbally. Many children were reluctant to give verbal answers. Instead, they pointed to their parent when asked what happened and nodded silently when asked if their parent had broken the puppet. Thus, although the presence of parents did not lead to a statistically significant increase in children's lie-telling behavior, it did change the way in which children gave their responses. In other words, children were sensitive to the presence of their parents, though their presence was insufficient for children to lie on their behalf. It is possible the child

may be more reluctant to discuss the transgression when in situation where the child is placed directly in front of the perpetrator.

In actual legal proceedings, children are usually put in the position where the alleged perpetrator must hear what they say. However, often devices such as a screen or closed-circuit TV may be used to protect the child from seeing the accused. These setups ensure the rights of the defendant by allowing the defendant to see the child while at the same time ensuring that the child is not intimidated by having to face the defendant. The setup in the current study does not directly mimic this situation, but rather was designed to examine whether the presence of a parent in a situation where no direct eye contact could be made would influence children's concealment of the parent's transgression. Although the majority of children in the Parent present condition confessed their parent's transgression, their behavior suggests that children may be more comfortable in situations where they cannot make eye contact with a known perpetrator (e.g., by testifying from behind a screen or via closed circuit television) than in situations where they are in direct line of sight.

Children in Experiment 2, as well as those in the child absent condition of Experiment 1, were less likely to reveal their parents' transgression. This finding suggests that children are adaptive and perhaps "selfish" lie- or truth-tellers. They are less likely to lie for someone else if there are potential negative consequences to themselves. When there was a possibility that the child might be blamed for the broken puppet (Parent absent and Parent present conditions), they were more likely to tell the truth. However, when the possibility of the child being blamed for the broken puppet was eliminated, children were more likely to lie about their parents' transgressions. Thus, our results suggest that when children tell the truth about their parents' transgressions, they may not be motivated solely by a concern for honesty. Furthermore, when children tell lies for their parents, they may not do so entirely for altruistic reasons. Rather, some may be motivated to lie to avoid negative consequences for themselves. Nevertheless, the fact that about two thirds of the children eventually told the truth suggests that many children are truthful and unwilling to lie for their parents despite explicit coaching.

Although it is encouraging to note that parental coaching had a limited impact on children's truthfulness in this study, it is a concern that even a few would tell a lie to conceal such a minor incident committed by their parent. It should be noted, however, that the setup of the present study is far removed from actual cases (e.g., sexual abuse) where children are asked to testify and caution is needed in making conclusions on the implications for children's testimony. For ethical reasons there are significant constraints on the types of threats and inducements that can be made to induce children to lie to conceal a parental transgression in an experimental setting. In actual legal cases, children may face coercion and threats from the perpetrator that may affect their tendency to disclose (Bussey, Lee, and Grimbeck (1993)), and the perpetrators may have much more time to engage in coaching or pressure. Further, the consequences of a child telling the truth can be very grave for the perpetrator (e.g., jail) as well as the child who fails to conceal abusive acts by the parent (i.e., the child may be removed from the home and contribute to imprisonment of a parent). These factors seem likely to increase the likelihood that the child will comply with the parent's request to "keep their secret." Furthermore, the current findings suggest that if a child is assured that s/he will not be blamed by the investigator, they may be more likely to lie for their parents. However, more research is needed to examine the effects of reassurance on children's reporting of an event. It remains a challenge for researchers to discover both exactly how parental coaching impacts children's reports of their parents' criminal acts and the effects of reassurance in forensically significant situations.

With regard to the second major finding of the present study (children's moral understanding about truth- and lie-telling), our findings are very similar to those found in previous studies (Bussey, 1992; Haugaard, 1993; Haugaard et al., 1991; Lee et al., 1997; Peterson et al.,

1983). Consistent with previous findings (for a review, see Lee, 2000), in the present study, children's Conceptual Knowledge Scores increased significantly with age. Overall, the findings of both the present and previous studies suggest that children's moral knowledge about lying, truth-telling, and the obligation to tell the truth emerges early and develops rapidly with age.

The third major finding of our study is a significant relation between children's moral knowledge about lie- and truth-telling and their actual lying behavior in the second fact-finding interview. Children who had higher Conceptual Knowledge Scores were more likely to tell the truth in the second interview. This finding suggests that when the competence questions are asked and a child promises to tell the truth, moral understanding may be predictive of honesty. However, this finding should be considered in light of several factors. First, it is possible that because the second interviewer conducted both the second fact-finding interview and the competence examination interview, children might have felt compelled to act in accordance with their moral knowledge in front of the same adult. Thus, those children who had higher Conceptual Knowledge Scores were more inclined to tell the truth. Second, the significant relation was only obtained when the competence questions were asked prior to the fact-finding questions. No significant relation was found when the fact-finding questions were asked first (i.e., the first fact-finding interview). Third, children's responses to the four critical questions in the second fact-finding interview only accounted for small amount of the variance in children's Conceptual Knowledge Scores for both experiments. The overall significant relationship between children's moral understanding and truth-telling was mainly due to the significant relation between children's Conceptual Knowledge Scores and their response to one of the four critical questions. It should be noted that this small effect was obtained despite the fact that the questions used in our competence examination reflect the best type of questioning used by legal professionals to test children's moral understanding about truth- and lie-telling (Huffman et al., 1999; Lyon & Saywitz, 1999; Talwar et al., 2001).

One may argue that there is a discrepancy between the scenarios depicted in the questions used in our competence examination interview and the actual event that children were asked to lie about. A stronger relation between children's moral knowledge and actual behavior might have been obtained had we used scenarios in our competence examination interview that closely mimicked the actual event (e.g., telling children a story in which a parent committed a misdeed and told children not to tell her or him). This is certainly a possibility that needs to be tested in future studies. However, such findings may not be meaningful for the justice system because in the court *competence inquiry*, children are generally not asked directly whether they would lie or tell the truth about an adult's misdeed if the adult asked them to lie about it. Nor at the competence inquiry stage are they asked about other facts directly concerning the case. One major reason for the lack of use of such questions in the actual competence examination is because they are considered inappropriate and prejudicial. Furthermore, research on the development of the concept and moral judgments of lying has shown that children make consistent responses to questions concerning concepts of truth- and lie-telling and their moral implications in various contexts. For example, Haugaard and his colleagues found that when they showed young children vignettes of a child corroborating a parent's lie or lying upon the instructions of a parent, children rated such statements as lies in a similar way as they did to lying in other situations (Haugaard, 1993; Haugaard et al., 1991).

Although the current procedure tested children's concealment of a parent's transgression rather than fabrication of an event, our failure to obtain a strong relation between a child's understanding of lying and truth-telling and lying and truth-telling behavior is consistent with findings that the competence examination questions do not correlate well with the accuracy of children's eye witness report (Goodman, Aman, & Hirschman, 1987; London & Nunez, 2002; Pipe & Wilson, 1994). Our finding has important implications for legal policy in the United States, Canada, and a number of other countries (e.g., Australia). In these jurisdictions,

the kinds of questions that children were asked in this experiment are used in court to determine whether a child will be regarded as legally competent to testify (Bala et al., 2000). The failure to establish a strong relation between children's moral knowledge and action concerning lie- and truth-telling raises serious questions about the validity of the fundamental assumption underlying the current court competence examinations and the appropriateness of using the present court competence examination as a procedure to screen out untruthful child witnesses. Future research needs to examine the relationship between children's moral knowledge and actual behavior by devising ethically appropriate procedures that are legally relevant. Specifically, these procedures must be tested with maltreated children involved in court cases. Research has shown that these children often have cognitive delays which may affect their performance on the competence type questions (Lyon & Saywitz, 1999).

Our fourth major finding, however, suggests that some aspects of the initial process of questioning a child about truth-telling and having the child promise to tell the truth may have value. Our results consistently showed that children were more truthful in the second interview. A number of factors might have contributed to children's increased truthfulness. First, children might have been more truthful when questioned a second time. However, Experiment 2 showed that children were more likely to tell the truth when they were asked questions about truth telling and promised to tell the truth than when they were merely questioned a second time. These findings suggest that the competence examination and promise have some truth-promoting effect over and above repeated questioning. Questioning children about their moral knowledge about lie- and truth-telling and asking them to promise to tell the truth might alert children about the importance of truth-telling and therefore lead some children to tell the truth. However, several factors may have influenced children's behavior. Children might be more truthful either because the questions about lies and truth alerted them to the importance of truth-telling, or because they had promised to tell the truth to the second interviewer. Because the primary focus of the present study was not on what aspect of the competence examination would have the most impact on children's subsequent truth- or lie-telling, these factors were not manipulated independently. Future studies need to address these important and intriguing questions. However, other research that has manipulated the competence examination process (Talwar et al., 2001) has found that children who only had to promise to tell the truth were more likely to tell the truth, even if they had not discussed any questions about their moral understanding of lying and were interviewed by only one person. In addition, Lyon and Dorado (1999) found that maltreated children involved in actual court cases were significantly more likely to disclose a transgression when they were asked to promise to tell the truth than when they were not asked to promise to tell the truth. Thus, it is possible that the significant improvement in truth-telling from the first to the second fact-finding interview was mainly due to the promise component of the competence interview. Further studies are needed to test this possibility. If this suggestion were found true, it would have significant implications for the judicial process regarding obtaining information from child witnesses. One important application of this finding would be to encourage police and social workers to elicit promises to tell the truth from children before interviewing them. This may help prevent false reports from continuing further into the justice system.

In summary, the present study examined the lie-telling behavior of children aged 3–11 years to conceal their parents' transgressions. It revealed that the majority of children told the truth about their parents' transgressions. However, children's lie or truth-telling behavior was adaptive and situation-specific. When the possibility of the child being blamed for the transgression was reduced, a significantly greater number of children lied about their parents' transgressions. Thus, while many of the children might tell the truth for moral reasons, some of their decisions to lie or tell the truth about their parents' transgressions appeared to be determined by a need of self-protection. Although children's moral knowledge about truth- and lie-telling was not found to be strongly related to their actual behavior, questioning them about

issues concerning lie- and truth-telling and asking them to promise to tell the truth appeared to promote truth-telling.

Acknowledgments

This study was supported by a doctoral fellowship to the first author and two separate grants from the Social Science and Humanities Research Council of Canada to Kang Lee and Nicholas Bala. We thank the children and their parents for participating in this study. Our gratitude is also extended to three anonymous reviewers for their constructive comments on earlier versions of this paper.

REFERENCES

- Bala N, Lindsay RCL, Lee K, Talwar V. A legal and psychological critique of the present approach to the assessment of the competence of child witnesses. *Osgoode Hall Law Journal* 2000;38(3):409–452.
- Bala N, Lindsay RCL, McNamara E. Testimonial aids for children: The Canadian experience with closed circuit television, screens and videotapes. *Criminal Law Quarterly* 2001;44:461–486.
- Why don't moral people act morally? Motivational considerations. *Current Directions in Psychological Science* 10:54–57.
- Bridging moral cognition and moral action: A critical review of the literature. *Psychological Bulletin* 88:1–45.
- Schrader, D., editor. *New directions for child development*. Jossey-Bass; San Francisco: Kohlberg's theory and moral motivation; p. 51-57.
- Bok, S. *Lying: Moral choice in public and private life*. Pantheon Books; N. Y.: 1978.
- Bottoms BL, Goodman GS, Schwartz-Kenney BM, Thomas SN. Understanding children's use of secrecy in the context of eyewitness reports. *Law & Human Behavior* 2002;26:285–313. [PubMed: 12061620]
- Bruck M, Ceci SJ, Hembroke H. Reliability and credibility of young children's reports. *American Psychologist* 1998;53:136–151. [PubMed: 9491744]
- Likona, T., editor. *Moral development and behavior*. Holt Rinehart, & Winston; New York: Honesty and dishonesty.
- Bussey K. Lying and truthfulness: Children's definitions, standards and evaluative reactions. *Child Development* 1992;63:129–137.
- Bussey, K. Factors influencing children's disclosure of witnessed events. Paper presented at the biennial meeting of the Society for Research in Child Development; New Orleans, LA. 1993.
- Bussey K. Children's categorization and evaluation of different types of lies and truths. *Child Development* 1999;70:1338–1347.
- Bussey, K.; Grimbeek, EJ. Disclosure processes: issues for child sexual abuse victims. In: Rotenberg, KJ., editor. *Disclosure processes in children and adolescents*. Cambridge University Press; Cambridge: 1995. p. 166-203.
- Bussey, K.; Lee, K.; Grimbeek, EJ. Lies and secrets: Implications for children's reporting of sexual abuse. In: Goodman, GS.; Bottoms, BL., editors. *Child victims, child witnesses: Understanding and improving testimony*. Guilford; New York: 1993. p. 147-168.
- Chandler M, Fritz AS, Hala S. Small-scale deceit: Deception as a marker of two-, three-, and four-year-olds' early theories of mind. *Child Development* 1989;60:1263–1277. [PubMed: 2612240]
- DePaulo BM, Kashy DA, Kirkendol SE, Wyer MM, Epstein JA. Lying in everyday life. *Journal of Personality & Social Psychology* 1996;70:979–995. [PubMed: 8656340]
- DePaulo, BM.; Zuckerman, M.; Rosenthal, R. Detecting deception: Modality effects. In: Wheeler, L., editor. *The review of personality and social psychology*. Sage; Beverly Hills, CA: 1980.
- Galindo v. United States. Washington D.C.: 1993. 630 A.2d 202
- Goodman, GS.; Aman, CJ.; Hirschman, J. Child sexual and physical abuse: Children's testimony. In: Ceci, SJ.; Toglia, MP.; Ross, DF., editors. *Children's eyewitness memory*. Springer-Verlag; New York: 1987. p. 1-23.
- Gray, E. *Unequal justice: The prosecution of child sexual abuse*. MacMillan; New York: 1993.
- Greenglass ER. Effects of age and prior help on "altruistic lying." *Journal of Genetic Psychology* 1972;121:303–313. [PubMed: 4650427]

- Hala S, Chandler M, Fritz A. Fledgling theories of mind: Deception as a marker of 3 year olds' understanding of false belief. *Child Development* 1991;62:83–97.
- Haugaard JJ. Young children's classification of the corroboration of a false statement as the truth or a lie. *Law & Human Behavior* 1993;17:645–659.
- Haugaard JJ, Reppucci ND, Laird J, Nauful T. Children's definitions of the truth and their competency as witnesses in legal proceedings. *Law & Human Behavior* 1991;15:253–271.
- Honts CR. Assessing children's credibility: Scientific and legal issues in 1994. *North Dakota Law Review* 1994;70:879–899.
- Huffman ML, Warren AR, Larson SM. Discussing truth and lies in interviews with children: Whether, why, and how? *Applied Developmental Science* 1999;3:6–15.
- Lee, K. Lying as doing deceptive things with words: A speech act theoretical perspective. In: Astington, JW., editor. *Minds in the making*. Blackwell; Oxford: 2000. p. 177-196.
- Lee K, Cameron CA, Xu F, Fu G, Board J. Chinese and Canadian children's evaluations of lying and truth-telling: Similarities and differences in the context of pro- and anti-social behaviors. *Child Development* 1997;68:921–931.
- Lewis M, Stranger C, Sullivan MW. Deception in 3 year olds. *Developmental Psychology* 1989;25:439–443.
- Lewis, M. The development of deception. In: Lewis, M.; Saarni, C., editors. *Lying and deception in everyday life*. the Guilford Press; N. Y.: 1993. p. 90-105.
- London K, Nunez N. Examining the efficacy of truth-lie discussions in predicting and increasing the veracity of children's reports. *Journal of Experimental Child Psychology* 2002;83:131–147. [PubMed: 12408959]
- Lyon TD. Child witnesses and the oath: Empirical evidence. *Southern California Law Review* 2000;73:1017–1074.
- Lyon, TD.; Dorado, JS. Does the oath matter? Motivating maltreated children to tell the truth. Paper presented at the Annual Meeting of the American Psychological Society; Denver, CO. 1999.
- Lyon TD, Saywitz KJ. Young maltreated children's competence to take the oath. *Applied Developmental Science* 1999;3:16–27.
- Owens v. United States. Washington, D.C.: 1996. 688 A. 2d 399
- Peskin J. Ruse and representations: On children's ability to conceal information. *Developmental Psychology* 1992;28:84–89.
- Peterson CC. The role of perceived intention to deceive in children's and adults' concepts of lying. *British Journal of Developmental Psychology* 1995;13:237–260.
- Peterson CC, Peterson JL, Seeto D. Developmental changes in ideas about lying. *Child Development* 1983;54:1529–1535. [PubMed: 6661946]
- Pipe M, Goodman GS. Elements of secrecy: Implications for children's testimony. *Behavioral Sciences and the Law* 1991;9:33–41.
- Pipe M, Wilson JC. Cues and secrets: Influences on children's event reports. *Developmental Psychology* 1994;30:515–525.
- Polak A, Harris PL. Deception by young children following noncompliance. *Developmental Psychology* 1999;35:561–568. [PubMed: 10082026]
- Siegal M, Peterson CC. Pre-schoolers' understanding of lies and innocent and negligent mistakes. *Developmental Psychology* 1998;34:332–341. [PubMed: 9541785]
- Strichartz AF, Burton RV. Lies and truth: A study of the development of the concept. *Child Development* 1990;61:211–220. [PubMed: 2307041]
- Talwar V, Lee K. Development of lying to conceal a transgression: Children's control of expressive behavior during verbal deception. *International Journal of Behavioral Development* 2002;26:436–444.
- Talwar V, Lee K, Bala N, Lindsay RCL. Children's conceptual knowledge of lying and its relation to their actual behaviors: implications for court competence examinations. *Law and Human Behavior* 2002;26:395–415. [PubMed: 12182530]

- Tye MC, Amato SL, Honts CR, Devitt MK, Peters D. The willingness of children to lie and the assessment of credibility in an ecologically relevant laboratory setting. *Applied Developmental Science* 1999;3:92–109.
- Wilson JC, Pipe M. The effects of cues on young children's recall of real events. *New Zealand Journal of Psychology* 1989;18:65–70.
- Wimmer H, Gruber S, Perner H. Young children's conception of lying: Lexical realism-moral subjectivism. *Journal of Experimental Child Psychology* 1984;37:1–30.

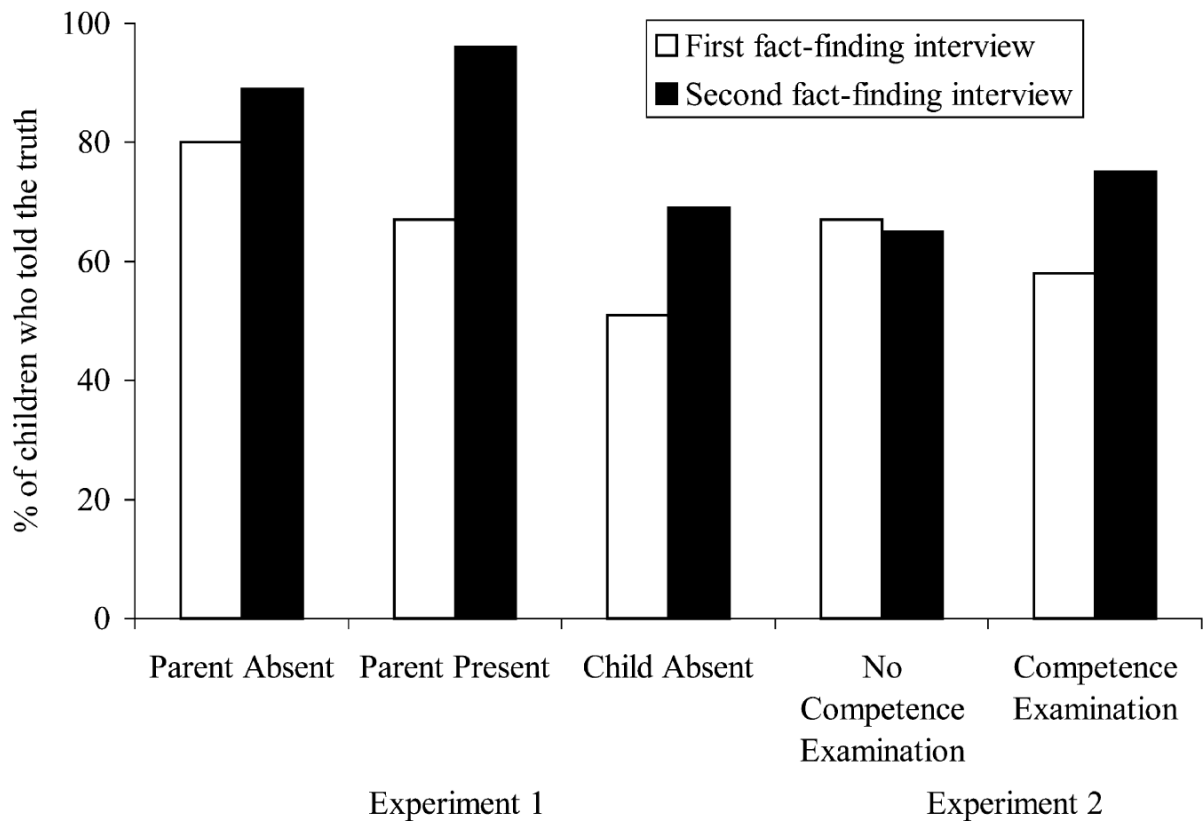


Fig. 1. Percentage of children who told the truth in the conditions of Experiments 1 and 2.

Table 1
 Percent of Truthful Responses (Frequencies) to the Four Critical Questions in Each Condition During the First and Second Fact-Finding Interview in Experiment 1

Conditions	First interview			Second interview		
	Parent absent	Parent present	Child absent	Parent absent	Parent present	Child absent
Question 1. What happened to the puppet? ("Mom broke it")	52 (24/46)	46 (21/46)	22 (10/45)	85 (39/46)	96 (43/46)	60 (27/45)
Question 2. Did you break the puppet? ("No")	100 (46/46)	98 (45/46)	100 (45/45)	100 (46/46)	100 (46/46)	100 (45/45)
Question 3. Did your mom (dad) break it? ("Yes")	80 (37/46)	67 (31/46)	51 (23/45)	89 (41/46)	96 (43/45)	69 (31/45)
Question 4. Did someone else break it? ("No")	98 (45/46)	96 (44/46)	76 (34/45)	91 (42/46)	91 (42/46)	78 (35/45)

Note. Typical responses in brackets.

Table 2

Percent of Truthful Responses (Frequencies) to the Four Critical Questions During the First and Second Fact-Finding Interview in Experiment 2

Conditions	First interview		Second interview	
	No competence examination	Competence examination	No competence examination	Competence examination
Question 1. What happened to the puppet? ("Mom broke it")	53 (17/32)	31 (10/32)	59 (19/32)	53 (17/32)
Question 2. Did you break the puppet? ("No")	97 (30/31)	97 (31/32)	94 (29/31)	100 (32/32)
Question 3. Did your mom (dad) break it? ("Yes")	69 (22/32)	56 (18/32)	66 (21/32)	75 (24/32)
Question 4. Did someone else break it? ("No")	87 (27/32)	78 (25/32)	94 (29/31)	91 (29/32)

Note. Typical responses in brackets.