



When the happy victimizer says sorry: Children's understanding of apology and emotion

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Previous research suggests that children gradually understand the mitigating effects of apology on damage to a transgressor's reputation. However, little is known about young children's insights into the central emotional implications of apology. In two studies, children ages 4–9 heard stories about moral transgressions in which the wrongdoers either did or did not apologize. In Study 1, children in the no-apology condition showed the classic pattern of 'happy victimizer' attributions by expecting the wrongdoer to feel good about gains won via transgression. By contrast, in the apology condition, children attributed negative feelings to the transgressor and improved feelings to the victim. In Study 2, these effects were found even when the explicit emotion marker 'sorry' was removed from the apology exchange. Thus, young children understand some important emotional functions of apology.

One of the most universal and powerful rituals used by humans in the aftermath of transgression is apology. Apology rituals are found across diverse cultural groups (e.g., Fry, 2000; Hickson, 1986; Pirie, 2006; Shook, 1985). These exchanges can soothe vengeful feelings, engender forgiveness, increase empathy for the offender, repair damaged interpersonal ties, and speed cardiovascular recovery from anger (Anderson, Linden, & Habra, 2006; Darby & Schlenker, 1982; Lazare, 2004; McCullough *et al.*, 1998; Ohbuchi, Kameda, & Agarie, 1989; although for divergent findings, see Struthers, Eaton, Santelli, Uchiyama, & Shirvani, 2008). Most of the empirical studies of apology have been done with adults; we know less about how children view apologies. Moreover, much of the existing research with children has focused on the links that children draw between apologies and outcomes such as deservingness of punishment and forgiveness (e.g., Darby & Schlenker, 1982). However, a key function of apology is the expression of remorse by a transgressor and the alleviation of upset feelings in a victim. Children's views on the role of apology in both the expression and alleviation of emotion have been largely unexplored in the developmental literature. Central to the present study, then, was the question of what children know about these two key emotional functions of apology.

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The study of apology in children

Previous research with children offers some information on both their use and understanding of apology. In a mishap paradigm that tracked children's apologies, Kochanska, Casey, and Fukumoto (1995) found that 2- and 3-year-old children did not apologize when they encountered flawed objects that they themselves had clearly not broken. However, when led to believe that they had damaged an object, children apologized. Thus, even young children apologize in the wake of harm or damage caused by the self. Recent research on apologies between siblings suggests that the use of spontaneous apologies increases between the ages of 2 and 6, and that this repair strategy is most often deployed following episodes involving physical harm (Schleien, Ross, & Ross, 2010).

Existing research on young children's understanding of apology has focused primarily on the 'facework' functions of apology (Goffman, 1955), notably children's understanding of apology as a tool for softening the judgments of others and restoring a preferred social identity. Thus, children have been asked to rate apologizers and non-apologizers on dimensions such as blameworthiness, badness or naughtiness, deserved forgiveness, deserved punishment, likeability, and intentionality (Darby & Schlenker, 1982, 1989; Ohbuchi & Sato, 1994; Wellman, Larkey, & Somerville, 1979). For example, Ohbuchi and Sato (1994) found that 10- to 11-year-olds judged transgressors to be more deserving of forgiveness if they had apologized, but 7- to 8-year-olds were insensitive to the relationship between apology and forgiveness. Likewise, Darby and Schlenker (1982) found that 5- to 6-year-old children were relatively insensitive to the links between apology and variables such as forgiveness, deservingness of punishment, and likeability of a transgressor.

Overall, the extant research shows that preschoolers do spontaneously apologize. However, an explicit understanding of the impression-management functions of apology is limited during the preschool and early school years and is only gradually consolidated thereafter. Although these studies have sometimes included a measure of emotion attribution, such probes have been cursory, often consisting of a simple question about the transgressor's level of remorse, with no direct queries about the emotions of the victim or the possibility of mixed feelings. By contrast, the present study focused on the central role that emotions play in the delivery and receipt of an apology.

The present study

We studied children's emotion attributions using scenarios in which a spontaneous apology was offered in the wake of a moral transgression (i.e., a transgression involving deliberate harm or a violation of rights; Smetana, 1981). In an influential study that used a similar paradigm (minus the apology), 4-year-olds attributed positive emotions to a moral transgressor who achieved a desired outcome, whereas 8-year-olds were more likely to attribute negative feelings to the same character (Nunner-Winkler & Sodian, 1988). Because even young children understand that unprovoked moral violations are wrong (Nucci, 2001; Smetana, 1981), these findings of a 'happy victimizer' expectancy in young children cannot be explained by children's ignorance of moral rules. Rather, younger children appear to disregard those rules and focus instead on the fulfilment of desire when making emotion attributions to a transgressor. Older children, however, increasingly focus on the transgressor's feelings about causing upset or harm (Nunner-Winkler & Sodian, 1988). Subsequent research has replicated these developmental findings (Arsenio & Kramer, 1992; Keller, Lourenço, Malti, & Saalbach, 2003; Lake, Lane, & Harris, 1995; Murgatroyd & Robinson, 1993).

There is some evidence that changes to the interview procedure can attenuate the happy victimizer pattern of attribution. For example, Keller *et al.* (2003) showed that children's happy victimizer attributions were less frequent when they predicted how they themselves would feel after transgressing. Yet over half of the younger children continued to hold happy victimizer expectancies even in this condition. Arsenio and Kramer (1992) found that additional probes about mixed feelings led most 6- to 8-year-olds to eventually attribute remorse to a victimizer. However, even after repeated probes, the majority of the 4-year-old group persisted in holding the view that a person who satisfies a desire via victimization will experience unalloyed positive emotion.

Arsenio, Gold, and Adams (2006) have reviewed evidence that, contrary to what was found by Nunner-Winkler and Sodian (1988), the happy victimizer expectancy may endure past middle childhood, and appears to be robust even in cultures in which guilt is indoctrinated at an early age. For example, Murgatroyd and Robinson (1993) found that a substantial minority of adults predicted positive emotion in an adult wrongdoer who had attained a goal. Further, Lourenço (1997) demonstrated that happy victimizer expectancies are easily elicited in children who are raised in a strongly Catholic culture in which morality and guilt are made salient at an early age. Thus, the happy victimizer pattern is robust and can be quite persistent.

We took advantage of this in our exploration of apology understanding by using a paradigm similar to that used in happy victimizer studies. Specifically, we compared children's attributions to transgressors who satisfied desires and subsequently did or did not offer apologies. In the no-apology condition, we expected to replicate previous findings that young children attribute positive feelings to a transgressor who obtains a desired outcome whereas older children typically attribute mixed feelings. To the extent that children have an understanding of the emotions involved in genuine apology, we expected them to depart from the happy victimizer pattern of attribution in the apology condition. Thus, we expected both age groups to attribute feelings of remorse to the spontaneously apologetic transgressor.

Children were asked to provide justifications for their emotion attributions. In principle, children might associate apologies with receiving a punishment or a reprimand and not with remorse over wrongdoing. However, given that children rarely mention concerns about punishment when they attribute negative emotion to a successful transgressor (e.g., Arsenio & Kramer, 1992), we did not expect this type of justification. Instead, in line with previous research on children's guilty feelings (e.g., Kochanska *et al.*, 1995), we expected that children would link apologies to feelings of guilt. The justification data also allowed for an important assessment of whether children associate apology with positive moral emotion (e.g., feeling good about doing the right thing by apologizing).

As in Arsenio and Kramer (1992), children in the present study were prompted in order to check for the attribution of mixed feelings. We anticipated that children might attribute mixed rather than negative feelings to a victim receiving an apology because he or she would experience two events, one negative (the transgression) and the other positive (the apology). Nevertheless, given the extensive literature on children's developing understanding of mixed feelings (Harris, 1989; Peng, Johnson, Pollock, Glasspool, & Harris, 1992; Steele, Steele, Croft, & Fonagy, 1999), the older group was expected to acknowledge such mixed feelings more readily than the younger group. In line with Arsenio and Kramer (1992), we expected that, with increasing age, children would be more likely to attribute mixed feelings to the transgressor who had satisfied his or her desire.

Finally, to explore whether children view an apologetic transgressor as nicer than one who does not apologize, participants were asked about the moral character (nice vs. naughty) of the transgressor. In contrast to the insight we expected children to show about the emotional aspects of apology, we anticipated that children would be relatively insensitive to the trait-related implications of apology. Such a trend would be consistent with the existing impression-management research on apology reviewed above (e.g., Darby & Schlenker, 1982).

The central research questions were examined across two studies. In Study 1, participants were told that the transgressor used the phrase 'I'm sorry' during the apology scene. To examine the possibility that the word 'sorry' might serve as an explicit cue for children to attribute negative emotion to a transgressor, participants in Study 2 were told that the transgressor apologized, but the word 'sorry' was not used.

STUDY 1

Method

Participants

Twenty-six 4- to 5-year-olds ($M = 4; 11$; $SD = 5$ months) and twenty-six 7- to 8-year-olds ($M = 8; 2$; $SD = 6$ months) were recruited from Boston-area preschools and elementary schools. Testing was done in quiet spaces within the school buildings. A range of ethnic and socio-economic backgrounds was represented in the sample, but participants were predominantly White and from middle-class families. The numbers of males and females were similar in the younger (11 and 15, respectively) and older group (12 and 14).

Materials and procedures

Each child was presented with two moral transgression stories, one about toy grabbing and one about physical aggression. Each child heard the wrongdoer apologize in one of the stories, and say nothing after the transgression in the other story. Figure 1 provides an outline of the two stories, with the apology manipulation at the end of each.

The stories were read to children, and children also saw drawings that illustrated the main components of the stories (see Appendix for full text of stories). The illustrated characters' faces were obscured to avoid biasing children's emotion attributions. Female participants heard stories with female characters and male participants heard stories with male characters. The ordering of transgression type (grabbing story first vs. second) and apology (apology condition first vs. second) was counterbalanced across participants. Thus, half of the children heard stories in which the aggressor apologized and the grabber did not, while the other half heard stories in which the grabber apologized and the aggressor did not.

Questioning procedures

After the first story was complete, children were asked a brief memory question (e.g., do you remember what Kim did when she wanted to use the swing first?). If a child answered the memory question correctly, the interview proceeded. If a child made a memory error, the story was read again. Children had no difficulty in remembering the key components of the stories. Out of the 104 memory checks performed, only one

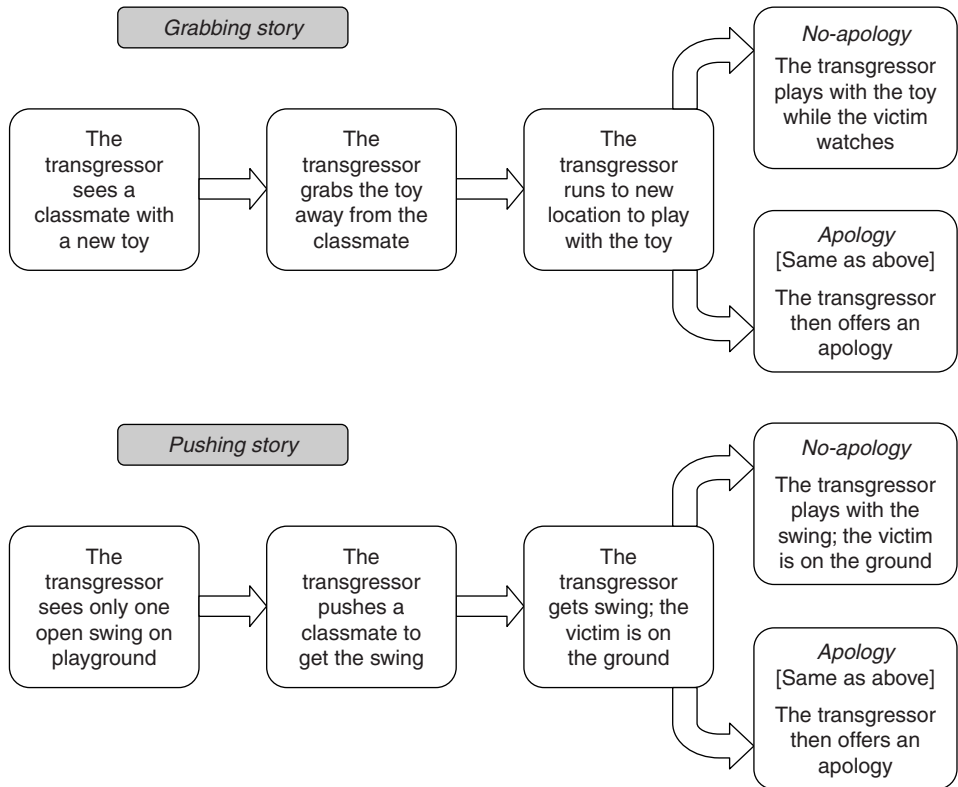


Figure 1. Outlines of the grabbing and aggression stories, including apology manipulations.

child needed a reminder of what happened in a story, and that child passed the second memory check.

Questions regarding the transgressor were always asked before questions about the victim, and were adapted from Arsenio and Kramer (1992) as follows (the questions below pertain to the girls' aggression story):

- (1) Initial emotion question: How does Kim feel at the end of the story?
- (2) Intensity of initial emotion: Does Kim feel a little bit [emotion named by child], or a lot?
- (3) Justification for initial emotion choice: Why does she feel this way?
- (4) Minimally directive probe for mixed feelings: Do you think Kim could be feeling anything else? What? Why?
- (5) Explicitly directive probe for mixed feelings: [If subject did not provide an opposite-valence emotion in response to Question 4]: Do you think Kim could feel the opposite of [emotion named by child in Question 1]? What? Why?
- (6) Moral character question: [Asked about transgressor only] Do you think Kim is nice or naughty most of the time? Why?

The same questions about emotion were then asked about the victim in the first story. The second story was then read, and the same questions were posed about that story's characters. Thus, each child's interview yielded a separate set of responses for:

(1) the unapologetic transgressor, (2) the victim who did not receive an apology, (3) the apologetic transgressor, and (4) the victim who did receive an apology. The scoring system used for each set of responses is described below.

Scoring

Initial emotion attributions

Children's discrete emotion attributions (from Question 1) were coded as positive or negative. *Good* and *happy* comprised the bulk of the positively valenced emotion attributions provided by children; *sad*, *mad*, *bad*, *sorry*, and *guilty* comprised the bulk of the negatively valenced emotion attributions. Based on responses to Question 2, the attributions were assigned intensity scores on a four-point scale: (1) a lot of negative emotion, (2) a little negative emotion, (3) a little positive emotion, and (4) a lot of positive emotion. Interrater reliability for valence classification was assessed using 25% of all initial emotion responses (a masters-level child therapist was the second rater). Interrater agreement was 98% ($\kappa = .96$), and the one disagreement was easily resolved through discussion.

Justifications for emotion attributions

Children's justifications for their initial emotion attributions to the transgressor were coded using a system adapted from Arsenio and Kramer (1992). Responses were coded for children's attention to the following issues: (a) gains, (b) sanctions, (c) victimization, (d) moral rules, and (e) apology. Gain responses were those that focused on the satisfied goals of the transgressor (e.g., 'She's happy because she got the swing'). Sanction responses contained references to being caught or punished (e.g., 'He's worried because someone might have seen him do that'). Victimization responses referred to the act of victimization and/or the harm to the victim (e.g., 'He is sad because he pushed the other boy'). Moral-rules responses contained explicit mention of moral rules or obligations (e.g., 'He is sad because he knows that he should have asked instead of pushing'). Apology responses were those that linked the emotions of the transgressor to the delivery of the apology (e.g., 'She feels good because she said sorry'). A second rater (a master's-level clinician) coded a subset of 52 responses, and inter-rater reliability was good, $\kappa = .92$; disagreements were resolved through discussion.

Children's justifications for their emotion attributions to the victim were coded using the same system, though it was expected that the gain and sanction categories would not be common responses in reference to the victim.

Mixed feeling scores

A three-point scale was used to consolidate children's responses to the two mixed emotion probes. The scale ranged from a ready acknowledgement (low scores) to persistent denial of mixed feelings (high scores). Thus, children received: a score of 1 if they responded with an opposite-valence emotion either in a spontaneous fashion (before the minimally directive probe) or to the minimally directive probe; a score of 2 if they answered affirmatively to the more directive probe about opposite-valence emotions; and a score of 3 if they denied mixed feelings in response to both probes. If children named a new secondary emotion that was not different in valence from the initial emotion (e.g., saying 'sad' and then 'mad'), credit was not given for attribution of

mixed feelings. (This type of response was viewed as intriguing, but it was not of central interest to the present study.) Note that the denial of mixed feelings was an appropriate response in some scenarios (e.g., when the victim did not receive an apology).

Results and discussion

Preliminary analyses showed that gender, transgression type (i.e., pushing vs. grabbing), apology order (i.e., first or second), and apologizer role (i.e., grabber vs. pusher) did not affect the outcomes, and in most cases the associated *p*-values fell well short of significance. Accordingly, subsequent analyses pooled data across these variables. We first present children's thinking about the transgressor and then their thinking about the victim.

Children's thinking about the transgressor

Initial emotion attributions

Table 1 presents children's scores as a function of age and apology. Inspection of Table 1 shows that both age groups attributed more negative feelings (i.e., gave lower ratings) in the apology condition as compared to the no-apology condition. To check this conclusion, a 2 (age group) \times 2 (apology condition) mixed-measures ANOVA was calculated, with age group as the between-subjects factor and apology condition as the within-subjects factor. The main effect of age group was not significant. A strong main effect of apology condition was confirmed; the feelings of the transgressor who apologized were regarded as significantly more negative than those of the transgressor who did not apologize, $F(1, 50) = 37.18$, $p < .001$, $\eta^2 = .43$. The interaction of age group \times apology condition fell well short of significance.

Table 1. Mean responses (with SDs) to questions about the transgressor as a function of apology condition and age group

Variable	4- to 5-year-olds		7- to 8-year-olds	
	No-apology	Apology	No-apology	Apology
Initial emotion attributions to transgressor ^a	3.12 (1.18)	2.08 (1.16)	2.77 (1.07)	1.58 (0.70)
Number of prompts needed to elicit attribution of mixed feelings ^b	2.58 (0.76)	2.31 (0.84)	1.54 (0.71)	2.00 (0.89)

Note. ^a Emotion attributions were scored as: 1 = very negative; 2 = slightly negative; 3 = slightly positive; 4 = very positive. ^b Mixed-feeling responses were scored with reference to the number of prompts required to elicit an attribution of mixed feelings: 1 = with non-directive probe; 2 = with directive probe; 3 = no attribution of mixed feelings.

A *post hoc*, exploratory analysis was conducted to investigate the relationship between children's ratings of the transgressor's moral character and the emotions attributed to the transgressor; no links were found.

Justifications for emotion attributions

Table 2 presents the frequencies of the justifications children used to justify their initial emotion attributions to the transgressor. There were only very modest differences

between the age groups, and initial chi-squared analyses revealed these to be non-significant. Therefore, the data from the two age groups were combined. Two notable differences across conditions were apparent. Children produced a greater percentage of gain responses in the no-apology condition (67%) compared to the apology condition (15%), and a greater number of victimization responses in the apology condition (64%) compared to the no-apology condition (21%). Given that the apology response category was only valid in the apology condition, and that sanction responses were virtually absent, a marginal homogeneity test was conducted to compare responses across condition with a focus on the moral-rules, victimization, and gain categories. This test confirmed significant differences across the two conditions, indicating a greater attention to moral-rules and particularly to victimization in the apology condition compared to the no-apology condition, $p < .001$. Children rarely linked the apology to positive emotion (e.g., 'He feels good because he said sorry to the other boy'); this trend held even when children's responses to the second and third emotion questions were analysed.

Table 2. Frequency of justifications provided for initial emotion attributions to the transgressor

Response category	4- to 5-year-olds		7- to 8-year-olds	
	No-apology	Apology	No-apology	Apology
Moral	0	2	3	4
Victimization	6	15	5	18
Sanction	0	1	0	1
Gain	17	5	18	3
Apology	na	2	na	0
Uncodable	3	1	0	0

Note. The total N in each column is 26.

Mixed feelings attributions

Inspection of Table 1 shows that in the no-apology condition, older children more readily attributed mixed feelings than did younger children whereas this age change was less evident in the apology condition. To check these conclusions, children's scores on the mixed feelings scale were analysed by means of a 2(age group) \times 2(apology condition) ANOVA. The analysis confirmed a significant interaction of age group \times apology condition, $F(1, 50) = 6.48$, $p = .01$, $\eta^2 = .12$. Simple effects analyses confirmed that, as expected, the older group ($M = 1.54$) more readily attributed mixed feelings to the transgressor in the no-apology condition than did the younger group, $M = 2.58$; $F(1, 50) = 26.15$, $p < .001$. However, the difference between the older ($M = 2.00$) and younger group ($M = 2.31$) was not significant in the apology condition $F(1, 50) = 1.64$, ns. This was because both age groups were inclined to see the apologetic transgressor as feeling purely remorseful. Thus, even with directive probing both age groups were likely to insist that the apologetic transgressor felt badly.

Judgments of moral character

Moral character judgments were assigned to three response categories. Children were given the options of 'nice' and 'naughty' during the interview, but a small number of

children said 'both'. These responses were allowed and included in the analyses. Across the no-apology (NA) and apology (A) conditions, similar percentages of 4- to 5-year-olds made naughty (NA: 35%; A: 35%) and nice (NA: 58%; A: 50%) judgments about the transgressor. Compared to the younger group, the percentages of older children making naughty (NA: 54%; A: 39%) and nice (NA: 39%; A: 46%) judgments were not dramatically different. Nonparametric tests indicated no significant variation across conditions for either age group (marginal homogeneity tests) or across age groups within either condition (chi-squared tests).

In summary, children's thinking about the unapologetic transgressor replicated earlier findings. Both age groups expected the transgressor to feel happy; they justified that expectation by referring to the transgressor's gains; and when given more directive probes, only the older children entertained the possibility of negative feelings. Children had markedly different expectations when the transgressor apologized. Both age groups expected the transgressor to feel badly, and they justified that expectation by referring to the act of victimization or to the moral rules transgressed. Finally, both age groups persisted in expecting the apologetic transgressor to feel badly despite prompts to attribute alternative feelings.

Children's thinking about the victim

The approach to scoring children's responses about the victim was the same as the approach reported above for responses about the transgressor.

Initial emotion attributions

Inspection of Table 3 shows that children, especially those in the older group, judged that the victim would have more positive feelings in the apology condition than in the no-apology condition. A 2 (age group) \times 2 (apology condition) mixed-measures ANOVA confirmed the significant main effect of apology condition, $F(1, 50) = 39.33$, $p < .001$, $\eta^2 = .44$, and a significant interaction of age group \times apology condition, $F(1, 50) = 6.97$, $p = .01$, $\eta^2 = .12$. Simple effects tests indicated that the two age groups gave similar (negative) ratings of the victim's emotion in the no-apology condition. In the apology condition, however, the older group rated the victim's feelings more positively than did the younger group, $F(1, 50) = 4.83$, $p = .03$. Nevertheless, both the younger, $F(1, 50) = 6.60$, $p = .01$, and older, $F(1, 50) = 39.71$, $p < .001$, groups showed

Table 3. Mean responses (with SDs) to questions about the victim as a function of apology condition and age group

Variable	4- to 5-year-olds		7- to 8-year-olds	
	No-apology	Apology	No-apology	Apology
Initial emotion attributions to victim ^a	1.15 (0.37)	1.58 (0.86)	1.08 (0.27)	2.12 (0.91)
Number of prompts needed to elicit attribution of mixed feelings ^b	2.69 (0.62)	2.42 (0.86)	2.62 (0.70)	1.85 (0.97)

Note. ^a Emotion attributions were scored as: 1 = very negative; 2 = slightly negative; 3 = slightly positive; 4 = very positive. ^b Mixed-feeling responses were scored with reference to the number of prompts required to elicit an attribution of mixed feelings: 1 = with non-directive probe; 2 = with directive probe; 3 = no attribution of mixed feelings.

significant increases in positive emotion ratings from the no-apology to the apology condition. Not surprisingly, emotions commonly attributed to the victim in the no-apology condition included *bad*, *sad*, and *angry* whereas children used words like *good* and *happy* more often when discussing the victim's feelings in the apology condition.

Justifications for emotion attributions

Table 4 presents the frequencies of the justifications children used to justify their emotion attributions to the victim. The differences between the age groups were small, and initial chi-squared tests confirmed that they were non-significant. As expected, children mainly focused on victimization (85%) and moral rules (13%) in the no-apology condition. In the apology condition, there were fewer references to victimization (64%) and moral rules (10%). Instead, a notable minority (23%) referred to the apology.

Table 4. Frequency of justifications provided for initial emotion attributions to the victim

Response category	4- to 5-year-olds		7- to 8-year-olds	
	No-apology	Apology	No-apology	Apology
Moral	2	3	5	2
Victimization	23	19	21	14
Apology	na	3	na	9
Uncodable	1	1	0	1

Note. The total *N* in each column is 26.

Mixed feelings

Inspection of Table 3 reveals that children needed fewer prompts to attribute mixed feelings to the victim in the apology condition as compared to the no-apology condition. An age group \times apology condition ANOVA confirmed a main effect for apology condition, $F(1, 50) = 14.69, p < .001, \eta^2 = .23$. There was no main effect of age group, nor was there an age group \times condition interaction (both fell just short of significance). Children were reluctant to attribute mixed feelings to the victim in the no-apology condition, but more readily saw this character as feeling a mix of good and bad feelings when a negative event (the transgression) was followed by a positive event (the apology).

In summary, in the no-apology condition, both age groups initially attributed negative feelings to the victim, justified those attributions on the basis of victimization and moral rule transgression and persisted in attributing negative feelings despite additional probes. The apology condition provoked a different attribution pattern. Children initially attributed less negative feelings, particularly, in the older group. They made references to the apology, and they were ready to attribute mixed feelings after additional probes.

Discussion

Study 1 explored how children's thinking about the emotional implications of an apology develops from early to middle childhood. The findings show that even 4- to 5-year-old children grasp the basic implications, and by age 8 a more systematic understanding is in place. Children's thinking about the transgressor's emotions differed

sharply as a function of the presence or absence of an apology. In the no-apology condition, children's views of the unapologetic transgressor were similar to those found in previous studies of the happy victimizer phenomenon: (a) children were likely to view the transgressor as feeling positively about satisfying his or her desires; (b) children often referred to the transgressor's gains when justifying emotion attributions; and (c) older children saw the transgressor as feeling a mix of positive and negative feelings, whereas younger children were more likely to attribute solely positive feelings. A simple apology by the transgressor led to a different view of the transgressor's emotions: both older and younger children (a) attributed negative feelings to the apologetic transgressor; (b) promptly linked the apologizer's negative feelings to his or her wrongdoing rather than to concerns about punishment; and (c) were reluctant to attribute anything but negative feelings.

Children's thinking about the victim's emotions also differed as a function of the presence or absence of an apology. Both age groups attributed purely negative initial emotions to the victim who was wronged but received no-apology. In the apology condition, however, children saw the victim as feeling better. This shift was more pronounced in the older group, but even younger children showed an awareness of apology's role in mending a victim's feelings.

The results of Study 1 suggest that young children possess key information about the emotional implications of apology exchanges. However, there may be a simple reason why even 4- to 5-year-old children linked an apology to a transgressor's remorse. An apology, as stated with the words 'I'm sorry' (as in Study 1), might be viewed as an explicit statement of emotion. This direct marking of negative emotion may have prompted children to attribute negative feelings to the apologetic transgressor. Furthermore, the apology offered by the transgressor in Study 1 contained an allusion to the transgression (e.g., 'I'm sorry I stole your marbles'). This allusion may have assisted children with their reasoning about the emotions of the transgressor. To rule out this interpretation, the emotion terms and allusions to the transgression were removed from the apology in Study 2.

STUDY 2

The goal of Study 2 was to replicate the main findings of Study 1 despite an important change to the presentation of the apology. Specifically, the emotion marker 'sorry' and the mention of the transgression were eliminated from the apology exchanges. Children were told by the story narrator that the transgressor 'gave an apology' to the victim. If children possess true insight into the emotional implications of giving an apology, they should understand that the transgressor in the apology condition would feel worse than the transgressor in the no-apology condition whether or not the exchange included the emotion term 'sorry'. Further, children should be aware that the victim in the apology condition would feel better than the victim in the no-apology condition. Given the specific focus of Study 2 on the role of the emotion term 'sorry', a simplified procedure was employed that did not include the multiple emotion attribution probes used in Study 1.

Method

Participants

Forty-three 4- to 9-year-old children were recruited in the Living Laboratory at the Boston Museum of Science. The Living Laboratory is a space set aside for child

development research, and is located in an area of the museum designed for younger visitors and their families. Recruitment was done at the museum, most often by providing parents with flyers describing the study. Children were interviewed individually while their parents or guardians were sitting nearby. Children were divided into two age groups using a naturally occurring gap in the age distribution. (This approach was used in order to make use of the data from all children who participated in this museum-based study.) The younger group was composed of 22 children (11 girls) ages 4;4-6;2 ($M = 5;3$; $SD = 6$ months). The older group contained 21 children (11 girls) ages 6;7-9;11 ($M = 7;9$; $SD = 14$ months). The sample was ethnically diverse, but was comprised of children from primarily middle-class families.

Materials and procedures

The stimuli used in Study 2 were identical to those used in Study 1 with the exception of a change to the apology scene in the stories. Instead of seeing the transgressor say, for example, 'I'm sorry I pushed you over', children were simply informed that the transgressor 'gave an apology' to the victim at the end of the apology condition stories. After the experimenter said that the transgressor had given an apology, each child was then asked, 'Do you know what an apology is? You can say yes or no'. All participants answered yes.

Consistent with the focused goals guiding the second study, the interview in Study 2 was shorter than in Study 1. Children were only asked one emotion attribution question for each story character, and were asked a moral character question about the transgressor in each condition. Children's responses to the emotion attribution questions were scored using the four-point scale that was used in Study 1. Children's justifications for their emotion attributions to transgressor were also scored using the system that was employed in Study 1.

Results and discussion

Initial analyses were conducted to investigate the roles of gender, condition order (apology story first vs. second), and transgression type (pushing vs. grabbing); these factors did not emerge as significant and are not discussed further. We also explored whether children's moral character ratings of the transgressor (nice vs. naughty) predicted the emotions that were attributed to the transgressor; such an association was not found.

Children's thinking about the transgressor

Emotion attributions

Table 5 shows children's emotion attributions as a function of age, condition, and question. Inspection of Table 5 reveals that both age groups attributed more negative feelings to the transgressor in the apology condition as compared to the no-apology condition. To check this conclusion, emotion attributions to the transgressor were analysed with a 2 (age group) \times 2 (apology condition) ANOVA. There was a main effect of apology condition, $F(1, 41) = 22.17$, $p < .001$, $\eta^2 = .35$ as well as a main effect of age group, $F(1, 41) = 3.98$, $p = .05$, $\eta^2 = .09$; the older group attributed more negative

feelings to the transgressor than did the younger group. The age group \times apology condition interaction was not significant.

Table 5. Means (with SDs) for children's emotion attributions in Study 2 as a function of age group, story character, and apology condition

	Younger group		Older group	
	No-apology	Apology	No-apology	Apology
Transgressor	3.27 (1.12)	2.09 (1.19)	2.48 (1.33)	1.71 (1.06)
Victim	1.14 (0.35)	2.68 (1.17)	1.19 (0.40)	2.62 (0.92)

Note. Emotion attributions were scored as: 1 = very negative; 2 = slightly negative; 3 = slightly positive; 4 = very positive.

These results closely replicate children's initial emotion attributions to the transgressor in Study 1. Indeed, when children's initial emotion attributions to the transgressor in Study 1 were compared to children's emotion attributions in Study 2 in a 2 (apology condition) \times 2 (Study; Study 1 vs. Study 2) ANOVA, the effect of study was far from significant ($p = .96$). Thus, children are not dependent on the term 'sorry' or on a recounting of the transgression when thinking about an apologetic transgressor's emotions.

Justifications for emotion attributions

As in Study 1, there were no differences between the two age groups with regard to the frequencies of the different response categories, so the justification data from the two age groups were combined. In the no-apology condition, 63% of children mentioned gains to justify their attributions of positive feelings to the transgressor; only 28% gave victimization justifications, and 5% mentioned moral rules (2 responses were uncodable). By contrast, in the apology condition, most children referred to victimization (67%). There were few references to gain (14%), moral rules (7%), or apology (7%) (3 responses were uncodable). As in Study 1, children's justifications for their emotion attributions to the transgressor were much more likely to involve attention to victimization in the apology condition than in the no-apology condition. This was confirmed with a marginal homogeneity test, $p < .001$ (apology responses were omitted prior to the analysis). Notably, none of the children linked the transgressor's negative emotions to the possibility of being punished; children focused on the wrongdoings when thinking about the transgressor's negative emotions.

Judgments of moral character

Children's judgments about the transgressor's moral character (nice vs. naughty) were analysed using McNemar tests. As in Study 1, neither the younger ($p = .22$) nor the older children ($p = .51$) distinguished between the apologetic and the unapologetic transgressor when making judgments about moral character.

Children's thinking about the victim

Emotion attributions

A 2 (age group) \times 2 (apology condition) ANOVA confirmed the main effect of apology condition that is apparent in Table 3, $F(1, 41) = 77.01, p < .001, \eta^2 = .65$. As in Study 1, children in Study 2 attributed more positive feelings to the victim in the apology condition than in the no-apology condition. However, in contrast to Study 1, the interaction of age group \times apology condition failed to reach significance. A 2 (age group) \times 2 (apology condition) \times 2 (study; 1 vs. 2) ANOVA was used to examine the effect of study. Not surprisingly, the main effect of apology condition was significant, $F(1, 91) = 122.60, p < .001, \eta^2 = .57$. There was also a main effect of study, $F(1, 91) = 14.72, p < .001, \eta^2 = .14$, and an apology condition \times study interaction, $F(1, 91) = 14.26, p < .001, \eta^2 = .14$. In both studies, children's ratings of the victim's emotions in the no-apology condition were similarly negative. However, in the apology condition, children in Study 2 ($M = 2.65$) viewed the victim as feeling significantly better than did children in Study 1 ($M = 1.85$). This difference between the studies reinforces, rather than undermines, the claim that explicit mention of the word 'sorry' is not needed for children to understand the emotional benefits of an apology for the victim.

The difference between the studies appears to be have been mainly driven by the younger groups (the apology condition \times study \times age group interaction fell just short of significance). Consistent with this interpretation, the younger group in Study 2 was somewhat older ($M = 5;3$) than the younger group in Study 1 ($M = 4;11$), $t = -3.36, p < .01$. Younger children in Study 1 expected the apology to elicit only a moderate improvement in the victim's feelings but older children expected a considerable improvement. In Study 2, by contrast, both age groups expected a considerable improvement.

Justifications for emotion attributions

In the no-apology condition, all 43 children (100%) provided victimization responses when asked to justify their attributions of negative emotion to the victim (e.g., 'He is sad because the other guy stole his marbles'). In the apology condition, only 37% of the children provided these types of responses. Instead, 44% (10 younger and 9 older children) gave apology responses to explain the victim's more positive feelings. An additional 12% of children answered that the victim would feel happy because he or she was going to get the swing/marbles back, perhaps indicating that the apology signalled forthcoming reparation by the transgressor. Finally, 5% of children said that the transgression would lead the victim to feel bad, but that the apology would elicit simultaneous positive emotions. One child's response was uncodable. Overall, children's justifications in the apology condition shifted from an exclusive focus on the act of victimization to include attention to the transgressor's apology and to potential reparation.

Summary

In Study 2, even when the apologies were stripped of emotion terms and allusions to the transgression, the classic happy victimizer pattern of attribution was again attenuated. Children attributed negative feelings to the apologetic transgressor. In addition, they judged the victim who received an apology as feeling more positive.

Thus, children as young as 4–5 years of age are aware that an apology by a transgressor is an expression of remorse and that it can begin to assuage the hurt feelings of a victim.

GENERAL DISCUSSION

Tavuchis (1991) has noted the paradox of apology: 'An apology, no matter how sincere or effective, does not and cannot undo what has been done. And yet, in a mysterious way and according to its own logic, this is precisely what it manages to do (p. 5).' Theorists have argued that genuine apologies have such power, in part, because they signal that a transgressor has suffered the painful emotion of remorse (e.g., Lazare, 2006). Do children understand some of the basic aspects of these processes? In the two studies presented here, children ages 4–9 were confronted with an apologetic transgressor, and were asked to reason about the emotions of this character and his or her victim.

Because young children are often prompted to deliver apologies by adults, they may not connect these speech acts to feelings of remorse. Even if they associate an apology with negative feelings, they might connect such feelings to anxiety about punishment or to the demand that they give up whatever gains they have made. However, in Studies 1 and 2, even 4- and 5-year-olds were aware that spontaneous apologies express remorse for wrongdoing. Furthermore, apology was viewed by participants as a positive influence on the feelings of a victim. Below, we consider the implications of this work, both for the literature on children's happy victimizer expectancies and the literature on apology. We then discuss directions for future research.

Happy victimizer expectancies

As noted in the Introduction, a considerable body of work shows that young children attribute positive feelings to a transgressor who gets what he or she wants (e.g., Arsenio & Kramer, 1992; Keller *et al.*, 2003; Lake *et al.*, 1995; Murgatroyd & Robinson, 1993; Nunner-Winkler & Sodian, 1988). The existing findings are provocative (Arsenio & Lover, 1995; Harris, 1989; Krettenaur, Malti, & Sokol, 2008), given that very young children are quite aware that moral violations such as grabbing and hitting are wrong, even in the absence of prohibitive rules (Nucci, 2001; Smetana, 1981).

In one approach to explaining children's happy victimizer attributions, Nunner-Winkler and Sodian (1988) theorized that younger children focus solely on the fulfilment of desire when thinking about a transgressor's emotions. Given that these authors found that children persist in their attribution of positive feelings to the transgressor even in cases where severe harm was caused to the victim, the notion that children attend primarily to desire fulfilment is plausible. Arsenio and Lover (1995) correspondingly argue that, while children who hold happy victimizer expectancies do indeed view the victim as feeling badly, they fail to attend to the emotions of the victim alongside those of the transgressor when attributing emotions to the latter. These views are consistent with a larger attribution framework (Graham & Weiner, 1986) which holds that people engage in both primary appraisals consisting of checks on goal-fulfilment (e.g., Sam got the marbles), and secondary appraisals consisting of causal analyses (e.g., Sam got the marbles because he grabbed them from Kevin). It may be that children – especially young children – perform

a primary appraisal of desire fulfilment but fail to proceed to a causal analysis of the transgression and its wider consequences.

Alternative explanations for young children's persistent happy victimizer expectancies have been proposed and warrant systematic testing. For example, Harris (1989) has argued that children are more likely to attribute guilt to a transgressor once they are able to conceptualize people as judges of their own transgressions. In the present study, children's justifications for their emotion attributions provide a good deal of support for the interpretation of the happy victimizer pattern of attribution proposed by Arsenio and Lover (1995) and Nunner-Winkler and Sodian (1988). Children in the no-apology condition often set aside the act of victimization when attributing emotion to the transgressor and focused only on the transgressor's gains. Note that children had not failed to encode the act of victimization, nor had they forgotten it. That act was frequently invoked when children explained the victim's feelings.

Understanding of apology

The question of what children understand about apology was often raised by the parents and teachers who took part in this research. A common concern was that apologies might be understood in a simple, purely script-based manner by young children, and that the common act of prompting an apology from a child might fail to advance the socialization goals held by many adults. The present study shows, however, that most young children grasp two of the key functions of apology: the expression of regret by a transgressor for harm caused, and the mitigation of the distress of a victim.

Because it is not uncommon for young children to be prompted to apologize, their conception of apology exchanges might focus on negative consequences, such as getting in trouble, or having to return a desired object. In the present research, however, children rarely mentioned such concerns. Instead, children saw the apologetic transgressor's emotions as tightly linked to the act of victimization. Thus, although children focused on the gains for the unapologetic transgressor – setting aside the act of victimization – that act was regarded as critical for explaining the emotions of the apologetic transgressor. While more research is needed to test whether and when this holds true during children's real-world apologies, the present findings suggest that children possess an understanding of a fundamental aspect of genuine apologies: the remorseful focus on the act of wrongdoing. Thus, the present findings highlight the fact that young children are not restricted to the happy victimizer pattern of attribution. Consistent with Keller *et al.* (2003), who found that children acknowledged the wrongness of feeling happy after a transgression, the children in the present study were easily able to conceive of transgressors who display the socially acceptable emotion of remorse.

When considering adults' concerns about how children view apologies, it is worth noting that even adult apologies are often communicated in a scripted fashion. Indeed, key components of apology scripts are similar across diverse cultures (e.g., Afghari, 2007; Olshtain, 1989). What does the relatively formulaic nature of apologizing mean for adults who want children to grapple with the emotional implications of transgression? A reasonable answer is that, even if young children learn to apologize using a verbal formula, that formula appears to have powerful consequences. In the present research, a very simple verbal apology directed children away from happy

victimizer attributions and towards acknowledgments of a remorseful offender and a victim with improved feelings. Thus, just as the scripted nature of an 'I do' at a wedding does not preclude a heartfelt delivery of the words and a grasp of their emotional implications, the scripted nature of apology is not necessarily a constraint on what children feel and understand when prompted to apologize. Further, as Hoffman (2000) suggests, parental apology prompts are likely to be most effective when a victim's perspective is made salient and when the tension between desire fulfilment and appropriate behaviour is discussed.

Despite their understanding of apology-emotion links, children appear to lack a complete understanding of the full range of implications of apology. Both age groups were insensitive to the moderating effect of apology on the moral standing of a transgressor. They rated the unapologetic transgressor similarly to the apologetic transgressor when asked about niceness versus naughtiness. Previous research has also found that children, especially those in the preschool and early elementary years, are insensitive to various remedial aspects of apology (Darby & Schlenker, 1982; Ohbuchi & Sato, 1994). On the other hand, research with older children (e.g., 12-year-olds; Darby & Schlenker, 1982) and adults does indicate that apologies are perceived as effective in mitigating threats to reputation and identity. Thus, an awareness of this aspect of apology is likely to be solidified towards the end of middle childhood.

Directions for future research

Given the complexity and importance of apology, several issues deserve further exploration. We focus here on two: children's responses to apology in the context of real-world transgressions and children's insights into insincere or inadequate apologies.

Do children who are victims of actual pushing and grabbing accept that an apologetic transgressor feels badly? Do children who transgress and then apologize, either spontaneously or with prompting, realize that their victims may feel better? Alternatively, is it only as observers contemplating hypothetical altercations that children are capable of acknowledging the emotional implications of an apology? Given that affective forecasting research with adults has shown that emotional expectancies do not always match actual emotional experiences (e.g., Gilbert, Lieberman, Morewedge, & Wilson, 2004; Gilbert, Morewedge, Risen, & Wilson, 2004), these questions deserve exploration. Indeed, even the basic findings on happy victimizer expectancies in childhood would benefit from clarification via the approach currently being used by affective forecasting researchers in which expected and actual emotions are compared.

A second and related area of interest is children's understanding of insincere apologies. Before children come to apologize spontaneously for transgressions, many are introduced to the practice by adults (Ely & Gleason, 2006). Indeed, our pilot research indicates that many young children are initially guided to apologize via direct parental prompting. During this process, of socialization, it is likely that children have at least two distinct experiences with apology prompts. On the one hand, there are times when a sincere apology is produced by the child following an adult apology prompt. On the other hand, there are probably times when an insincere apology is delivered after an apology prompt, either to please a parent or to avoid negative consequences. Future research could explore children's insights into this phenomenon, and their ideas about the effects that insincere apologies have on victims.

Conclusions

We presented children ages 4–9 with a character who achieved his or her goals via moral transgression and either did or did not apologize. The results confirmed that children in this age group often expect wrongdoers to feel happy because of what they have gained. Nevertheless, children also have a basic understanding of the emotional effects of apology. Even preschool-age children are aware that apologies can express a transgressor's remorse and make a victim feel better. The presence of the apology shifted children's focus away from the transgressor's gains towards the act of victimization. Nevertheless, the effects of the apology did not carry over to children's moral judgments; children were equally likely to characterize a non-apologizing and an apologizing transgressor as nice. Finally, although younger children understood the basic emotional impact of an apology for the victim, only the older children were aware of the more complex link between an apology and the experience of mixed feelings.

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Appendix

Full text of stories

Grabbing story (girls' version)

- (1) This is a story about a girl named Kim. Kim loves to play with toys. She really likes to play with new toys.
- (2) Kim is in the cubby room at her school, and she sees a girl named Julia there.
- (3) Julia has a new bag of marbles. Julia says, 'Look! My mom said I can play with my new marbles after school!'
- (4) Kim really wants a bag of marbles too. She grabs the bag out of Julia's hand.
- (5) Kim goes to a different part of the room and plays with the marbles.
- (6) [Picture of Kim with marbles and Julia off to the side] *In apology condition only*: Kim sees Julia. Kim says, 'Julia, I'm sorry I grabbed your marbles'.

Pushing story (boys' version)

- (1) This is a story about a boy named Eric. Eric really likes to play on the swings at his school.
- (2) On this day, Eric sees that only one swing is open. The other swing is being used. Eric really wants that one swing.
- (3) Eric sees a boy named Adam walking over to the open swing.
- (4) Eric runs really fast and pushes Adam out of the way.
- (5) Adam falls down, and Eric gets to the swing first.
- (6) [Picture of Eric on swing and Adam on ground] *In apology condition only*: Eric sees Adam. Eric says, 'Adam, I'm sorry I pushed you over'.