Children's Confession- and Lying-Related Emotion Expectancies: Developmental Differences and Connections to Parent-Reported Confession Behavior

Craig E. Smith[1] and **Michael T. Rizzo**[2]

[1]University of Michigan, Center for Human Growth and Development, North Ingalls Building, 10th Floor, 300 N. Ingalls Street, Ann Arbor, MI 48109, 617-875-9469, craigsm@umich.edu

[2]Department of Human Development and Quantitative Methodology, 3304 Benjamin Building, University of Maryland, College Park, MD 20742, mtrizzo@umd.edu

Abstract

Young children understand that lying is wrong, yet little is known about the emotions children connect to the acts of lying and confessing, and how children's emotion expectancies relate to real-world behavior. In the present study, 4-to-9-year-old children ($N = 48$) heard stories about protagonists 1) committing transgressions, 2) failing to disclose their misdeeds, and 3) subsequently lying or confessing. Younger children (4-to-5 years) expected relatively positive feelings to follow self-serving transgressions, failure to disclose, and lying, and they often used gains-oriented- and punishment-avoidance-reasoning when justifying their responses. Older children (7-to-9 years) had the opposite pattern of emotional responses (better feelings linked to confession, compared to lying). Older children expected a more positive parental response to a confession than did younger children. Further, children who expected more positive parental responses to confession were reported by parents to confess more in real life than children who expected more negative parental responses to a confession. Thus, the present research demonstrates a link between children's emotion expectancies and actual confession behavior.

Keywords

guilt; emotion; emotion attribution; confession; lying; moral development

Following a furtive transgression, non-disclosure, confession, and lying are all options. And although very young children understand that transgressions like hitting and stealing are wrong (Smetana, 1981), and that lying to cover them up is also wrong (Talwar, Lee, Bala, & Lindsay, 2002), children are also aware of the potential negative repercussions of disclosing a transgression (e.g., Rotenberg, Betts, Eisner, & Ribeaud, 2012). Thus, following a transgression, children must decide how to respond. How children respond to transgression

-- and expect others to respond -- is likely linked to both transgression-related emotion expectancies (e.g., fear of punishment), as well as developments in their moral evaluations of transgression and behaviors such as non-disclosure, lying, and confession.

Young children often expect positive emotions in people who achieve a desired outcome via moral transgression (e.g., pushing someone to gain access to a toy; Lake, Lane, & Harris, 1995; Nunner-Winkler & Sodian, 1988; Smith & Warneken, 2014). By about age 8, however, this so-called "happy victimizer" expectancy is less common; children increasingly view successful transgressors as feeling a mix of positive and negative emotions (Arsenio & Kramer, 1992). However, children are more likely to attribute guilty emotions when the self -- compared to another child -- is imagined as the transgressor (Keller, Lourenço, Malti, & Saalbach, 2003), indicating that the framing of moral violations can have important consequences for emotion expectancies.

Studies in this line of research often include measures of children's moral reasoning. The development of children's moral reasoning is typically assessed using the same approach employed in the present study: by asking children to explicitly justify their initial responses (e.g., evaluations, predictions, emotion attributions, etc.). In a recent review, Malti and Ongley (2014) discussed the development of moral reasoning and observed that, across a wide range of studies, age-related changes in moral reasoning have been linked to age-related changes in evaluations and judgments. We note, however, the caution provided by the moral intuitionism perspective (e.g., Haidt, 2001), wherein reasoning provided after a judgment or attribution should not necessarily be viewed as underlying that initial response. Nonetheless, collecting data on children's reasoning, in addition to their behaviors, expectations, and judgments, can provide valuable information regarding the development of children's moral thinking (Rizzo & Killen, 2016).

A typical finding, when assessing moral reasoning in this area of research, is that even preschoolers understand that moral transgressions are particularly wrong compared to transgressions of social convention, and they primarily voice concerns for fairness and others' welfare when reasoning about moral transgressions (Killen & Smetana, 2015). Importantly, these findings also hold for gains-oriented moral transgressions, where the protagonist stands to benefit from the transgression (e.g., stealing a desired toy; Smetana, 1981). Yet, as noted above, young children also tend to view self-serving transgressors as feeling good, despite having committed an acknowledged moral wrong (e.g., Arsenio & Kramer, 1992; Nunner-Winkler & Sodian, 1988). When asked to provide their explicit reasoning for such attributions, children in the preschool years typically focus their comments on the gains of the transgressor, even when they also readily acknowledge that the victim feels upset (Arsenio & Kramer, 1992; Smith et al., 2010). However, by the age of 7 or 8, children reason in a different manner; they tend to consider that, for a self-serving transgressor, both the ill-won gains and the harm done to others will exert influences on the conscience of a transgressor (Arsenio, Gold, & Adams, 2006). This type of reasoning is associated with older children's tendency to attribute mixed feelings to a self-serving transgressor (both positive emotion and guilt; Arsenio & Kramer, 1992). These developmental advances in moral reasoning may be influenced by the development of more general capacities to reason about multifaceted social situations. For example, preschool-age

children have difficulty acknowledging that a person can experience emotions of different valances about the same event (e.g., feeling happy that one's missing dog has returned, but sad that the pet has been injured; Harris, 1989). In some studies, it is not until age 8 that children expect mixed-valance emotional responses to stem from these types of events (Wintre & Vallance, 1994). Thus, children's developing ability to process social and emotional complexities may be related to their ability to engage in more complex moral reasoning (e.g., reasoning about the types of emotions a moral transgressor might experience).

Although the emotion expectancies involved in the happy victimizer phenomenon are relatively well-studied, less is known about the emotions children associate with the social interactions that follow moral transgressions (e.g., lies, confessions). One line of research that has addressed this question has focused on the role of apologies in mending post-transgression social rifts. This research has shown that children understand that post-transgression apologies signal remorse on the part of a victimizer and can effectively soothe the upset feelings of a victim (Smith, Chen, & Harris, 2010; Vaish, Carpenter, & Tomasello, 2011). Related studies have explored what children understand about post-transgression responses such as excuses and disclaimers (e.g., Bennett, 1990), but the questions in such studies typically focus on variables such as punishment deservingness, and not on emotion. The present research makes a novel contribution to this area of the developmental literature by exploring the emotions children associate with post-transgression non-disclosure, lying, and confession. We tested developmental hypotheses related to this topic, and also tested hypothesized connections between children's confession-related emotion expectancies and their actual tendencies to confess, as reported by their parents. We next review the most relevant existing literature on non-disclosure, lying, and confession. We then describe the present study in greater detail, and lay out the hypotheses that guided our research.

Emotion Expectancies Linked to Non-Disclosure

Directly following a transgression, and before an authority figure has gained knowledge of the incident, children must decide whether they will report their misdeed or simply stay quiet (i.e., lie by omission). From a developmental perspective, relatively little is known about lying by omission, compared to what is known about explicit lying or confessing behavior. The existing research indicates that, by three years of age, children assert that individuals should tell the truth (Lyon & Dorado, 2008; Talwar & Lee, 2008). In the one study that directly assessed lying by omission, Lake et al. (1995) presented 4-to 9-year-old children with a story in which a character committed a transgression, initially failed to disclose his or her misdeed, but ultimately confessed to a parent. Both the younger and older children needed prompting to acknowledge that bad feelings might accompany the non-disclosure of a misdeed, and that good feelings might accompany confession. Thus, spontaneous acknowledgment of guilt related to non-disclosure was not the norm. Nevertheless, in a resistance-to-temptation paradigm used in the same study, those who resisted the temptation to cheat in a game were more likely than those who did not to recognize that bad feelings can accompany the non-disclosure of a misdeed.

The unprompted self-disclosure of a misdeed can be difficult for young children. Consistent with the findings from Lake et al. (1995), Bussey and colleagues conducted a series of experiments that indicate that the positive emotions linked to self-disclosure appear later in childhood. Although preschoolers, 2nd-graders, and 5th-graders all understand that lying is worse than truth-telling and is linked to greater self-censure (Bussey, 1992), preschoolers are less likely than older children to report that self-disclosure is right (Bussey & Grimbeek, 2000), and less likely to anticipate positive emotions stemming from truthfulness. Given that younger children failed to anticipate positive outcomes associated with self-disclosure, it is possible that they do not understand the importance of self-disclosure and the reasons why lying by omission is wrong. No research to date has examined children's justifications for their emotion expectancies regarding self-disclosure, something that we did in the present research.

Lying-Related Emotion Expectancies

A large body of research exists on children's lying. A number of studies have established that children as young as three tell lies, especially following a transgression (Chandler, Fritz, & Hala, 1989; Lewis, Stanger, & Sullivan, 1989; Polak & Harris, 1999), and that lying behavior increases throughout childhood (Lee, 2013). With age, children become increasingly proficient at maintaining lies (Talwar & Lee, 2002), and this competence is linked to the development of more complex mental-state understanding (Talwar, Gordon, & Lee, 2007; Talwar & Lee, 2008). Children also recognize multiple different types of lies, including those for personal gain, for others' protection, and for serving prosocial functions (Lee, 2013).

Children arrive at a clear conceptual understanding of telling lies versus telling the truth at an early age. When presented with a story character who lied about a transgression, most 3-7-year-old children correctly identified the transgressor's account as a lie, asserted that the truth was preferable to a lie, and rated the lie as a bad act (Talwar, Lee, Bala, & Lindsay, 2002). Yet, despite the empirical attention that has been paid to children's production and understanding of lies, surprisingly little is known about the emotions that children associate with telling a lie. While children may be aware that lying is wrong, they may associate positive feelings with this act at a young age (akin to the "happy victimizer" expectancy discussed above). Whether children choose to lie and avoid disclosure or to confess in the wake of a transgression is likely influenced by the emotions children associate with each option. Support for this notion comes from Smetana et al., who found that fear of parental disapproval or punishment was a predictor of non-disclosure among adolescents (Smetana, Villalobos, Tasopoulos-Chan, Gettman, & Campione-Barr, 2009). In the present study we directly examined the emotions children associate with lying, and the justifications children give for these expectancies.

Confession-Related Emotion Expectancies

Confession is not an uncommon act in early childhood. In a study of parental reports, 67% of children aged two years and under were reported by their mothers to have confessed a misdeed at least once; the percentage rose to 95% among 3-year-olds (Kochanska, DeVet,

Goldman, Murray, & Putnam, 1994). A major inhibitor to children's confession behavior is the expectation of punishment (Lyon & Dorado, 2008; Talwar & Lee, 2011). Wagland and Bussey (2005) found that children were more likely to expect transgressors to tell the truth when they were encouraged compared to than when they were not, particularly when the possibility of punishment was salient. Further, Talwar, Arruda, & Yachison (2015) found that 4- to 8-year-old children were more likely to tell the truth following a transgression when the virtue of honesty was promoted, relative to when children expected punishment to follow a confession. In sum, young children do confess after mistakes and misdeeds, and the threat of punishment is a factor that influences children's willingness to confess. However, children's expectations regarding the emotional repercussions of confession, and the justifications children give for these expectations, remain largely unexamined. Thus, examining children's confession-related emotion expectancies was one of the central goals of the present study, as was assessing the linkage between these emotion expectancies and their real-world confession behavior.

The Present Research

We assessed children's emotion expectancies, and their justifications for those expectancies, with regard to a moral transgression, the non-disclosure of that transgression, and a subsequent lie or confession about the same transgression. The experimenter read two illustrated vignettes aloud to each child; each vignette contained three episodes.

In Episode 1 of each vignette, participants were presented with a fictional child who committed a moral transgression in order to satisfy a personal desire. Given the previous work on the "happy victimizer" expectancy (Arsenio & Kramer, 1992; Nunner-Winkler & Sodian, 1988), we anticipated that younger children would attribute positive post-transgression emotions, and that this tendency would decrease with age.

In Episode 2 of each vignette, the transgressor failed to self-disclose the transgression to a parent. Given the previous work on this topic (Bussey, 1992; Bussey & Grimbeek, 2000), we anticipated that the 4-to-5-year-old children would focus on the avoidance of punishment when attributing relatively positive emotions to the non-disclosing transgressor, whereas the 7-to-9-year-old children would be more likely to focus on the wrongfulness of non-disclosure when attributing relatively negative emotions to the transgressor.

Finally, in Episode 3, one vignette ended with the transgressor lying about the transgression and the other vignette ended with the transgressor confessing. Given the related, above-mentioned work on children's understanding of lying by omission, we expected that the 4-to-5-year-old children would be more likely to focus on the avoidance of punishment when attributing relatively positive emotions to the lying transgressor, whereas the 7-to-9-year-old children would be more likely to focus on the problematic nature of lying when attributing relatively negative emotions to the liar. Further, given the literature indicating the influence of punishment expectations on young children's confession behavior (e.g., Lyon & Dorado, 2008), we expected that the 4-to-5-year-old children would be more likely to focus on the punishment of a transgressor who confesses and to attribute relatively negative emotions to that transgressor. Conversely, we expected that the 7-to-9-year-old children would be more

likely to focus on the virtue of honesty when attributing relatively positive emotions to the confessing transgressor.

In Episode 3 of the confession story, children were also asked about how the protagonist's mother would feel about her son's confession. Here, based on past findings that older children have more insight than younger children into the positive aspects of disclosure (Bussey, 1992; Bussey & Grimbeek, 2000), we expected that the 7-to-9-year-olds would be more likely than the younger children to report that a parent would feel happy about her child's confession, regardless of the parent's feelings about the child's actual misdeed.

As noted earlier in the Introduction, as children develop, their explicit moral reasoning reflects a deepening understanding of why an individual may behave or feel a certain way. For example, with increasing age their moral reasoning reflects a growing capacity to coordinate multiple concerns (e.g., feeling bad about lying but relieved about not being in trouble). We note that our hypotheses about children's moral reasoning, laid out above, were influenced by the literature on this topic (see Killen & Smetana [2015] for a recent review of the literature on the development of moral reasoning).

Finally, we were also interested in whether children's confession-related emotion expectancies would predict their real-world tendencies to engage in confessing behavior. Thus, parents of participants completed the child confession subscale from the Kochanska et al. (1994) Conscience Measure. We tested two hypotheses related to children's parent-reported confessing behavior: (1) that children who anticipated positive emotions in a confessor would themselves be more likely to engage in real-world confessing behavior, and (2) that children who predicted positive emotions in a parent hearing a confession would be more likely to engage in real-world confessing behavior.

Method

Participants

Twenty-four 4-to-5-year-olds (M = 5;3, SD = 6 months; 9 females) and twenty-four 7-to-9-year-olds (M = 8;3, SD = 9 months; 10 females) were recruited from Boston-area preschools and elementary schools. Testing took place in calm spaces in the schools (e.g., quiet hallways or offices). Although the sample contained a range of ethnic and socioeconomic (SES) groups, the majority of the children were White and middle-class.

Materials and Procedure

Parental reports on children's confessing—To measure each child's inclination to confess following a misdeed or mishap, we administered the 7-item confession subscale from the Kochanska et al. (1994) Conscience Measure to each parent. Based on parental feedback during pilot testing, we modified the original 7-point response scale to incorporate just four choices: (1) extremely uncharacteristic of my child, (2) somewhat uncharacteristic of my child, (3) somewhat characteristic of my child, and (4) extremely characteristic of my child. Parents used this scale to respond to items concerning their children's tendency to confess (5 items; e.g., *Will confess to a wrongdoing, even if unlikely to be found out*) and lie (2 items; e.g., *May deny that she or he did something wrong even if confronted with the*

evidence). After the two lying items were reverse scored, internal consistency was assessed. The two lying items reduced the internal consistency of the scale, and an exploratory factor analysis indicated that the two lying-focused items loaded onto one factor while the five confession-focused items loaded onto another. For the purposes of the present study, only the five confession-focused items were used to create a parent-report measure of children's confessing behavior. One parent did not properly complete the parent survey; thus, analyses involving the parent-report confession data included 47 data points instead of 48. The five-item confession scale had excellent internal consistency, $\alpha = .88$.

Child interview—Each child was presented with two illustrated stories depicting moral transgressions committed by a fictional transgressor (story outlines were adapted from Lake et al., 1995; see Appendix for the full text of the stories). In one story, the transgressor[3] stole candy from a friend (Stealing Story), and in the other story, the transgressor pushed a child to the ground in order to obtain a playground swing (Aggression Story). Story themes were modeled after existing stories that have been used to explore children's "happy victimizer" expectancies (e.g., Arsenio & Kramer, 1992; Nunner-Winkler & Sodian, 1988; Smith et al., 2010).

Each story contained three distinct episodes: (1) the protagonist transgresses in order to obtain a desired object; (2) the protagonist fails to disclose his misdeed to a parent; and (3) the protagonist ultimately either confesses (e.g., "I stole the candy") or lies (e.g., "The dog ate the candy") about his misdeed. In key illustrated frames of the stories, faces were obscured to avoid biasing children's emotion attributions. All children heard one story in which Episode 3 consisted of a confession and one story in which Episode 3 consisted of a lie. Half of the children heard the Stealing Story end with a lie and the Aggression Story end with a confession, and the remaining children heard the reverse arrangement; story order was counterbalanced across children.

Interview questions followed each episode in each story. In Episode 1, after the transgressor committed the self-serving moral transgression, children were asked: (1) what they thought the transgressor was feeling (open-ended emotion attribution); (2) how intense that feeling was ("a little or lot?"); and (3) why he was feeling that way (attribution justification). In Episode 2, after the transgressor chose to not disclose his misdeed, the same three questions were asked again, with specific reference to the act of non-disclosure. In Episode 3, after the transgressor was shown breaking his silence and speaking to his mother about the focal event (with either a lie or a confession), children were asked another round of emotion attribution questions about the transgressor (what emotion, how much, and why).

---

[3]Based on the fact that research in moral development fails to yield consistent gender differences (for a full review see Killen & Smetana, 2015), we had no a priori reason to expect that the boys and girls in this study would differ in their approach to attributing emotions to the transgressor, or to the transgressors' mother. Related studies using story characters matched to participant gender have found no gender differences in responding (e.g., Smith et al., 2010). The present study utilized a male protagonist, Bill, and a female parent figure, Bill's mother, as the characters in all of the vignettes. As is reported below, no gender differences were found in the present study, in which the same male fictional protagonist and a female parent figure were used for all participants. This suggests that children's ability to coherently attribute emotion to others in simple scenarios does not hinge on the extent to which gender is matched between the participant and story protagonist

A manipulation check was used in the Lying Condition to ensure that children were aware of the fabrication. After children saw the transgressor lie to his mother, they were asked, for example, "Did the dog really eat the candy?" All children answered the manipulation-check question correctly on the first query.

In a final series of questions in the Confession Condition, children were asked how the transgressor's mother would feel about hearing her son's confession:

> After Bill told his mom about taking the candy, how do you think his mom feels? She might be mad that he took the candy…but how does she feel about Bill telling her that he had done something wrong? Will she feel happy or mad that he told her?

If a participant responded, "Mad" a follow-up probe was used:

> Some kids think that Bill's mom would be mad because Bill did something wrong. But they also think that Bill's mom will be happy that Bill told her what he did. Do you think that Bill's mom could be happy that he told her the truth about what he did?

This line of questioning was drawn almost directly from Lake et al. (1995), and it was designed to do a number of things. First, it was designed to ensure that children provided an answer to the particular question being asked: what Bill's mother will feel about the *confession*, not what she will feel about the *transgression*. This step was taken out of concern that the 4-to-5-year-olds would be especially likely to focus on the transgression when attributing an emotion to the mother, and would thus fail to provide data on the question of interest. Second, the additional probe was used to assess whether, once the notion that a parent could be happy with a child's confession was introduced, children who hadn't spontaneously responded this way would view it as conceivable. We note that the wording of the additional probe did not indicate what the experimenter thought was correct, and the experimenter took care to deliver the question without suggesting that participants should agree with the 'kids' that were mentioned.

Scoring

All of the emotion terms children supplied during the interview (e.g., *sad*, *happy*, *good*, *bad*, *glad*, *not so good*, etc.) were coded by one rater as either positive or negative. A second rater, blind to the goals of the study, categorized the Episode 1 emotion terms as positive or negative, and interrater agreement was 100%. Next, all of the coded, valenced responses were assigned intensity scores based on whether children had said that the transgressor was feeling a little or a lot of the stated emotion. This resulted in a 4-point emotion-attribution scale for all emotion attributions to the transgressor characters: (1) a lot of negative emotion, (2) a little negative emotion, (3) a little positive emotion, and (4) a lot of positive emotion.

As noted, when asked about the mother's emotions, participants received up to two probes to determine if they were able to recognize that the mother might have positive feelings regarding her son's confession. The responses were scored from 1-3: (1 = positive emotion mentioned spontaneously mentioned after first probe; 2 = positive mentioned after second, more directive probe; 3 = positive emotion not mentioned).

Coding categories for justifications—Across the three episodes, participants were asked to justify their emotion attributions to the transgressor. The justification categories used throughout this study were adapted from previous studies examining the 'happy victimizer' phenomenon (for examples, see: Gummerum et al., 2016; Keller et al., 2003; Malti, Eisenberg, Kim, & Buchmann, 2013; Smith et al., 2010; Smith & Warneken, 2014). Because the present study had a unique focus on children's emotion attributions in the context of lies, confessions, and non-disclosures, it was necessary to modify existing coding schemes to add codes that accounted for explicit mentions of these post-transgression behaviors (e.g., it was necessary to create a coding category to account for responses that explicitly linked lying to positive emotion).

In total seven codes used to categorize children's justifications were borrowed directly from previous research, or were adapted to fit the focus of the present study: (i) *Transgression-Oriented* (mention of concerns about the moral principles of fairness and avoidance of harm; e.g., "He feels bad because he took his friend's candy"); (ii) *Sanction-Oriented* (mention of concerns about punishment or negative consequences; e.g., "He feels scared because his friend might find out"); (iii) *Gains-Oriented* (references to the gains of the transgressor; e.g., "He feels good because now he has the candy to munch on"); (iv) *Happy Deceiver* (references to good feelings or gains linked to non-disclosure; e.g., "He feels good because he likes that he tricked his mom"); (v) *Unhappy Deceiver* (references to a negative aspect of non-disclosure, or to the rightness of disclosure; e.g., "He feels bad because he wasn't honest" or "He feels bad because he should have told his mom"); (vi) *Disclosure-Favoring* (references to negative aspects of lying, or positive aspects of confession); and (vii) uncodable responses that did not fit the other categories. Interrater agreement was assessed individually for each Episode, and was good for all three episodes (Episode 1: $\kappa = .89$, Episode 2: $\kappa = 90$, Episode 3: $\kappa = 87$); discrepancies were resolved via discussion. We also note that it was not possible to use all of the same coding categories in each episode, because certain codes were not relevant in certain episodes (e.g., the *Happy Deceiver* category was not relevant in the first episode, in which the protagonist's decision to avoid disclosure had not yet occurred).

Results

Initial tests for the effects of child gender, condition order, and transgression type (aggression vs. stealing) were carried out in all analyses. However, these variables never emerged as significant, and thus were not included in the analyses reported below.

Prior to any questions about emotion, the transgressor in each story was initially shown thinking about stealing or pushing to get an object. In response to a simple question about whether such a course of action was right or wrong, all children asserted that it was unacceptable for the transgressor to steal or push to get what he wanted.

Episode 1: Emotions Attributed to the Transgressor after Stealing/Pushing

After children saw the story protagonists satisfy desires via transgression in Episode 1 of both stories, they were asked how these characters would feel. Children's emotion attributions to the transgressors were examined with a 2 (age group) × 2 (story ending:

confession vs. lying) mixed-measures ANOVA. As expected, given that the first episodes in both stories (confession vs. lying) were equivalent, the effect of story type was not significant, $F(1, 46) = 0.23$, $p = .64$ More importantly, as compared to the 4-to-5-year-old group ($M = 3.13$), the 7-to-9-year-old children ($M = 2.52$) attributed feelings that were significantly more negative, $F(1, 46) = 4.81$, $p = .03$, $n_p^2 = .10$. There was no significant interaction between the two factors, $F(1, 46) = 1.24$, $p = .27$.

Participants primarily justified their attributions using the *Transgression-Oriented* and *Gains-Oriented* justification categories in Episode 1. As expected, given the similarities in Episode 1 across the two stories, a McNemar test did not find differences in the types of justifications that children offered based on story type (confession vs. lying), $p = .22$. Accordingly, scores were summed across the two stories, such that each child could receive a score of 0, 1, or 2 for each type of justification. Mean scores are shown in Figure 1. A 2 (age group) × 2 (justification type) mixed-measures ANOVA revealed a main effect of justification type, $F(1, 46) = 7.62$, $p < .01$, $n_p^2 = .14$, and a significant age × justification type interaction, $F(1, 46) = 4.10$, $p = .05$, $n_p^2 = .08$. The interaction was explored with a series of simple effects analyses. The 4-to-5-year-olds ($M = 1.50$) provided significantly more Gains-Oriented responses than did the 7-to-9-year-olds ($M = 1.00$), $F(1, 46) = 4.60$, $p = .04$, $n_p^2 = .09$. Conversely, there was a trend for older children ($M = .83$) to offer more Transgression-Oriented justifications than younger children ($M = .42$), $F(1, 46) = 3.29$, $p = .08$, $n_p^2 = .07$. The 4-to-5-year-olds were significantly more likely to supply Gains- compared to Transgression-oriented responses, $F(1, 46) = 11.45$, $p < .01$, $n_p^2 = .20$, whereas the 7-to-9-year-olds did not provide one type of response more often than the other, $p = .61$.

Episode 2: Emotions Attributed to the Transgressor after Non-Disclosure

In the second episode, children were asked how the protagonist would feel about not telling his mother about his misdeed. Children's Episode 2 emotion attributions to the transgressor were examined with a 2 (age group) × 2 (story ending: confession vs. lying) mixed-measures ANOVA. As expected, given the similarities across the two stories in Episode 2, the effect of story type was not significant, $F(1, 46) = 1.13$, $p = .29$. However, the effect of age was significant. Compared to the 4-to-5-year-old children ($M = 2.67$), the 7-to-9-year-old children ($M = 1.71$) attributed more negative feelings to the non-disclosing transgressor, $F(1, 46) = 17.31$, $p < .001$, $n_p^2 = .27$. The interaction between the two factors was not significant, $F(1, 46) = 1.13$, $p = .29$.

Participants primarily justified their attributions using the *Happy Deceiver, Unhappy Deceiver, Sanction-Oriented*, and *Transgression-Oriented* justification categories in Episode 2. Examining the four codable types of justifications with a marginal homogeneity test revealed that there were no differences in the frequencies of Episode 2 justifications across the two stories, $p = .59$. Accordingly, each child was given a score ranging from 0-2 representing the number of times he or she provided each of the four justification types across the two stories. Mean scores are shown in Figure 2. A 2 (age group) × 4 (justification type) mixed-measures ANOVA revealed a significant age × justification interaction, $F(3,$

138) = 4.42, $p = .005$, $n_p^2 = .09$. The main effects of justification type, $F(3, 138) = 1.95$, $p = .13$, and age group, $F(1, 46) = 0.00$, $p = 1.00$, were not significant. Simple effects analyses established that the younger group ($M = .63$) gave more Happy Deceiver justifications than did the older group ($M = .21$), $F(1, 46) = 4.89$, $p = .03$, $n_p^2 = .10$. By contrast, the older group ($M = .75$) provided Unhappy Deceiver justifications more often than did the younger group ($M = .13$), $F(1, 46) = 10.21$, $p < .01$, $n_p^2 = .18$. The younger and older groups did not differ across the sanction-oriented ($p = .54$) and transgression-oriented ($p = .57$) response categories.

Episode 3: Emotions Attributed to the Transgressor after Lying/Confessing

In Episode 3, one of the two stories presented to each child ended with the transgressor lying, and the other ended with the transgressor offering a confession. Children's Episode 3 emotion attributions to the transgressor were examined with a 2 (age group) × 2 (story ending: confession vs. lying) mixed-measures ANOVA. As expected, the age × story ending interaction emerged as significant, $F(1, 46) = 12.37$, $p < .001$, $n_p^2 = .21$ (see Figure 3). The main effects of age group, $F(1, 46) = 0.93$, $p = .34$, and story ending, $F(1, 46) = 0.28$, $p = .60$, were not significant.

Analyses of simple effects were used to explore the nature of the interaction. The 4-to-5-year-old children viewed the lying transgressor ($M = 2.46$) as feeling significantly better than the confessing transgressor ($M = 1.75$), $F(1, 46) = 4.47$, $p = .04$, $n_p^2 = .09$. Conversely, the 7-to-9- year-old children viewed the confessing transgressor ($M = 2.75$) as feeling significantly better than the lying transgressor ($M = 1.79$), $F(1, 46) = 8.18$, $p < .01$, $n_p^2 = .15$. Hence, younger children's emotion attributions to the lying transgressor were more positive than were older children's, $F(1, 46) = 5.12$, $p = .03$, $n_p^2 = .10$. Correspondingly, older children's emotion attributions to the confessing transgressor were more positive than were younger children's, $F(1, 46) = 11.75$, $p < .001$, $n_p^2 = .20$.

Participants primarily justified their attributions using the *Discolsure-Favoring, Sanction-Oriented, Transgression-Oriented*, and *Happy-Deceiver* justification categories in Episode 3. A marginal homogeneity test was used to analyze potential differences in the frequencies of Episode 3 justifications across the Lying and Confession conditions. The Happy-Deceiver responses were omitted from this analysis, given that these responses were only relevant in the Lying condition. No significant differences in the frequencies of the remaining response categories were found across the two story endings, p = .67.

Each child received a score ranging from 0-2 representing the number of times he or she provided Disclosure-, Sanction-, and Transgression-Oriented justifications across the two stories. Figure 4 shows children's mean scores as a function of age and justification type. A 2 (age group) × 3 (justification scores) mixed-measures ANOVA revealed a significant main effect of justification, $F(2, 92) = 6.00$, $p = .004$, $n_p^2 = .12$. However, this was qualified by a significant age × justification interaction, $F(2, 92) = 9.96$, $p < .001$, $n_p^2 = .18$. The main effect of age was not significant, $F(1, 46) = 2.98$, $p = .09$.

Analyses of simple effects, used to clarify the interaction, indicated that the 7-to-9-year-olds ($M = 1.17$) gave more Disclosure-Favoring justifications than did the 4-to-5-year-olds ($M = .33$), $F(1, 46) = 16.91$, $p < .001$, $n_p^2 = .27$. There were no differences in the frequencies of Sanction- ($p = .10$) and Transgression-Oriented ($p = .15$) justifications as a function of age group. Within the younger group, there were no significant differences in the frequencies with which the three types of justifications were supplied (all p-values $> .23$). The older children, however, supplied Disclosure-Favoring justifications ($M = 1.17$) more often than Sanction- ($M = .29$) and Transgression-Oriented ($M = .17$) justifications (both pairwise p-values $< .001$).

Finally, in the Lying condition only, the 4-to-5-year-olds (33%) were no more likely than the 7-to-8-year-olds (21%) to provide a Happy Deceiver response, $\chi^2(1, N = 48) = 0.95$, $p = .33$.

Episode 3: Emotions Attributed to the Confessor's Mother

To examine age-related expectations of parental emotions following a confession, an independent-samples t-test was conducted; the difference between the age groups was significant, $t(46) = 3.52$, $p < .001$, $d = 1.03$. The younger group's mean ($M = 1.67$) on the prompt scale indicated that, on average, many children in this group needed two questions -- one of them being highly directive -- before they acknowledged that the mother might feel have positive feelings after her son's confession. (An inspection of the distribution of younger children's responses confirmed that the mean of 1.67 was not driven by a bimodal response pattern.) The older group, on average ($M = 1.08$), needed just the single, open-ended question about the mother's feelings in order to acknowledge that she might feel good about her son's confession.

Associations with Children's Parent-Reported Confessing Behavior

Two final analyses tested the hypothesis that children's thinking about confession-related emotions would predict their real-world confessing behavior, as reported by their parents (recall that parent-reported confession scores had a possible range from 1 to 4).

We first tested whether children's attributions of positive vs. negative emotion to the confessing transgressor predicted their own confessing behavior. This was done with a 2 (age group) $\times$ 2 (emotion attribution to confessor: positive vs. negative valence) ANOVA, with the parent-report confession scale as the outcome measure. There was no effect of age group ($p = .67$) or of the emotion attributed to the confessor ($p = .55$).

We next tested whether children's *initial* attributions of positive vs. negative emotion to the recipient of the confession (the mother) predicted their own parent-reported confessing behavior. A 2 (age group) $\times$ 2 (initial emotion attribution to confession recipient: positive vs. negative) ANOVA yielded a non-significant effect of age ($p = .10$). However, there was a significant effect of the valance of the initial emotion attributed to the confession recipient, $F(1, 43) = 4.62$, $p = .04$, $n_p^2 = .10$. Children who attributed an initial negative emotion to the mother were less likely to engage in real world confessing behavior ($M_{\text{4-to-5-year-olds}} = 2.95$; $M_{\text{7-to-9-year-olds}} = 2.10$) compared to children who initially expected the mother to reactive

positively to her child's confession ($M_{\text{4-to-5-year-olds}} = 3.18$; $M_{\text{7-to-9-year-olds}} = 3.07$). The age × emotion attribution interaction was not significant.

Discussion

Children understand from an early age that people feel good when they satisfy their desires, and feel bad when their desires are frustrated (Lagattuta, 2005). However, a tension exists where self-serving moral transgressions are concerned. When thinking about the emotions that stem from such acts, children are faced with both the achievement of a desired end (e.g., getting a playground swing) and the violation of a moral rule (e.g., the aggression involved in getting the swing). With age, children increasingly focus on moral rules and the experiences of victims when predicting emotional responses, and they increasingly talk about guilty or mixed feelings when questioned about the emotional consequences of self-serving transgressions (Arsenio & Kramer, 1992). Children are faced with a similar tension when it comes to deciding whether to lie about or confess to a moral transgression. The tension involves weighing personal desires (e.g., wanting to keep a stolen item, wanting to avoid punishment) against a standard that children are aware of from a young age: telling the truth is right and lying is wrong. Little is known about how children think about the emotional consequences of lying, confessing, and non-disclosure, and how these emotion expectancies relate to actual behavior. A novel contribution of the present research was to explore children's emotion expectancies related to each of these concerns within a single study. Below, we review the key findings in light of the extant literature, and then discuss implications and directions for future research.

In the context of stories that presented transgressors using aggression or theft to achieve a desire, we first replicated previous findings (e.g., Arsenio & Kramer, 1992; Nunner-Winkler & Sodian, 1988) that, compared to 4-to-5-year-olds, 7-to-9-year-old children attribute more remorseful feelings to self-serving transgressors. We then introduced a series of story lines in which the transgressors omitted mention of, lied about, or confessed to the misdeeds. A clear difference emerged between the younger and older children in their thinking about the emotional consequences of these acts. The younger children associated more positive feelings with both non-disclosure of and outright lying about the misdeed compared to the older children. Conversely, compared to the younger children, the older children associated more negative feelings with non-disclosure and lying, and more positive emotions with telling the truth about a moral transgression.

Additionally, throughout the interview, children were probed for their reasoning related to their emotion attributions. Consistent with our hypotheses, when justifying their positive emotion attributions to transgressors, younger children were more likely to focus on the gains associated with a self-serving transgression and the avoidance of punishment associated with non-disclosure. Conversely, older children were more likely to focus on the guilt and wrongfulness related to transgression, non-disclosure, and lying when justifying their negative emotion attributions to the transgressor. Further, younger children were also more likely to attribute negative emotions following a confession, focusing on the prospect of punishment, whereas older children were more likely to attribute positive emotions following a confession, focusing on the wrongfulness of lying and of the initial

transgression. These results are consistent with research showing that children recognize multiple moral, conventional, and personal concerns within a given context, and weigh these concerns differently at different ages (Killen & Smetana, 2015).

These results suggest that attributions akin to the "happy victimizer" expectancy appear in other aspects of transgression scenarios, after the initial transgression has taken place. For example, just as some children expect a protagonist to feel good after stealing (a moral breach) because he got what he wanted (e.g., candy), some children expect a protagonist to feel good after lying (a moral breach) because he got what he wanted (e.g., avoidance of punishment).

Finally, when asked to think about the reaction of the mother to her son's eventual confession, the 7-to-9-year-olds were more likely than the 4-to-5-year-olds to spontaneously anticipate that the mother would feel pleased by her son's confession. Further, children's expectations about a parent's emotion regarding a confession were related to their own likelihood of confessing in the home, as reported by parents. Children who spontaneously expected the mother to feel positively about the confession were more likely to be rated by their parents as prone to confessing transgressions in the home, compared to children who needed more prompting to conceive of the possibility that a parent would react positively to a confession. Thus, the present research demonstrates a novel and important link between children's own confession behaviors and their expectations regarding other's emotions.

The present findings are consistent in a number of ways with recent work on children's emotion attributions. For example, Lagattuta (2005) showed that, between the ages of 5 and 7, children increasingly link positive emotions to acts of willpower (i.e., inhibiting behaviors that will satisfy desires but that also involve standards violations). The act of confessing to a misdeed can be seen as a type of willpower act that involves overriding a response -- lying or non-disclosure -- that results in a benefit. The finding that children increasingly come to view confession as leading to positive emotion fits with Lagattuta's results.

Another important aspect of the present study is the connection that was established between children's emotion expectancies and their actual behavior. Moral development can been viewed as growth across the areas of cognition, behavior, and emotion. As such, emotions (both experienced and anticipated) have been a key focus for many researchers interested in moral cognition and behavior (e.g., Greene, Sommerville, Nystrom, Darley, & Cohen, 2001). While connections between *experienced* emotion and moral cognition/behavior and have been uncovered (e.g., Haidt & Hersh, 2001; Nichols, 2002; Pellizzoni, Siegal, & Surian, 2010), fewer links have been established between emotion expectancies and moral behavior, especially in children. However, a number of recent studies have shown that such associations do indeed exist. For example, a study with 3-5-year-olds uncovered a positive relation between children's anticipated guilt about committing a self-serving transgression and the amount they shared with an anonymous other child (Gummerum, Hanoch, Keller, Parsons, & Hummel, 2010). In a study with adolescents, Krettenauer and Eichler (2006) found that children who anticipated feeling bad about committing a desire-satisfying transgression were less likely to be involved in delinquent behavior. The present findings

offer further support for the claim that children are guided in their behavior, in part, by the emotions that they expect to result from various actions in the moral domain.

Another novel aspect of the present findings is that it was the emotional response children expected in an authority figure that was connected to children's observed behavior, as opposed to the emotions children anticipated feeling in themselves. Further research is needed to determine whether these emotion expectancies predict unique variance in children's confessing behavior after controlling for other, related variables, such as children's concerns about the punishment that may stem from an authority figure's affective reaction. For example, research is need to test whether children are motivated to elicit pride or pleasure in a caregiver with a confession, or are simply motivated to confess in order to reduce the likelihood or severity of punishment.

Another issue that deserves attention in future research is the extent to which children's predictions about the emotion-related aspects of lying and confession are accurate. Our research shed light on how children *think about* the emotions associated with lying and confessing, but little is known about how children *actually feel* after offering lies and confessions. Affective forecasting paradigms (e.g., Gilbert, Lieberman, Morewedge, & Wilson, 2004) have demonstrated that people often make errors in predicting how they will actually feel about a focal event, and recent research indicates that children may incorrectly anticipate the emotions that stem from receiving an apology (Drell & Jaswal, 2015). Thus, it is possible that although young children predict negative feelings following a confession, they may actually experience positive emotions; likewise, it is also possible that older children's more positive predictions are inaccurate.

In thinking about directions for future research we also note that, in order to assess how children expect a parent to react to a confession, rather directive follow-up probes were used by the interviewer (in line with Lake et al., 1995). These probes were used to disentangle participants' expectations of parental reactions to *confessions* and *transgressions* (e.g., "She might be mad that he took the candy…but how does she feel about Bill telling her that he had done something wrong?"). These probes were deemed necessary to ensure that children of all ages addressed the specific question of interest, and the experimenter took care to deliver the questions without biasing participants. However, the possibility exists that these follow-up questions influenced some children's responses. Future research should investigate children's ability to differentiate adult reactions to confessions and transgressions through a variety of assessments that alleviate concerns about potential experimenter influence.

Finally, we note a practical implication of the present research. Our findings indicate that children who anticipate a positive response from the recipient of a confession are themselves more likely to confess to their mishaps and misdeeds. This fits with recent research showing that children are more likely to tell the truth when the virtue of honesty is highlighted and the expectation of punishment is low (e.g., Talwar et al., 2015). Combined, studies in this area suggest that parents who signal a willingness to listen calmly to their children during tense or morally-charged conversations may have children who are more willing to approach them with confessions of transgressions and other misadventures.

Conclusions

In conclusion, the present study makes a unique contribution to developmental research on non-disclosure, lying, and confession by focusing on children's emotion expectancies related to these acts. Whereas 4-to-5-year-old children anticipate relatively positive lying-related and negative confession-related emotions, 7-to-9-year-olds expect the opposite pattern. Importantly, individual differences in these emotion expectancies predict actual confessing behavior in the home. Children who anticipated that an authority figure would be upset following a child's confession were rated by their own parents as less likely to confess, compared to children who expected an authority figure to be pleased by a child's decision to confess.

Acknowledgments

Appendix: Full Text of Stories

Stealing Story (interview guides show for Stealing Story only)

This is a story about a boy named Bill. Bill is playing at his friend's house. Bill goes into the kitchen to put a plate in the sink, and he sees his friend's candy on the table. Bill really wants to take the candy and put it in his pocket. *[Bill knows that it's not his candy. Is it okay if Bill takes the candy for himself?]*

Bill looks around. No one else is in the kitchen except his friend's dog. Bill takes the candy and puts it in his pocket. Later on, Bill goes home with the candy hidden in his pocket. *[How does Bill feel about taking the candy? Why does he feel that way?]*

At home, Bill's mom asks him what he did at his friend's house. He wonders if he should tell his mom about taking the candy. He decides not to tell his mom about taking the candy. *[How does Bill feel right after he doesn't tell his mom about taking the candy? Why does he feel that way?]*

Later that night, Bill is resting quietly in his bed, and his mom is getting ready to say goodnight.

[TWO POTENTIAL ENDINGS TO THE STORY]

a.	*Confession*: Bill sits up and decides to tell his mom something. He tells her about seeing the candy at his friend's house, and about how he took it without asking. *[How does Bill feel right after he tells his mom that he took the candy from his friend? Why does he feel that way?*
b.	After Bill told his mom about taking the candy, how do you think his mom feels? She might be mad that he took the

candy…but how does she feel about Bill telling her that he had done something wrong? Will she feel happy or mad that he told her? *If subject says 'mad,' use the following probe: Some kids think that Bill's mom would be mad because Bill did something wrong. But they also think that Bill's mom will be happy that Bill told her what he did. Do you think that Bill's mom could be happy that he told her the truth about what he did?]

c.   *Lie*: Bill sits up and decides to tell his mom something. He tells her that when he was in his friend's kitchen, he saw the dog eat the candy. *[Did the dog really eat the candy? How does Bill feel right after he tells his mom that the dog ate the candy? Why does he feel that way?]*

Pushing Story

This is a story about a boy named Bill. Bill is on the playground at school. Bill really wants play on the swing, but only one swing is open. Bill sees a girl walking over to the swing. Bill wonders if he should push the girl out of the way so he can get the swing. Bill looks around. No one else is watching. Bill walks over and pushes the girl out of the way and he gets on the swing first. When he gets home, Bill's mom asks him what he did at school. He wonders if he should tell his mom about pushing the girl to get the swing. He decides not to tell his mom about pushing the girl.

Later that night, Bill is sitting down, and his mom is quietly reading a book to herself.

[TWO POTENTIAL ENDINGS TO THE STORY]

a.   *Confession*: While Bill is sitting there, he decides to tell his mom something. He tells her that he pushed the girl at the playground. He tells his mom about pushing the girl out of the way so he could use the swing first.

b.   *Lie*: While Bill is sitting there, he decides to tell his mom something. He tells her that when he was playing on the playground, he saw the girl fall by accident near the swings.

References

Arsenio, WF., Gold, J., Adams, E. Children's conceptions and displays of moral emotions. In: Killen, M.Smetana, JG.Killen, M., Smetana, JG., editors. Handbook of Moral Development. Mahwah, NJ, US: Lawrence Erlbaum Associates Publishers; 2006. p. 581-609.

Arsenio W, Kramer R. Victimizers and their victims: Children's conceptions of the mixed emotional consequences of moral transgressions. Child Development. 1992; 63:915–927. DOI: 10.2307/1131243 [PubMed: 1505247]

Bennett M. Children's understanding of the mitigating function of disclaimers. The Journal of Social Psychology. 1990; 130:29–37. DOI: 10.1080/00224545.1990.9922930 [PubMed: 2325399]

Bussey K. Lying and truthfulness: Children's definitions, standards, and evaluative reactions. Child Development. 1992; 63:129–137. DOI: 10.2307/1130907

Bussey K, Grimbeek EJ. Children's conceptions of lying and truth-telling: Implications for child witnesses. Legal and Criminological Psychology. 2000; 5:187–199. DOI: 10.1348/135532500168083

Chandler M, Fritz A, 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. DOI: 10.2307/1130919 [PubMed: 2612240]

Drell MB, Jaswal VK. Making amends: Children's expectations about and responses to apologies. Social Development. 2015; doi: 10.1111/sode.12168

Gilbert DT, Lieberman MD, Morewedge CK, Wilson TD. The Peculiar Longevity of Things Not So Bad. Psychological Science. 2004; 15:14–19. DOI: 10.1111/j.0963-7214.2004.01501003.x [PubMed: 14717826]

Greene JD, Sommerville R, Nystrom LE, Darley JM, Cohen JD. An fMRI investigation of emotional engagement in moral judgment. Science. 2001; 293:2105–2108. DOI: 10.1126/science.1062872 [PubMed: 11557895]

Gummerum M, Hanoch Y, Keller M, Parsons K, Hummel A. Preschoolers' allocations in the dictator game: The role of moral emotions. Journal of Economic Psychology. 2010; 31:25–34. DOI: 10.1016/j.joep.2009.09.002

Gummerum M, López-Pérez B, Ambrona T, Rodríguez-Cano S, Dellaria G, Smith G, Wilson E. Children's moral emotion attribution in the happy victimizer task: The role of response format. The Journal of Genetic Psychology: Research and Theory on Human Development. 2016; 177(1): 1–16. DOI: 10.1080/00221325.2015.1103694

Haidt J. The emotional dog and its rational tail: A social intuitionist approach to moral judgment. Psychological Review. 2001; 108(4):814–834. DOI: 10.1037/0033-295X.108.4.814 [PubMed: 11699120]

Haidt J, Hersh MA. Sexual morality: The cultures and emotions of conservatives and liberals. Journal of Applied Social Psychology. 2001; 31:191–221. DOI: 10.1111/j.1559-1816.2001.tb02489.x

Harris, PL. Children and emotion: The development of psychological understanding. Cambridge, MA: Blackwell; 1989.

Keller M, Lourenço O, Malti T, Saalbach H. The multifaceted phenomenon of 'happy victimizers': A cross-cultural comparison of moral emotions. British Journal of Developmental Psychology. 2003; 21:1–18. DOI: 10.1348/026151003321164582

Killen, M., Smetana, J. Origins and development of morality. In: Lamb, ME., editor. Handbook of child psychology and developmental science. 7. Vol. III. NY: Wiley-Blackwell; 2015. p. 701-749.

Kochanska G, DeVet K, Goldman M, Murray K, Putnam SP. Maternal reports of conscience development and temperament in young children. Child Development. 1994; 65:852–868. DOI: 10.2307/1131423 [PubMed: 8045172]

Krettenauer T, Eichler D. Adolescents' self-attributed moral emotions following a moral transgression: Relations with delinquency, confidence in moral judgment and age. British Journal of Developmental Psychology. 2006; 24:489–506. DOI: 10.1348/026151005X50825

Lake N, Lane S, Harris PL. The expectation of guilt and resistance to temptation. Early Development and Parenting. 1995; 4:63–73. DOI: 10.1002/edp.2430040203

Lagattuta K. When You Shouldn't Do What You Want to Do: Young Children's Understanding of Desires, Rules, and Emotions. Child Development. 2005; 76:713–733. DOI: 10.1111/j.1467-8624.2005.00873.x [PubMed: 15892788]

Lee K. Little liars: Development of verbal deception in children. Child Development Perspectives. 2013; 7(2):91–96. DOI: 10.1111/cdep.12023 [PubMed: 23687515]

Lewis M, Stanger C, Sullivan M. Deception in 3-year-olds. Developmental Psychology. 1989; 25:439–443. DOI: 10.1037/0012-1649.25.3.439

Lyon TD, Dorado JS. Truth induction in young maltreated children: The effects of oath-taking and reassurance on true and false disclosures. Child Abuse & Neglect. 2008; 32:738–748. DOI: 10.1016/j.chiabu.2007.08.008 [PubMed: 18599119]

Malti T, Eisenberg N, Kim H, Buchmann M. Developmental trajectories of sympathy, moral emotion attributions, and moral reasoning: The role of parental support. Social Development. 2013; 22(4): 773–793. DOI: 10.1111/sode.12031

Malti, T., Ongley, SF. The development of moral emotions and moral reasoning. In: Killen, M.Smetana, JG.Killen, M., Smetana, JG., editors. Handbook of Moral Development. 2. New York, NY, US: Psychology Press; 2014. p. 163-183.

Nichols S. Norms with feeling: Towards a psychological account of moral judgment. Cognition. 2002; 84:221–236. DOI: 10.1016/S0010-0277(02)00048-3 [PubMed: 12175573]

Nunner-Winkler G, Sodian B. Children's understanding of moral emotions. Child Development. 1988; 59:1323–1328. DOI: 10.2307/1130495 [PubMed: 3168643]

Pellizzoni S, Siegal M, Surian L. The contact principle and utilitarian moral judgments in young children. Developmental Science. 2010; 13:265–270. DOI: 10.1111/j.1467-7687.2009.00851.x [PubMed: 20136922]

Polak A, Harris P. Deception by young children following noncompliance. Developmental Psychology. 1999; 35:561–568. DOI: 10.1037/0012-1649.35.2.561 [PubMed: 10082026]

Rizzo MT, Killen M. Children's understanding of equity in the context of inequality. British Journal of Developmental Psychology. 2016; doi: 10.1111/bjdp.12150

Rotenberg KJ, Betts LR, Eisner M, Ribeaud D. Social antecedents of children's trustworthiness. Infant and Child Development. 2012; 21:310–322. DOI: 10.1002/icd.751

Smetana J. Preschool children's conceptions of moral and social rules. Child Development. 1981; 52:1333–1336. DOI: 10.2307/1129527

Smetana J, Villalobos M, Tasopoulos-Chan M, Gettman D, Campione-Barr N. Early and middle adolescents' disclosure to parents about activities in different domains. Journal of Adolescence. 2009; 32:693–713. DOI: 10.1016/j.adolescence.2008.06.010 [PubMed: 18708247]

Smith CE, Chen D, Harris PL. When the happy victimizer says sorry: Children's understanding of apology and emotion. British Journal of Developmental Psychology. 2010; 28:727–746. DOI: 10.1348/026151009X475343 [PubMed: 21121464]

Smith CE, Warneken F. Does it always feel good to get what you want? Young children differentiate between material and wicked desires. British Journal of Developmental Psychology. 2014; 32:3–16. DOI: 10.1111/bjdp.12018 [PubMed: 25284361]

Talwar V, Arruda C, Yachison S. The effects of punishment and appeals for honesty on children's truth-telling behavior. Journal of Experimental Child Psychology. 2015; 130:209–217. DOI: 10.1016/j.jecp.2014.09.011 [PubMed: 25447716]

Talwar V, Gordon H, Lee K. Lying in the elementary school years: Verbal deception and its relation to second-order belief understanding. Developmental Psychology. 2007; 43:804–810. DOI: 10.1037/0012-1649.43.3.804 [PubMed: 17484589]

Talwar V, Lee K. Social and cognitive correlates of children's lying behavior. Child Development. 2008; 79:866–881. DOI: 10.1111/j.1467-8624.2008.01164.x [PubMed: 18717895]

Talwar V, Lee K. Development of lying to conceal a transgression: Children's control of expressive behaviour during verbal deception. International Journal of Behavioral Development. 2002; 26:436–444. DOI: 10.1080/01650250143000373

Talwar V, Lee K. A punitive environment fosters children's dishonesty: A natural experiment. Child Development. 2011; 82(6):1751–1758. DOI: 10.1111/j.1467-8624.2011.01663.x [PubMed: 22023095]

Talwar V, Lee K, Bala N, Lindsay R. 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. DOI: 10.1023/A:1016379104959 [PubMed: 12182530]

Vaish A, Carpenter M, Tomasello M. Young children's responses to guilt displays. Developmental Psychology. 2011; 47:1248–1262. DOI: 10.1037/a0024462 [PubMed: 21767013]

Wagland P, Bussey K. Factors that Facilitate and Undermine Children's Beliefs About Truth Telling. Law And Human Behavior. 2005; 29(6):639–655. DOI: 10.1007/s10979-005-7371-y [PubMed: 16382354]

Wintre MG, Vallance DD. Developmental Psychology. A developmental sequence in the comprehension of emotions: Intensity, multiple emotions, and valence. 1994; 30(4):509–514. DOI: 10.1037/0012-1649.30.4.509

Highlights

- Four-to-five-year-olds associate relatively positive emotions with lying.

- Seven-to-nine-year-olds associate relatively positive emotions with confession.

- Four-to-five-year-olds expect negative parental reactions to a confession.

- Seven-to-nine-year-olds expect positive parental reactions to a confession.

- Confession more common in children who expect a positive parent reaction.
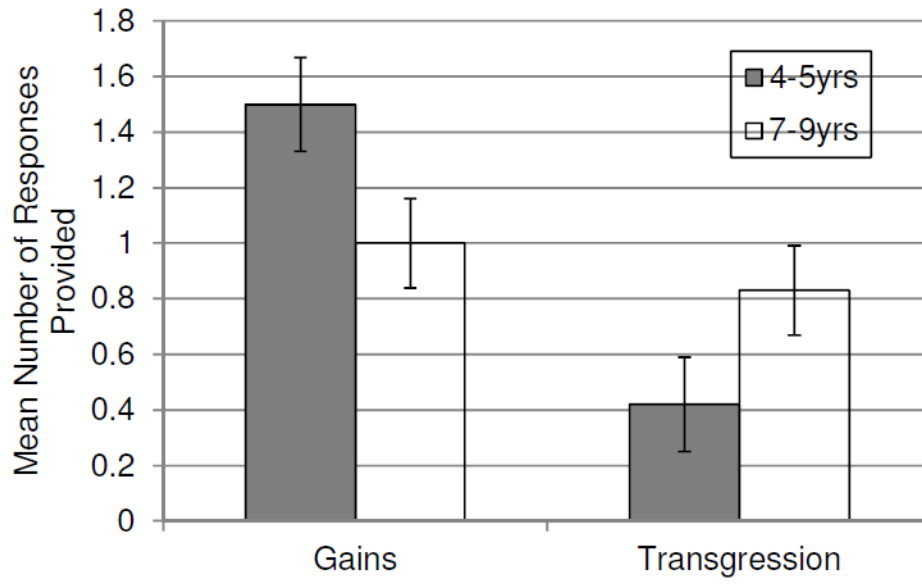
Figure 1.
Mean number of Episode 1 justifications offered by children as a function of age and justification type.
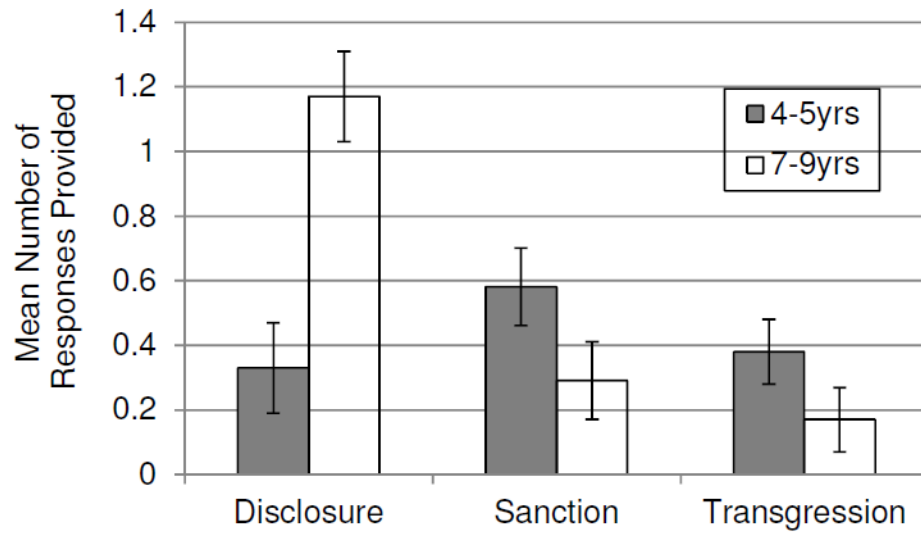
Figure 2.
Mean number of Episode 2 justifications offered by children as a function of age and justification type.
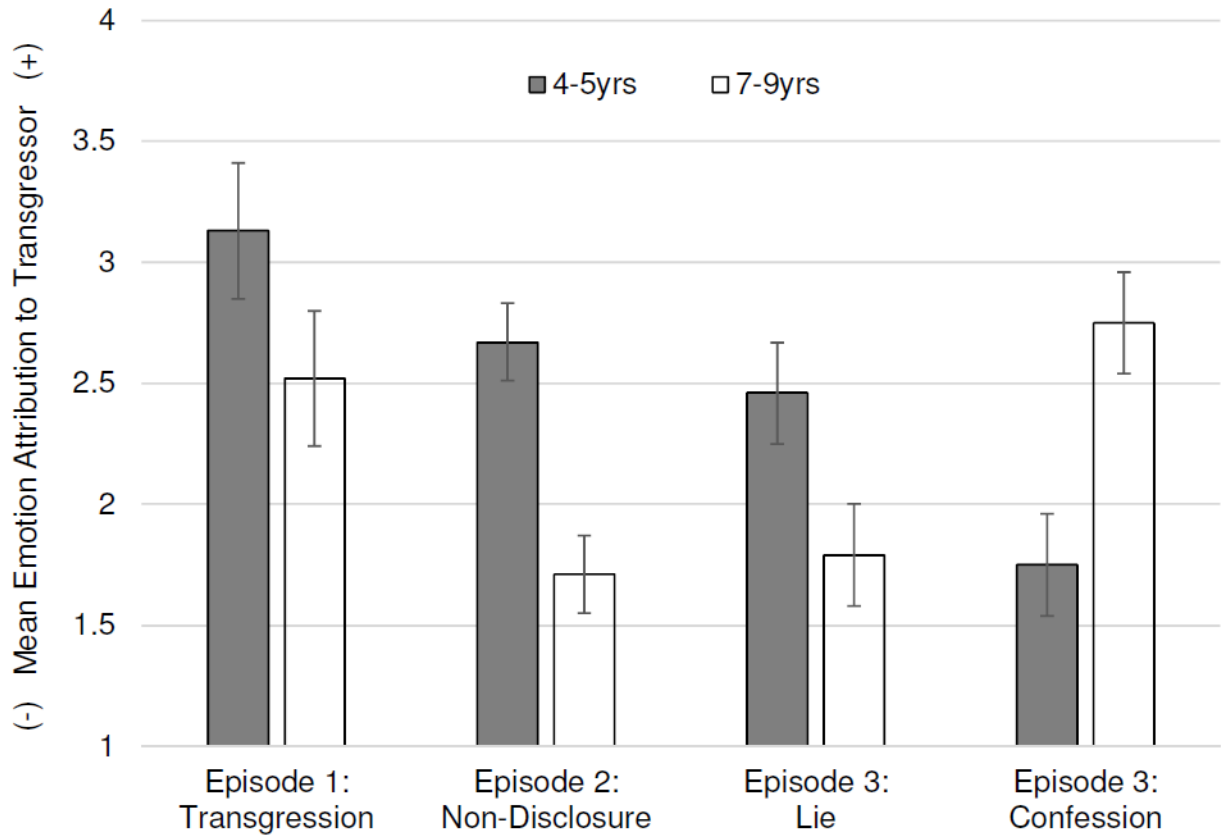
Figure 3.
Mean emotion attributions to the transgressor as a function of episode, child age, and story type (for Episode 3).

Figure 4.
Mean number of Episode 3 justifications offered by children as a function of age and justification type.