
He Didn't Want Me to Feel Sad: Children's Reactions to Disappointment and Apology

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Abstract

Experimental studies of children's responses to apologies often present participants with hypothetical scenarios. This article reports on an experimental study of children's reactions to experiencing an actual disappointment and subsequent apology. Participants (ages four to seven) were told that another child was supposed to share some attractive stickers with them. In the two primary conditions, the other child kept the stickers for himself or herself. Some participants received an apology from the other child, whereas others did not. Compared with children who did not receive the apology, the apology recipients: (1) reported feeling better; (2) viewed the other child as more remorseful; and (3) rated the other child as nicer. Support was found for a mediation model of apology: the positive effects of the apology on children's emotions were accounted for by the effective signaling of remorse by the wrongdoer.

Keywords: apology; emotion; emotion attribution

Introduction

Behaviors designed to resolve conflict are important for a highly social species that relies on cooperation for survival (de Waal, 2000). A wide range of primate species engages in post-conflict behaviors (embracing, grooming, etc.) designed to repair threatened bonds (e.g., Aureli & van Schaik, 1991; de Waal & van Roosmalen, 1979). Such behaviors have been conceptualized as vital mechanisms in balancing conflicting with overlapping interests (de Waal, 2000). Rituals designed to constrain the cost of conflict are also needed to maintain co-operative ties among humans. Arguably, one of the most universal and powerful rituals used by humans to mend relational ties is apology. Apologies are used across a diverse range of situations (Ely & Gleason, 2006; Tavuchis, 1991), and cultural groups (e.g., Fry, 2000; Hickson, 1986; Pirie, 2006; Shook, 1985). Apologies have been studied extensively in adults and are demonstrably effective in appeasing upset feelings and generating forgiveness (e.g., McCullough et al., 1998; Ohbuchi, Kameda, & Agarie, 1989).

Developmental research offers some information on children's understanding and use of apology. For example, Kochanska, Casey, and Fukumoto (1995) found that two- to three-year-old children did not apologize when they encountered flawed objects that

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they themselves had clearly not broken. However, when led to believe that they had damaged an object, some children did deliver apologies. Thus, very young children appear to view apology as a tool for mitigating harm or damage caused specifically by oneself. Preschool-aged children seem to make more frequent use of spontaneous post-conflict apologies in cultures where special emphasis is placed on apology (e.g., Japan; Fujisawa, Kutsukake, & Hasegawa, 2005), as compared with western settings (e.g., Sweden; Ljungberg, Horowitz, Jansson, Westlund, & Clarke, 2005). In a study of sibling conflicts in Canadian families with two young children, Schleien, Ross, and Ross (2010) found that children apologize both spontaneously and following parental prompting. The frequency of spontaneous apologizing increased with age, and these types of apologies were tied to higher rates of reconciliation compared with prompted apologies. Young children often made use of very simple apologies with siblings (e.g., a short 'I'm sorry'), and were more likely to offer apologies following severe transgressions (physical harm) compared with less serious offenses (e.g., teasing).

The literature on children's understanding of apology has focused primarily on their grasp of apology as a tool for mitigating the negative judgments of transgressors. Children have been asked to supply ratings of an offender's blameworthiness, perceived 'badness', deserved punishment, likeability, and intentionality (Darby & Schlenker, 1982, 1989; Ohbuchi & Sato, 1994; Wellman, Larkey, & Somerville, 1979). Much of this research indicates that sensitivity to the impression management functions of apology (Goffman, 1955), is fragile during the preschool years, and a firm understanding of apology may elude even seven-year-olds. For example, Ohbuchi and Sato (1994) found that second-grade children did not reliably differentiate between an apologetic and an unapologetic harmdoer. Less attention has been paid to children's appreciation of the emotional functions of apology. However, one recent study has shown that preschoolers view apologies as effective for soothing the hurt feelings of a victim and expressing the remorse of a transgressor (Smith, Chen, & Harris, 2010).

Previous developmental studies have either studied apologies in naturalistic settings (e.g., Schleien et al., 2010), or apology understanding via the use of hypothetical scenarios (e.g., Ohbuchi & Sato, 1994). The naturalistic approach allows researchers to examine various forms of apologies and their effects on victims but does not allow for the tight control of contextual factors. Experimental studies, on the other hand, have allowed investigators to question all participants about the same transgression, but the transgressions have been hypothetical in nature. The present study adds to the existing literature by combining tight experimental control and the use of an *in vivo* scenario (with participants in the role of apology recipients).

In order to test whether apologies might be effective in soothing negative emotion in children, mild disappointment was provoked. Children were told that they would be receiving a gift of attractive stickers from another child. However, the gift envelope contained a note from the other child saying that he or she had used all of the stickers. Some participants received an apology in the note whereas others did not. It was predicted that the participants who received the apology would report feeling better and would view the other child as feeling worse, compared with children in the no apology condition. The somewhat contrived scenario of receiving an envelope from a distant child allowed for control over the variables of interest.

We also examined how far participants attributed positive emotions to the other child given that this other child had obtained a desired object (the stickers) albeit via breaking a promise. Although failure to send the stickers was not necessarily an

outright transgression, it was observed in pilot testing that participants often viewed it as a problematic violation of a promise. In studies using depictions of hypothetical violations, older children are alert to the feelings of remorse that wrongdoers often experience, whereas preschool-aged children consistently make positive, gain-based emotion attributions—so-called ‘happy victimizer’ expectancies (Arsenio & Kramer, 1992; Nunner-Winkler & Sodian, 1988). Thus, we asked whether younger participants in the present study would attribute happiness to the other child who did not follow through on sending the promised stickers. Correspondingly, we also asked whether older participants would be more attentive to potential guilty feelings experienced by the other child.

A further goal of the study was to test a mediation model of apology originally developed with adults in mind (Lazare, 2006; Philpot & Hornsey, 2008). According to this model, an apology attenuates the offended party’s negative emotions by signaling the transgressor’s experience of remorse. In the present study, this pathway was tested. We hypothesized that the potential link between participants’ own emotions and the apology variable would be mediated by perceptions of the other child’s feelings of remorse. Thus, we predicted that children would feel better to the extent that they attributed remorse to the apologizer.

Participants were also asked whether the other child was ‘nice or not-so-nice.’ Some research using hypothetical scenarios has shown that children in the early elementary years are still in the process of consolidating an awareness of the impression management functions of apology (e.g., Darby & Schlenker, 1982). However, we anticipated that children’s *in vivo* experience of disappointment and apology might lead to systematic associations between the receipt of an apology and character ratings of the apologetic child. We therefore explored whether children would rate an apologetic child as nicer than an unapologetic child.

We also tested a model in which the perceived remorse of the other child served as a mediator between the apology and ratings of the other child’s character. Such a model is in line with arguments that perceived that remorse in an offender has profound effects on the extent to which his or her character is viewed as moral and, thus, worthy of compassionate treatment (e.g., Weisman, 2004). The mediation model we tested is also consistent with experimental research showing that expressions of guilt by an offender can positively influence views of his or her character (e.g., Taylor & Kleinke, 1992). Accordingly, we predicted that participants would rate the other child’s character more positively to the extent that they perceived the other child as being remorseful.

Finally, we included a stickers condition in which participants received the promised gift of stickers from the other child. This allowed us to verify that participants in the other two conditions were indeed disappointed by the missing stickers.

Method

Participants

Children at the ages of four to seven were recruited in the Living Laboratory at the Boston Museum of Science. The Living Laboratory is a museum space set aside for child development research. Recruitment was conducted at the museum, most often by providing parents with flyers that described the study and alerted them to the deception involved.

Following pilot testing, a criterion was established for excluding data from analyses. Given the sometimes distracting atmosphere at the museum, we checked that children had encoded the scenario about the ‘other child.’ If a participant responded ‘I don’t know’ to questions about the origins of their own *and* the other child’s emotions (i.e., two ‘don’t know’ responses), data from that participant were omitted from the study. The data from 16 participants (mean age = 5.44, *SD* = 1.05) were omitted using this criterion. The final sample (*N* = 91; 50 girls and 41 boys) was split into two age groups: 46 four- to five-year-olds (mean age = 5.02, *SD* = .68) and 45 six- to seven-year-olds (mean age = 6.96, *SD* = .50). Data on the ethnicity of the participants were not collected, but a recent demographic survey of Living Laboratory participants (Soren, 2009), provides a general picture of families that participate in museum-based studies like this one (the main groups represented were 5 percent African-American, 5 percent Asian-American, 6 percent Hispanic/Latino, and 79 percent White). Most children who participate in Living Laboratory studies are accompanied by parents who have completed either college or a graduate program (Soren, 2009).

Procedure

After a parent and a child entered the lab area, the parent signed a consent form. Each child sat at a table across from the experimenter, while the parent sat nearby with some information about the study available. The child was then told the following: ‘We are doing a project today and we would love your help. Some children who live in a different city put stickers in envelopes and mailed them to me. The stickers are always really cool, and one of the envelopes is yours. It’s a gift to you from one of the children who live in the other city.’ These and all other instructions were standardized across participants.

The experimenter then produced an envelope. Each envelope had an ink stamp on the front that said *RECEIVED* in order to give the appearance that the envelope had been processed in some manner. The experimenter continued:

In a few seconds, you get to open this envelope and see what kind of stickers the girl who lives in a different city shared with you. You get to keep the stickers as a gift from the other girl, and they are usually really great. Then I will ask you some questions about what you got. I am going to ask you how you feel about what was in the envelope. You can show me what your feeling is by pointing to one of these faces for: a lot sad, a little sad, in the middle, a little happy, or a lot happy. I am also going to ask you some questions about what you think the other girl might be like. Are you ready? Okay—you can open the envelope!

The gender of the ‘other child’ was matched to each participant’s gender. Participants were randomly assigned to receive an envelope containing one of three things. In the no apology condition (*N* = 19 younger and 18 older children), the envelope contained empty backing paper from a sheet of stickers and a handwritten note from the other child saying ‘I used all of the stickers before I mailed this to you.’ In the apology condition (*N* = 18 younger and 18 older children) the contents were similar, but the note read ‘I used all of the stickers before I mailed this to you. I’m really sorry.’ Finally, in the stickers condition (*N* = 9 younger and 9 older children) the envelope contained a sheet of gender-matched stickers, ostensibly from the other child.

Each participant opened the envelope and, in the first two conditions, found the note and the empty sticker paper. (In the stickers condition, the experimenter moved directly to the interview questions after the stickers were inspected by the participant.) Upon seeing the note and the empty sticker paper, the experimenter acted confused, saying

'What did you get there? Did you get any stickers?' The experimenter then searched the envelope for the stickers, picked up the note, and read it aloud twice in a neutral voice. The experimenter, acting surprised, then said 'Well, you didn't get any stickers. But . . . well . . . can I still ask you the questions because I'm curious about what you think?' Every child agreed to continue with the interview.

It is important to note that all experimenters involved in this study received practice in reading the apology and no apology notes in the same neutral voice. This in-depth practice was necessary in order to ensure that the participants' responses were not influenced by the experimenter's voice tone. Checks were in place during the practice and testing phases of the study to ensure the neutrality of experimenters' voices. Firstly, research team members provided critical feedback to each other during the practice phase. Secondly, experimenters received feedback about the delivery of the notes from at least two Museum of Science staff who worked near the Living Laboratory on each day the study was run. Although feedback was sought on a regular basis, there were no concerns with voice tone during the testing phase of the study.

During the introduction to the study, the experimenter had introduced each child to a 5-point emotion rating scale, and this was used for the first interview question: 'How did you end up feeling after seeing what you got in the envelope?' Children were asked to point to one of five faces, ranging from very sad to very happy. Next, participants were asked to evaluate the character of the other child: 'Do you think the other girl is usually nice, or not so nice?' (The few participants who said 'both' were asked to state what the other child might be like *most of the time*.) Finally, children were asked, 'How do you think the other girl was feeling when she was sending the envelope? Why?' The 5-point emotion rating scale was used for this question. In the apology and no apology conditions, the content of the note was recapped by the experimenter in a neutral voice before each question was asked. (e.g., 'This other boy wrote that he used all the stickers and he's really sorry. How did you end up feeling after seeing what you got in the envelope?') The questions were always posed in the order described above, based on the assumption that asking about other-emotion last would provide the most rigorous way to carry out the planned *apology* → *other-emotion* → *own emotion* mediation analysis. (This mediation model was prioritized in the present study, as it has been directly discussed in the apology literature.)

Scoring

Participants' ratings of their own and the other child's emotions were recorded using a 5-point scale: 1 = very sad, 2 = a little sad, 3 = in the middle, 4 = a little happy, and 5 = very happy.

The justifications provided by participants for their own-emotion ratings were transcribed verbatim by the experimenter during the interview. Three coding categories were established *a priori*, with attention paid to the two conditions in which stickers were not sent by the other child: (1) *event focused* (mention of the lack of stickers in the envelope: e.g., 'They used all the stickers'); (2) *note focused* (mention of the note and/or the apology: e.g., 'I'm happy she gave me a note'); and (3) *other* (responses that did not fit into the other two categories: e.g., 'I don't know' and 'Just because'). A second rater coded a subset of 25 justifications; inter-rater reliability was good, $\kappa = .86$, and the one disagreement was resolved easily through discussion.

The justifications provided by participants for their emotion attributions to the other child were also transcribed verbatim during the interview. These justifications

were scored with particular attention to gain-based reasoning (akin to the ‘happy victimizer’ reasoning discussed earlier; e.g., Nunner-Winkler & Sodian, 1988). Six coding categories were established *a priori*: (1) *remorse* (sad feelings about the transgression: e.g., ‘She was sad because she didn’t give me the stickers’); (2) *happy disappointer* (happy feelings about not sharing or about having all of the stickers: e.g., ‘He was feeling very good because he got to keep the stickers’); (3) *happy giver* (in the stickers condition only: e.g., ‘He feels very good because he gave them to me’); (4) *sad giver* (in the stickers condition only: e.g., ‘She feels a little bad because she didn’t get to have the stickers’); (5) *happy communicator* (happy feelings about sending the letter or delivering the apology: e.g., ‘She feels a little good because she thought I might think she was nice and polite’); and (6) *uncodable* (responses that did not fit the previous five categories). A second rater coded a subset of 25 justifications; inter-rater reliability was perfect, $\kappa = 1.00$. A substantial minority (23 percent) of children provided responses that were uncodable (11 of these were in the no apology condition, two were in the apology condition, and eight were in the stickers condition). The vast majority of these responses involved participants saying ‘I don’t know’ when asked to justify their attributions of emotion to the other child.

Results

Own-emotion Ratings

Firstly, participants’ own-emotion ratings were analyzed with a 3 (condition) \times 2 (gender) \times 2 (age group) ANOVA (see Table 1 for descriptive statistics). A main effect of condition emerged, $F(2, 79) = 50.67, p < .001, \eta_p^2 = .56$. A *post hoc* Bonferroni analysis was used to identify differences between the conditions. Participants in the stickers condition rated their feelings as more positive ($M = 4.89$) than did participants in the two conditions in which stickers were not delivered, $p < .001$ in each case. Thus, as expected, the absence of the stickers was a disappointing event. Nevertheless, participants in the apology condition ($M = 2.75$) rated their feelings as more positive than did participants in the no apology condition ($M = 2.08$), $p = .01$. There were no main effects of age, $F(1, 79) = .29, p = .59$, or gender, $F(1, 79) = 1.31, p = .26$, nor were there any significant interactions.

Children’s Justifications for Own-emotion Ratings

Children’s justifications for their own-emotion ratings were examined, with a focus on the apology and no apology conditions (the children in the stickers condition uniformly talked about liking some aspect of getting stickers). Of the 59 children who provided *event-focused* justifications, 54 percent were in the no apology condition and 46 percent were in the apology condition. Of the 11 children who provided *note-focused* justifications, 36 percent were in the no apology condition and 64 percent were in the apology condition. (There were three responses in the *other* category; one in the no apology condition and two in the apology condition.) Thus, children who received an apologetic note were more likely to mention it, but the difference between the two conditions was not significant, $\chi^2(1, N = 70) = 1.19, p = .28$. Checks on age, $\chi^2(1, N = 70) = .97, p = .32$, and gender, $\chi^2(1, N = 70) = .04, p = .85$, did not reveal any significant trends.

Table 1. Means (and SDs) of Study Variables as a Function of Condition and Age

	4–5-year-olds			6–7-year-olds		
	No apology condition	Apology condition	Stickers condition	No apology condition	Apology condition	Stickers condition
Rating of own emotion	2.00 (1.00)	2.72 (1.18)	4.89 (.33)	2.17 (1.15)	2.78 (.73)	4.89 (.33)
Rating of other's emotion	3.00 (1.80)	1.56 (.98)	4.00 (1.41)	3.67 (1.19)	1.56 (.71)	4.33 (1.22)

Note: Emotion rating scale ranged from 1 = very sad to 5 = very happy.

Ratings of the Other Child's Character and Emotions

Participants' ratings of the offending child's character (*nice* vs. *not so nice*) were analyzed. An initial inspection of the data revealed that all 18 of the participants in the stickers condition rated the other child as nice. Of particular interest was the contrast between participants in the no apology and apology conditions. A logistic regression analysis was used to examine the effects of the two apology conditions (present vs. absent), gender, and age on ratings of the offender's character. A significant effect of apology condition emerged, $B = 2.64$, $Wald = 17.31$, $df = 1$, $p < .001$. Age ($B = .14$, $Wald = .32$, $df = 1$, $p = .57$), gender ($B = -.24$, $Wald = .15$, $df = 1$, $p = .70$), and the interaction terms were not significant predictors of character ratings. Therefore, a simpler chi-square analysis is presented here. Participants in the apology condition (86 percent) were more likely than participants in the no apology condition (32 percent) to rate the offending child as nice, $\chi^2(1, N = 73) = 21.72$, $p < .001$, $\phi = .55$. A follow-up Fisher's exact test revealed that participants in the apology condition and the stickers condition did not differ significantly in their likelihood of rating the other child as nice, $p = .16$.

Next, participants' ratings of the offending child's emotions were analyzed with a 3 (condition) \times 2 (gender) \times 2 (age group) ANOVA (see Table 1 for descriptive statistics). The ANOVA yielded a main effect of condition, $F(2, 79) = 30.58$, $p < .001$, $\eta_p^2 = .44$. There were no main effects of gender, $F(1, 79) = .01$, $p = .92$, or age, $F(1, 79) = 1.63$, $p = .21$, and none of the interactions emerged as significant. A *post hoc* Bonferroni analysis was used to examine differences between the conditions. Participants who received an apologetic note from the offender viewed that other child as feeling significantly sadder, $M = 1.56$, than (1) the unapologetic offender, $M = 3.32$, $p < .001$, and (2) the other child who shared stickers, $M = 4.17$, $p < .001$. There was a non-significant trend for children to view the gift giver as feeling better than the unapologetic offender, $p = .07$. However, neither was judged to feel badly.

Children's Justifications for Other-emotion Attributions

Children's justifications for their emotion attributions to the other child were examined. Firstly, the differences between participants' views of the gift giver (in the stickers condition) as compared with the non-giver (in the other two conditions) were analyzed using all codable responses ($N = 70$). As expected, this difference was significant, $\chi^2(4, N = 70) = 70.00$, $p < .001$, Cramer's $V = 1.00$. Children in the stickers condition confined their attribution justifications to two categories, *happy giver* (80 percent) and *sad giver* (20 percent). Not surprisingly, children in the two conditions in which the other child failed to share the stickers never offered such justifications. Instead, they offered *remorse* (70 percent), *happy disappoiter* (27 percent), and *happy communicator* (3 percent) justifications.

The distribution of codable justifications ($N = 60$) across these three response categories differed markedly across the apology and no apology conditions. Of the attribution justifications in the no apology condition, 58 percent were classified as *happy disappoiter*, 35 percent as *remorse*, and 8 percent as *happy communicator*. By contrast, 97 percent of the justifications in the apology condition involved references to *remorse*, and only 3 percent were categorized as *happy disappoiter*. These differences between the two conditions were significant, $\chi^2(2, N = 60) = 27.38$, $p < .001$, Cramer's $V = .68$.

A series of loglinear models were fitted to the data in order to assess whether there were differences across age groups or genders in children's justifications. No age-group or gender effects emerged. A targeted *t* test was also performed to analyze age differences between those who offered *happy disappointer* justifications and those who did not. No significant differences were found, $t(89) = .19$, $p = .85$.

Mediation Analyses

Two mediation models were tested. Firstly, it was hypothesized that the link between the presence of an apology and the emotions of participants would be mediated by the perceived remorse of the other child. To test this model of the effects of apology on children who received no stickers, a series of regression models was calculated following the procedure outlined by Baron and Kenny (1986). The hypothesized mediator (perceived emotions of the offender), was regressed on the independent variable (apology: present or absent). As expected, given the above results, the apology variable was a significant predictor of other-emotion ratings, $\beta = -.58$, $t(71) = -6.04$, $p < .001$, $R^2 = .34$. Compared with participants in the no apology condition, participants in the apology condition were more likely to attribute negative emotions to the other child. Secondly, the dependent variable (own-emotion ratings), was regressed on the independent variable (apology present or absent). Consistent with the earlier ANOVA, children in the apology condition were more likely to attribute positive emotions to themselves than were children in the no apology condition, $\beta = .32$, $t(71) = 2.81$, $p < .01$, $R^2 = .10$. Thirdly, participants' own-emotion ratings were regressed on both the apology variable and the ratings of the offender's emotions. With both independent variables in the model, the apology variable was no longer a significant predictor, $p = .43$, whereas the emotion attributed to the other child was, $\beta = -.36$, $t(70) = -2.73$, $p < .01$. A Sobel test was conducted to analyze the indirect effect of the apology variable on own-emotion ratings via other-emotion ratings. The test statistic of -2.26 was significant, $p = .02$. Thus, children who received an apology felt better to the extent that they viewed the apologetic offender as feeling badly about not sharing stickers.

In keeping with theories concerning the influence of expressions of remorse on judgments about transgressors' characters (e.g., Weisman, 2004), it was hypothesized that the link between the presence of an apology and the ratings of the other child's character would be mediated by participants' perceptions of the other child's remorse. MacKinnon and Dwyer (1993) discussed approaches to testing mediation models that contain dichotomous outcome variables. The present study used equations derived from MacKinnon and Dwyer, as outlined by Herr (2006).

As expected, given the analyses presented earlier, the independent variable (apology; present or absent), was a significant predictor of both the proposed mediator (other-emotion ratings), $\beta = -.58$, $t(71) = -6.04$, $p < .001$, $R^2 = .34$, and the dependent variable (character rating of other child), $B = 2.56$, Wald = 18.41, $df = 1$, $p < .001$. In addition, other-emotion ratings were significantly related to character ratings of the other child, $B = -.56$, Wald = 10.12, $df = 1$, $p < .01$. When character rating was regressed upon both the apology variable and the proposed mediator in a logistic regression model, the apology variable was a significant predictor, $B = 2.25$, Wald = 10.99, $df = 1$, $p < .001$, but the proposed mediator was not, $B = -.19$, Wald = .77, $df = 1$, $p = .38$. Thus, support was not found in the present study for the *apology* → *perceived remorse* → *ratings of other's character* mediation model.

Discussion

The present study used a novel experimental paradigm to expose young participants to a minor disappointment caused by another child. The offending child was supposed to have shared a gift of attractive stickers with participants, but instead most participants received a handwritten note from the other child explaining that he or she had used all of the stickers before mailing the envelope. Some of the notes from the other child contained an apology, and some did not.

Compared with children who received no apology, apology recipients rated their own feelings more positively despite explicitly mentioning the missing stickers a good deal of the time. Compared with those in the no apology condition, children in the apology condition also saw the other child as feeling more remorseful and viewed the other child as nicer. A mediation analysis indicated that the positive effects of the apology on recipients' emotions could be explained by the effective signaling of remorse by the other child. A small group of participants received a gift of stickers from the other child as promised. Not surprisingly, this group of participants rated themselves as happier than the other two groups. Despite their disappointment, children who received an apology but no stickers were just as likely as children who did receive stickers to view the other child as nice. Children who received no apology were less likely to view the other child as nice. Participants' ratings of niceness were powerfully and directly influenced by the apology itself. Thus, a second mediation analysis found that the *apology* → *character rating* link was not mediated by the perceived remorse of the other child.

Below, we consider the continuities between young children and adults where apology is concerned. Further, children's views of the wrongdoer are discussed with regard to the literature on children's 'happy victimizer' expectancies. Finally, we address some limitations of the present study and propose ideas for future research.

The psychological literature on apology indicates that sincere apologies are usually effective in soothing the feelings of adults (e.g., Anderson, Linden, & Habra, 2006; McCullough et al., 1998; Ohbuchi et al., 1989; for an example of conflicting findings, see Struthers, Eaton, Santelli, Uchiyama, & Shirvani, 2008). However, evidence on the effects of apology receipt in childhood is sparse. Schleien et al. (2010) have shown that apologies—especially when offered without prompting—are effective in facilitating post-conflict reconciliation among young siblings. The present study was the first to experimentally examine children's emotional reactions to receiving an apology. The results reported here replicate the general finding that, as in adult recipients, apologies offered to children lead to improved feelings and more positive views of wrongdoers.

It is noteworthy that age differences did not emerge in the present study; the youngest and oldest children were impacted by the apology manipulation in a similar fashion, and reasoned about the focal event in the same manner. This runs counter to some previous research in which young children, compared with children in the upper elementary grades, were less sensitive to the implications of apology for an offender's moral standing (e.g., Ohbuchi & Sato, 1994). Darby and Schlenker (1982) theorized that young children have more trouble integrating the presence of apology into their judgments about an offender due to age-typical social-information processing limitations and a still-developing insight into the implications of social conventions. The idea that young children lack knowledge about the convention of apology is not supported by the present study, which found that even four-year-olds view apologetic individuals more favorably than unapologetic ones. However, given that preschool- and

early-elementary-aged children seem less sensitive to the links between apology and moral character when asked to reason about interactions involving fictional characters, we concur with Darby and Schlenker (1982) that concern about information-processing demands on younger children may be warranted. Specifically, paradigms involving the interactions of multiple fictional characters may involve demands on perspective-taking capacities that very simple *in vivo* paradigms do not. As such, research employing straightforward *in vivo* experimental designs may shed light on some aspects of young children's social-cognitive knowledge that are masked when they are asked to think about the interactions of fictional characters.

The relatively narrow age range (four to seven) used in the present study may also account, in part, for the lack of age effects. Nevertheless, the lack of age effects did not result from the older children looking immature, but rather from the younger children showing a relatively mature sensitivity to multiple functions of apology. The lack of age differences and the overall pattern of the findings in the present study indicate that there may be important continuities from early childhood through adulthood in the way that apparently sincere, spontaneous apologies are experienced. Remarkably, there also appear to be continuities in the mechanisms of apology from childhood to adulthood; some of the same mediation effects observed in adults by Philpot and Hornsey (2008) also emerged here with young children. Although the factors responsible for this continuity have yet to be fully clarified, it is possible that children's early exposure (Ely & Gleason, 2006; Schleiien et al., 2010), to both parental apologies and apology prompts may account for their sensitivity to apology. Further research on the processes by which children learn about apology is needed.

Although the *apology* → *other-emotion* → *own-emotion* mediation model found support in the present study, the *apology* → *other-emotion* → *character rating of the other* mediation model did not. Both the apology and the perceived remorse of the other child were strongly related to how the other child's character was perceived. The apology variable, however, was the stronger predictor. The interview protocol used in the present study asked participants to supply only one type of character rating for the other child that was dichotomous in nature: *nice* or *not so nice*. It may be that a longer interview involving the solicitation of continuous character ratings on multiple dimensions (e.g., friendliness, sensitivity, etc.), would have yielded more nuanced support for the proposed *apology* → *other-emotion* → *character rating of the other* mediation model. Indeed, Taylor and Kleinke (1992) found that in adults, expressions of remorse by an offender influenced some types of attributions (e.g., of sensitivity), but not others (e.g., believability).

Previous research has shown that young children often attribute positive emotions to a wrongdoer who achieves a desired outcome. They are aware that moral transgressions are especially wrong (e.g., Smetana, 1981), but appear to focus on desire fulfillment when making attributions of emotion to a transgressor (Nunner-Winkler & Sodian, 1988). Thus far, these 'happy victimizer' expectancies have been studied in the context of hypothetical vignettes. The present study begins to fill an important gap in this literature by testing whether young children who experience a transgression at the hands of another person—rather than simply hear such a transgression described—also expect that person to feel good. In the absence of an apology, more than half of the children who experienced the disappointing event did indeed go on to make attributions of positive emotion to the other child. Thus, this study confirms that in the absence of apology, children think about hypothetical and actual offenders in a similar fashion. On the other hand, the presence of an apology all but eliminated beliefs that

the other child would feel good about keeping the stickers. As compared with children in the no apology condition, children in the apology condition viewed the other child as feeling much sadder. Moreover, they justified those attributions by articulating the other child's remorse about what he or she had done (e.g., 'He was sad because he didn't want me to feel sad'). This provides strong evidence that children who experience disappointment and subsequent apology react to one of the key functions of apology—the communication of a transgressor's remorse.

Some limitations of the present study warrant discussion. Firstly, the interview procedure in the two main conditions involved reviewing the content of the other child's note before each question was asked. As such, a demand effect may have been created, wherein children who repeatedly heard the phrase 'I'm really sorry' may have been guided to attribute negative emotion to the transgressor. The other child's message was repeated in order to make it salient for the participants during each phase of the interview. This approach did facilitate a comparison between the effects of an acknowledgement of behavior in the no apology condition ('I used all of the stickers'), with the addition of an apology in the apology condition. However, experimental research on children's responses to more naturalistic apologies is needed.

A key finding in the present study was the indirect linkage between apology and recipient emotion through the perception of the offender's emotion. From the earliest days of infancy, children's emotions are impacted by the emotions of other people (e.g., Martin & Clark, 1982), and the interacting influences of one mental state on another become more complex over the course of development, as is evident in the present research. In the research reported here, the apologetic child signaled his or her remorse via an explicit, verbal apology. It is plausible, however, that a simple visible display of remorse from a transgressor would be equally effective in alleviating feelings of disappointment. Future research could clarify the relative importance of verbal and non-verbal expressions of remorse.

Finally, the nature of the transgression warrants further research. Participants viewed the other child's behavior as a breach of a promise. However, the focal event was not truly a moral transgression (after all, the 'other child' was not under any strict obligation to send stickers). How might children respond to apologies in the face of more serious moral transgressions? Research with adults (e.g., Ohtsubo & Watanabe, 2009; Schlenker & Darby, 1981), has established the importance of costly signaling, elaboration, or compensation during apology. Schleien et al. (2010) have shown that children tend to use apologies more often following harmful transgressions, compared with breaches that do not cause substantial harm. Future research with children might therefore assess whether young apology recipients view elaborate or compensatory apologies as necessary when transgressions are more serious in nature.

The study described in this article extends the literatures on both apology and children's emotion attributions. Although the breach used in the novel paradigm described above was not a serious moral transgression, the four- to seven-year-old participants did view it as wrong, as evidenced by their systematic ratings of the unapologetic other child as not very nice. In the absence of an apology, many children in the present study viewed the other child as feeling good about his or her gains, consistent with previous research on the 'happy victimizer' expectancy (e.g., Nunner-Winkler & Sodian, 1988). This is the first experimental study to establish that such a pattern of emotion attribution emerges outside of interviews about hypothetical vignettes. However, when an apology was delivered after the disappointing event, participants' views of the other child shifted dramatically: they saw the other child as

nice and as feeling bad about his or her behavior. Further, the apology appeared to boost participants' emotions by effectively conveying the upset emotions of the offender.

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Acknowledgments

The authors wish to thank the participating children and parents. Special thanks to the Discovery Center at the Boston Museum of Science and to Charles Cardenas for his help with data collection. We are also grateful for the helpful feedback provided by three anonymous reviewers.