Aggressive and Nonaggressive Children's Moral Judgments and Moral Emotion Attributions in Situations Involving Retaliation and Unprovoked Aggression

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Abstract

The authors investigated 7- and 9-year-old children's moral understanding of retaliation as compared to unprovoked aggression with regard to their aggressive behavior status. Based on peer ratings, 48 children were selected as overtly aggressive and 91 as nonaggressive. Their moral understanding of retaliation and unprovoked aggression was assessed by an interview including questions about their moral judgments and emotion attributions. Aggressive children judged retaliations as less serious than did nonaggressive children. They also referred less often to the harmful consequences of retaliation and were more likely to excuse the retaliation because of the provocation. In unprovoked aggressive situations younger aggressive children, compared to the younger nonaggressive children, attributed more happiness to transgressors, more anger to victims, and less sadness to transgressors and victims. The results are discussed in terms of previous research on aggressive children's moral understanding of retaliation and unprovoked aggression.

Key words: Moral Emotion Attributions, Moral Judgments, Retaliation, Aggressive Behavior, Middle Childhood

Although it is widely acknowledged that moral development plays a decisive role in aggressive children's processing of conflict situations, it is still unclear how different components of children's morality relate to individual differences in children's aggressive behavior. Whereas some researchers view moral judgments and (im)moral action as inherently related (e.g., Kohlberg & Candee, 1984), other researchers assign moral emotions a primary role (e.g., Hoffman, 2000). Recently, it has been argued that moral judgments and moral emotions are both important features of children's experiences in moral conflict situations (e.g., Malti & Latzko, 2010). On the one hand, moral judgments tell us something about children's understanding of the validity of moral rules. On the other hand moral emotions may be conceived of as authentic reactions to what seems personally important to the child in a given moral conflict (e.g., harm, sanctions or personal gains following moral transgressions). However, only few studies so far, included both moral judgments and moral emotions when investigating relations between children's moral development and aggression.

Moreover, only limited research has investigated whether relations between children's moral development and aggressive behavior differ among different situational contexts. To learn more about how aggressive children evaluate and emotionally react to specific aspects of moral conflict situations, it is important to systematically compare aggressive and nonaggressive children's moral judgments and moral emotions in different contexts (Turiel, 2002). The present study was designed to fill in this research gap in the extant literature by investigating aggressive children's moral judgments and emotion attributions in two different contexts closely related to aggressive children's social experiences: unprovoked and provoked aggression (i.e., retaliation).

Moral Judgments, Moral Emotion Attributions, and Aggressive Behavior

A substantial body of research supports the assumption that juvenile delinquents exhibit lower moral judgments than their nondelinquent peers (Stams et al., 2006). In contrast,

there are only a few published investigations on moral judgment and aggression in middle childhood. Moreover, the existing research did not reveal a consistent picture regarding relations between moral judgments and aggressive behavior: Whereas some studies revealed significant relations between children's moral judgments and their aggressive behavior (e.g., Murray-Close & Crick, 2006; Nucci & Herman, 1982), other research found no deficits in aggressive children's moral judgments (e.g. Blair, 1997; Hawley, 2003). This raises the possibility that other aspects of children's morality such as moral emotions are important for explaining aggressive behavior (e.g., Arsenio & Lemerise, 2004; Malti, 2007; Malti, Gasser, & Gutzwiller-Helfenfinger, 2010).

Emotions in the moral domain have been widely investigated within the happy-victimizer tradition (for reviews, see Arsenio, Gold, & Adams, 2006 and Krettenauer, Malti, & Sokol, 2008). This research has shown that especially preschool children, but also some older children, attribute happiness to an unprovoked moral transgressor, even though they previously judged the transgression to be morally wrong. During the early elementary school years, happy-victimizer attributions markedly decrease, whereas negative (i.e., moral) emotion attributions increase (e.g., Keller, Lourenço, Malti, & Saalbach, 2003; Malti, Gasser, & Buchmann, 2009; Malti et al., 2010; Nunner-Winkler & Sodian, 1988). To explain this gap between young children's moral judgments and immoral (i.e. positive) emotion attributions researchers have argued that younger children may understand moral rules on a mere informational level, and thus do not yet have an internalized sense of these moral rules (e.g., Nunner-Winkler, 2007). In contrast, emotion attributions are immediate reactions to moral rule violations and therefore highlight the importance a child assigns to the moral issues involved (Nunner-Winkler, 2007). Following this, moral emotions, such as guilt, may function as empirical indicators of children's sensitivity to the moral aspects of a rule violation.

In support of the motivational hypothesis several studies suggest a link between children's happy or unhappy emotion attributions following unprovoked transgressions and (im)moral behavior (for reviews see Arsenio et al., 2006; Gasser, 2010; Krettenauer et al., 2008). Both positive and negative emotion attributions are significantly related to preschool and primary school children's aggressive behavior (Malti et al., 2010; Orobio de Castro, Merk, Koops, Veerman, & Bosch, 2005), to primary school children's externalizing behavior (Malti & Keller, 2009), to bullying (Menesini et al., 2003), as well as to adolescents' delinquent behavior (Krettenauer & Eichler, 2006; Johnston & Krettenauer, 2010). Children's moral reasoning following emotion attributions has been shown to be related to immoral behavior as well: Externalizing behavior is positively related to sanction-oriented and hedonistic reasoning and negatively related to moral reasoning in preschool and primary school children (Arsenio & Fleiss, 1996; Hughes and Dunn, 2000; Malti & Keller, 2009). Similar results were obtained for aggressive behavior (Malti et al., 2010), bullying behavior (Menesini et al., 2003) and immoral behavior in real-life situations (Asendorpf & Nunner-Winkler, 1992). Two recent studies indicate that the relation between moral emotion attributions and aggressive behavior are genuine and not reducible to deficits in children's social cognitions or moral knowledge. Arsenio, Adams and Gold (2009) found that adolescents' proactive (or instrumental) aggression is not related to deficits in children's social information processing (attributions of hostile intent, generation of aggressive strategies), but is associated with happy-victimizer attributions and lower moral reasoning following emotion attributions (Arsenio et al., 2009). Similarly, a study by Gasser and Keller (2009) showed that bullies, compared to prosocial children, provided less mature moral reasoning following emotion attributions, even though they did not differ in their moral reasoning following moral judgments or in their perspective taking skills.

Altogether, these findings are in concert with the motivational hypothesis of moral emotion attributions as empirical indicators of children's moral commitment. However, an exclusively motivational view of moral emotion attributions as well as the polarization of moral judgments and moral emotions has also been criticized (Krettenauer et al., 2008; Turiel, 2006). For example, Turiel (2002) argued that some studies might have failed to find relations between moral judgments and (im)moral behavior because the assessments of moral judgments only included prototypical moral transgressions which are clearly immoral (such as unprovoked aggression) and did not distinguish between different situational contexts. Moral transgressions often occur under specific conditions and result from different motives (e.g., instrumental vs. retaliative aggression) (e.g., Dodge, Coie, & Lynam, 2006). To reveal a more nuanced picture of the relationship between moral judgments, emotion attributions, and aggressive behavior, it is therefore important to investigate how children's reasoning about specific conditions and motives underlying moral transgressions relate to individual differences in behavior.

Moral Judgments and Moral Emotion Attributions in Provocative and Retaliative Contexts

Situations including provocation and retaliation are considered to be particularly sensitive to individual differences in children's social and moral judgments (for a review, see Crick & Dodge, 1994). For example, when confronted with hypothetical provoked situations, aggressive children are more likely than their nonaggressive peers to attribute hostile intent (Orobio de Castro, Veerman, Koops, Bosch, & Monshouwer, 2002) and express the expectation that aggressive strategies will be efficacious and lead to positive outcomes (e.g., Fontaine, Yang, Dodge, Bates, & Pettit, 2008). Research on children's moral judgments of retaliation within samples of nonaggressive children revealed that these children are less likely to judge retaliation as morally wrong and to refer to the victim's welfare than in their judgements and justifications of unprovoked aggression (Smetana, Campione-Barr, & Yell,

2003). Moreover, younger children viewed retaliation as more acceptable than unprovoked aggression, whereas with age children increasingly condemned retaliation and demanded alternate strategies of conflict resolution (Smetana et al., 2003). With regard to emotion attributions, research has shown that children were more likely to attribute happiness to unprovoked perpetrators than to retaliators whereas the contrary was the case for attributions of anger (Smetana et al., 1999).

But how do these moral judgments and emotion attributions in retaliative contexts relate to children's aggressive behavior? Even though several studies have examined the impact of exposure to violence on children's moral judgments of retaliation (Ardila-Rey, Killen & Brenick, 2009; Posada & Wainryb, 2008; Smetana et al., 1999), only a few studies specifically addressed aggressive children. A study by Astor (1994) examined moral judgments of children from low-income families who were identified by their teachers as extremely aggressive. Interestingly, violent and nonviolent children did not differ with regard to their moral judgments of prototypical moral transgression. Instead, violent children were more likely than the nonaggressive children to accept retaliation. Moreover, Guerra and Huesman (1997) found that approval of retaliation was positively correlated with both peer-nominated and teacher-rated aggression in primary school children.

Our knowledge about aggressive children's emotion attributions to retaliators and victims of provocation is even more limited. Orobio de Castro, Merk, Koops, Veerman, and Bosch (2005) showed that aggressive children were more likely than nonaggressive children to attribute anger to themselves in the role of a victim. Similarly, a study by Camodeca and Goossens (2005) indicated that bullies and victims were more likely to expect feeling angry after being provoked than non-involved or prosocial children. These findings are consistent with other findings showing that children with intensive negative emotions are at risk for behavior problems and social maladjustment (e.g., Eisenberg et al., 2004) and highlight the

role anger plays in the development of antisocial behavior. With regard to moral emotion attributions to retaliators, a study by Arsenio et al. (2009) revealed that adolescents' attributions of happiness to retaliators showed a unique relationship with proactive aggressive behavior, after controlling for reactive aggressive behavior. However, none of these studies systematically compared aggressive children's emotion attributions to perpetrators and victims in situations including unprovoked aggression and retaliation.

The Present Study

In view of these limited findings, the present study aimed to investigate how moral emotion attributions to perpetrators and victims as well as moral judgments relate to aggressive behavior in two different contexts referring to unprovoked aggression and retaliation. Based on previous studies (Smetana et al., 2003), we expected that both aggressive and nonaggressive children would be more likely to condemn unprovoked transgressions than retaliation on moral grounds. However, we also expected that aggressive children would be more accepting of retaliation than nonaggressive children. Consistent with previous research on aggressive children as happy victimizers (e.g., Arsenio et al., 2009; Malti et al., 2008), we expected that aggressive children would attribute more happiness and less sadness to unprovoked transgressors and to retaliators than would nonaggressive children. Moreover, we expected that aggressive children, because of their predominant focus on the unfairness of provocations, would attribute more anger to both victims and retaliators than would nonaggressive children. In addition, we assumed that aggressive children would be less likely than nonaggressive children to provide moral justifications in retaliative contexts. Furthermore, we expected that aggressive children, when justifying their judgments and emotion attributions, would refer more often to the provocation than nonaggressive children.

All these relationships were expected to depend upon development. The study included 7- and 9-year-old children, because this age group has been rarely investigated in

research on moral development and aggression. Moreover, the elementary school years represent a sensible period regarding the development of moral emotion attributions (e.g., Krettenauer et al., 2008) and therefore might reveal differential relations with aggressive behavior in younger and older elementary school children. More specifically, we expected the relationship between moral emotion attributions and aggression to be stronger in the younger compared to the older age group. Due to a growing understanding of mental states during the elementary school years, older children may be more likely to give social desirable answers than younger children. Thus, with increasing age emotion attributions may lose their predictive power (Malti et al., 2009; Nunner-Winkler, 1999). In contrast, during middle childhood children's justifications following emotion attributions and moral judgments become increasingly diverse and elaborate (Keller, Edelstein, Schmid, Fang, & Fang, 1998; Malti et al., 2008). Thus, in older children the justifications may offer more insights into their moral motivation than emotion attributions per se

Method

Selection of Participants

Groups of aggressive (n = 48) and nonaggressive children (n =91) were selected from a larger sample of 123 1st graders (66 girls; *M*age = 7.04, *SD* = 0.40) and 131 3rd graders (67 girls; *M*age = 9.5, *SD* = 0.41). This initial sample was recruited from elementary schools (i.e., 15 classes) in seven communities in the German speaking part of Switzerland. Written parental consent was obtained. The socioeconomic background of the families was estimated based on the type of community in which the parents lived. This information was provided by the Swiss Federal Statistics Office. Accordingly, approximately 23% of children's parents had little or no secondary education, and approximately 23% had earned a higher vocational diploma or a university degree. These numbers are fairly representative of the German part of Switzerland (Malti et al., 2008).

Procedure

The interviews on moral judgments and emotion attributions were conducted by graduate students who had received 2 days of training, which included practice interviews of four children. The interviews were conducted in a separate room in the school area and lasted between 15 and 20 min. Before the interviews, children were told that the experimenter would tell them some stories and ask them some questions. Children were told to respond spontaneously and that there were no right or wrong answers.

Measurement of aggressive behavior

A peer-nomination scale developed by Crick and colleagues (Crick, Casas, & Mosher, 1997; Crick & Grotpeter, 1995) was used to assess children's overt aggressive behavior. The scale consists of three items (e.g., “This child hits and pushes others”). Because of the developmental differences between 7- and 9-year-old children, different procedures were used to assess aggressive behavior in the two age groups (cf. Crick et al., 1997): Older children completed the aggression scale in writing during a single group testing session in class (cf. Crick & Grotpeter, 1995). They received a booklet in which each page contained a behavior item and a list of all the students in the class. The directions explained that the child had to identify classmates that matched the behavior description and to circle their names on the list. To ensure that children understood the procedure, the experimenter, together with the children, worked through an example (i.e., “Which of your classmates likes football the most?”).

Because 1st graders lack the reading skills to answer the items without assistance, we interviewed the 7-year-olds to obtain their peer nominations (cf. Crick et al., 1997). First, children were shown pictures of all the students in the class on a piece of cardboard. To ensure that children knew all their classmates, they were asked to repeat children's names.

Following this task, the interviewer read the three aggression items, for each of which the child was asked to nominate classmates fitting the behavior description.

The nominations children received from their peers were summed for each aggression item and then standardized within classes. An aggressive behavior score was created by summing these three standardized scores. Cronbach's α was .95 for the 7-year-olds and .97 for the 9-year-olds.

Identifying aggressive and nonaggressive children. Children were classified as overtly aggressive or nonaggressive by applying the following criteria (cf. Hanish & Guerra, 2003): Those with scores half a standard deviation above the sample mean were classified as aggressive, whereas those with scores half a standard deviation below the sample mean were classified as nonaggressive[1]. Based on these criteria, 48 children (40 boys, 8 girls) were identified as overtly aggressive and 91 (42 boys, 49 girls) as nonaggressive. The proportions of boys in the aggressive groups in the two samples were similar to the proportions reported by Crick and Werner (1998) with a large sample of 1166 children (our sample: 83.3%; Crick & Werner: 81.6%). The validity of the two identified behavioral groups was supported by teachers' ratings of children's overtly aggressive behavior, $F(1, 137) = 98.70$, $p < .001$ (*M*aggressive = 2.37, *SD* = 0.91, *M*nonaggressive = 1.23, *SD* = 0.41), as assessed using a scale developed by Crick et al. (1997). The aggressive and nonaggressive children were equally distributed across the two age groups: 39 younger nonaggressive children (42.9%); 23 younger aggressive children (47.9%). The aggressive and nonaggressive children did not differ in their theory of mind skills (*M*s = 0.92, 0.93; *SD*s = 0.82, 0.76, range = 0–2), as assessed by a task that measures children's interpretative understanding (Lalonde & Chandler, 2002), and language skills (*M*s = 20.56, 21.57; *SD*s = 4.88, 3.86; range = 0–24), as assessed

by a subtest of the Heidelberg evaluation of language development test (Grimm & Schöler, 1991).

Presentation of the Moral Stories and Interview Questions

The interview procedure for assessing moral judgments and emotion attributions was adapted from Smetana et al. (2003). It included the presentation of four moral transgressions representing typical overtly aggressive acts, specifically, physical and verbal attacks. The stories were illustrated with colored pictures and matched for the child's sex. The four stories pertained to two different conditions: *unprovoked aggression and retaliation*. The unprovoked condition always came first, so as to prevent children from attributing a provocation in a situation lacking provocation (cf. Smetana et al., 2003). To reduce the monotony of the interview, a theory-of-mind task of a more playful character was inserted between the two conditions. The unprovoked condition included two stories about moral transgressions in which no actions were mentioned that could have provoked an aggressive act in retaliation. In the first story, the protagonist physically attacks a child; in the second story, the protagonist verbally teases another child at the school exit. The two stories in the retaliative condition involved retaliations to a prior provocation. In one story, the protagonist retaliates physically to a physical provocation; in the other story, the protagonist retaliates verbally to a verbal provocation.

Following the procedure developed by Smetana et al. (2003), children were asked nine questions (some including a follow-up) about the transgression. The first question required the child to judge the severity of the transgression: “Is it okay or not okay for the child to do x?” and if not okay, “Is it a little wrong or very wrong?” Next came a single justification question: “Why?" This question was followed by three moral evaluation questions: (a) “If the teacher did not see the child, is it okay or not okay for the child to do x?” (authority independence); (b) “If the teacher never told the child that he should not do x, is it okay or not okay for the

child to do x?" (rule independence); (c) "The child did x at school. Is it okay or not okay to do x at home?" (context independence). Moreover, children were asked to rate the deserved punishment: "Should the child be punished for doing x?" and if yes, "a little bit or severely?" (deserved punishment). Next, there were three questions on emotion attribution: (a) "How does the perpetrator feel now?" (b) "How does the victim feel?" (c) "Why does the perpetrator feel that way?" This last question was added to those developed by Smetana et al. (1999) to assess how children justified their attribution of emotion to the perpetrator.

After the last question had been presented, children were shown a set of affect ratings. Selected on the basis of previous research (Smetana et al., 1999), they consisted of schematic line drawings of faces depicting happiness, anger, sadness, fear, or neutral affect with the corresponding verbal labels of "happy," "angry," "sad," "fearful," and "neutral" printed below the face. These affect labels were also presented orally, and children were asked to repeat the labels to ensure adequate understanding.

Scoring of Children's Ratings

Moral judgments. Children's judgments of severity and deserved punishment were coded on a 3-item scale with response options that varied from 1(*okay*) to 3(*very serious*) and from 1(*no punishment*) to 3 (*severe punishment*). The three questions regarding authority, rule, and context independence were each credited with 1 point if the child answered that the transgression was not okay, and with 0 points if the child said that the aggressive act was okay. A total moral evaluation score was created by summing the three item scores. These total scores could range from 0 (*dependent on authority, rule, and context*) to 3 (*independent of authority, rule, and context*).

Emotion attributions to transgressors and vicitms. Each of the five possible emotions (happiness, anger, sadness, fear, neutral feelings) was assigned 1 point if the emotion was mentioned and 0 points if the emotion was not mentioned. As very few children (< 4%)

spontaneously mentioned more than one emotion, these secondary attributions were not considered further.

Justifications of moral judgments and emotion attributions. Children's justifications of moral judgments and emotion attributions were classified using a coding system adapted from Smetana et al. (2003). The categories were defined as follows: (a) *moral*: others' welfare or the unfairness of the action (e.g., "It's not right to hurt others," "because the other child is sad now"); (b) *sanction-oriented*: negative sanctions from authorities or peers following the transgression (e.g., "He will call her father and get in trouble," "She will be punished by the teacher"); (c) *justified act:* explanation of the transgression by referring to the victim's actions or personal characteristics ("It's the other's fault") or to the prior provocation ("He deserved it"); (d) *hedonistic*: satisfaction of personal needs (e.g., "Now I have all my friends on my side"); (e) *alternate strategies:* nonaggressive reactions that could have been chosen ("She could have talked instead of hitting back"); (f) *undifferentiated*: failure to give a specific reason or elaboration of a reason beyond a simple repetition of the facts ("just because it would be so," "because I have done this"); (g) *uncodable*: an incomprehensible response or no response.

All the responses obtained during the interviews were probed and the resulting arguments coded. For example, if a child initially responded "It is not right" and then, after probing, said "because you should not steal," the argument was classified as moral. If the child then said "because it is not right" after probing, this argument was still classified as moral, because it represents a naive moral concept. Answers were coded 1 if they fell in one of the above categories and 0 if they did not. To control for the varying number of responses, the mean proportions of each type of justification were calculated for each child. Interrater reliability between the two coders, based on 15% of the interviews, was $\kappa = .86$. A little less than a third of the children (29.5%) gave more than one justification.

Results

Methods of Analysis

The dependent measures were analyzed with mixed analyses of variance (ANOVAs). Aggressive Status (high vs. not high) and Age (7- vs. 9-year-olds) were entered as between-group factors, and Condition (unprovoked aggression vs. retaliation), Role (aggressor vs. victim), and Justification Context (moral judgments vs. emotion attributions) as repeated measures. The dependent variables were (a) moral judgments, (b) emotion attributions, and (c) justifications of moral judgments and emotion attributions. Follow-up *t* tests were used to test for between-subjects and within-subjects differences. Due to the small number of aggressive girls ($n = 9$) and our focus being on the overall relations between aggression and moral development, we did not include sex as an independent variable in these analyses.

Moral Judgments

Separate 2 (Aggressive Status: high vs. not high) x 2 (Age: 7- vs. 9-year-olds) x 2 (Condition: unprovoked aggression vs. retaliation) repeated measures analyses of variance with condition as the repeated measure were performed on the three criterion judgments (severity, evaluation, punishment). Consistent with previous research, children judged unprovoked aggression to be more serious, $F(1, 134) = 28.14$, $p < .001$, more morally wrong, $F(1, 134) = 16.91$, $p < .001$, and more deserving of punishment, $F(1, 134) = 11.34$, $p < .001$, than retaliation (see Table 1 for means). However, a significant Age x Condition interaction for the ratings of seriousness, $F(1, 134) = 23.38$, $p < .001$, revealed that only older children differentiated between the two conditions, $t(76) = 5.81$, $p < .001$ (see Table 1).

As predicted, a significant Aggressive Status x Condition interaction, $F(1, 135) = 5.36$, $p < .05$, revealed that the aggressive children judged retaliation as less severe than did the nonaggressive children (*M*s = 2.0, 2.23; *SD*s = 0.53, 0.43), $t(137) = –2.20$, $p < .05$.

---------- insert table 1 here ----------

Emotion Attributions

Separate 2 (Aggressive Status: high vs. not high) x 2 (Age: 7- vs. 9-year-olds) x 2 (Condition: unprovoked aggression vs. retaliation) x 2 (Role: transgressor vs. victim) mixed ANOVAs were then conducted on the mean proportion of emotion attributions in each of the five categories (happiness, anger, sadness, fear, and neutral affect). The means of the emotion attributions as a function of age, condition and role are displayed in Table 2. Table 3 presents the means for emotion attributions for aggressive and nonaggressive children.

---------- insert table 2 and 3 here ----------

Happiness. Children attributed more happiness to the aggressor than to the victim (*M*s = 0.14, 0.02; *SD*s = 0.23, 0.08), $F(1, 135) = 41.13$, $p < .001$. A significant Condition x Role interaction, $F(1, 135) = 15.35$, $p < .001$, revealed that children attributed more happiness to the retaliator than to the unprovoked aggressor, $t(138) = 3.65$, $p < .001$.. A significant Age x Role interaction, $F(1, 135) = 9.57$, $p < .01$., indicated that older children attributed less happiness to the aggressor than did younger children (*M*s = 0.08, 0.20; *SD*s = 0.18, 0.26),$t(137) = 2.69$, $p < .001$, but attribution of happiness to the victims did not differ as a function of age (*M*s = 0.02, 0.02; *SD*s = 0.08, 0.08).

The analysis also revealed a significant four-way interaction involving aggressive status (Aggressive Status x Age x Condition x Role), $F(1, 135) = 6.22$, $p < .05$. Follow-up analyses indicated that younger aggressive children were more likely than younger nonaggressive children to attribute happiness to the unprovoked aggressor, $t(60) = 3.61$, $p < .001$. No effects of aggressive status were found for the older age group.

Anger. Children attributed less anger to the aggressor than to the victim (*M*s = 0.17, 0.24; *SD*s = 0.24, 0.29), $F(1, 135) = 5.44$, $p < .05$. Irrespective of condition and role, older children were less likely to attribute anger than younger children (*M*s = 0.26, 0.19; *SD*s = 0.19, 0.19), $F(1, 135) = 8.50$, $p < .01$.

Again a four-way –interaction involving aggressive status was found (Aggressive Status x Age x Condition x Role), $F(1, 135) = 5.51$, $p < .05$. Younger aggressive children attributed more anger to the victim in the unprovoked situations than did younger nonaggressive children (*M*s = 0.39, 0.17; *SD*s = 0.39, 0.31), $t(60) = 2.48$, $p < .05$.

Sadness. Children attributed less sadness to the aggressor than to the victim (*M*s = 0.23, 0.49; *SD*s = 0.30, 0.32), $F(1, 135) = 48.79$, $p < .001$. An Age x Role interaction, $F(1, 135) = 5.12$, $p < .05$, indicated that older children attributed more sadness to the aggressor than did younger children (*M*s = 0.29, 0.16; *SD*s = 0.32, 0.25), ,$t(137) = 2.66$, $p < .01$, whereas children, regardless of age, thought that the victim felt sad (*M*s = 0.48, 0.51; *SD*s = 0.32, 0.32).

Finally, a significant Aggressive Status x Age x Condition interaction, $F(1, 135) = 4.32$, $p < .05$, indicated that younger aggressive children were less likely than younger nonaggressive children to attribute sadness in the unprovoked situations (*M*s = 0.26, 0.90; *SD*s = 0.21, 0.21), $t(60) = –2.41$, $p < .05$.

Fear. No significant effects were found for attributions of fear.

Neutral Affect. Children attributed more neutral affect to the aggressor than to the victim (*M*s = 0.27, 0.08; *SD*s = 0.28, 0.15), $F(1, 135) = 55.16$, $p < .001$.

Justifications of Moral Judgments and Emotion Attributions

Separate 2 (Aggressive Status: high vs. not high) x 2 (Age: 7- vs. 9-year-olds) x 2 (Condition: unprovoked aggression vs. retaliation) x 2 (Justification Context: moral judgment vs. emotion attribution) mixed ANOVAs were performed to test the justifications, with condition and justification context as repeated measures. Two justification types (alternate strategies and hedonistic) were dropped from the analyses because they were very rarely given (*M*s = 0.04, 0.04). A single ANOVA was conducted on the mean proportions for each of the remaining justification types (moral, sanction-oriented, justified act, and undifferentiated).

The means of the justification types as a function of age, condition and context are displayed in Table 4. Table 5 presents the means for the justification types with regard to aggressive status.

---------- insert table 4 and 5 here ----------

Moral. Children were more likely to provide moral reasons when justifying their moral judgments than when justifying their emotion attributions (*M*s = 0.70, 0.28; *SD*s = 0.24, 0.30), $F(1, 122) = 179.36$, $p < .001$. A main effect for Condition, $F(1, 122) = 80.26$, $p < .001$, indicated that children were less likely to give moral reasons if the transgressions included retaliation than if they were unprovoked (*M*s = 0.38, 0.60; *SD*s = 0.29, 0.24). Furthermore, there was an Age x Condition interaction, $F(1, 122) = 6.91$, $p < .01$, indicating that older children appealed more to moral reasons in response to unprovoked aggression than did younger children (*M*s = 0.65, 0.55; *SD*s = 0.23, 0.25), $t(136) = 2.34$, $p < .05$, but their moral reasoning did not differ in response to retaliation (*M*s = 0.39, 0.37; *SD*s = 0.32, 0.25).

Consistent with our hypotheses, there was a significant Aggressive Status x Age x Condition interaction, $F(1, 122) = 7.64$, $p < .01$, indicating that older aggressive children provided fewer moral justifications than older nonaggressive children in the retaliative situations (*M*s = 0.25, 0.46; *SD*s = 0.26, 0.32), $t(75) = –3.00$, $p < .01$, but younger aggressive and nonaggressive children did not differ in this respect (*M*s = 0.37, 0.37; *SD*s = 0.24, 0.26).

Sanction-oriented. Children referred more often to sanctions for the justifications given for emotion attributions than those given for moral judgments (*M*s = 0.34, 0.03; *SD*s = 0.30, 0.09), $F(1, 122) = 109.95$, $p < .001$. A significant Condition x Justification Context interaction, $F(1, 122) = 13.26$, $p < .001$, indicated that children appealed more to sanctions to justify their emotion attributions if the aggression was unprovoked than if it was retaliative (*M*s = 0.44, 0.26; *SD*s = 0.40, 0.36), $t(127) = 5.10$, $p < .001$. There were few sanction-oriented justifications of moral judgments, regardless of condition (*M*s = 0.02, 0.04; *SD*s = 0.10, 0.12).

Justified act. Children referred more to the justified nature of the act in their reasoning if the aggression was retaliative than if it was unprovoked (*M*s = 0.20, 0.05; *SD*s = 0.26, 0.11), $F(1, 122) = 64.85$, $p < .001$.

Moreover, there was a significant Aggressive Status x Age x Condition interaction, $F(1, 122) = 6.94$, $p < .01$. As predicted, older aggressive children were more likely than older nonaggressive children to regard the retaliation as justified (*M*s = 0.38, 0.18; *SD*s = 0.32, 0.27), $t(75) = 2.86$, $p < .01$, but younger aggressive and nonaggressive children did not differ in this respect (*M*s = 0.27, 0.33; *SD*s = 0.20, 0.29).

Discussion

The main goal of the present study was to investigate aggressive and nonaggressive children's moral judgments and emotion attributions in hypothetical situations involving unprovoked aggression and retaliation. The study examined whether there are context-dependent relationships between aggression and moral development. By including both moral judgments and emotion attributions, we also sought to gain insight into the specific moral deficits associated with children’s aggressive conduct.

In accordance with our prediction, both aggressive and nonaggressive children viewed retaliation as less serious, less morally wrong, and less deserving of punishment than unprovoked aggression. Moreover, children expressed less moral concern when justifying their moral judgments of retaliative than of unprovoked aggression. Even though the aggressive children viewed retaliation as serious, they were more likely than the nonaggressive children to accept retaliation. The aggressive children's greater tolerance for retaliation was further supported by their justifications following their moral judgments and emotion attributions. Within the older sample, aggressive children were less likely than nonaggressive children to refer to moral reasons in their justifications of both moral judgments and emotion attributions. Similarly, older aggressive children, regardless of

whether the context was moral judgments or emotion attributions, were more likely than older nonaggressive children to view the retaliation as justified because of the prior provocation.

In sum, these findings suggest that aggressive children are more likely to subordinate the harmful consequences of the retaliation to the unfairness of the provocation (cf. Astor, 1994). According to Arsenio and Gold (2006), aggressive children, from early on, experience inequality and unfairness not only in their close relationships, but also with regard to their economic situations and life opportunities. It is therefore not surprising that they generalize these experiences to biased interpretations of other social situations as being hostile or unfair.

Aggressive and nonaggressive children also differed in their moral emotion attributions. Younger aggressive children attributed more happiness to the unprovoked aggressor than did younger nonaggressive children. However no differences were found in such happy-victimizer attributions to retaliators. Similarly, younger aggressive children, as compared to younger nonaggressive children, attributed less sadness to the transgressor and to the victim in the unprovoked situations, but not in the retaliative situations. These findings support previous research demonstrating that children's attributions of happiness and sadness to unprovoked transgressors are related to their (im)moral behavior (e.g., Malti et al., 2008). They indicate that aggressive children may be more concerned about the material or social gains produced by unprovoked aggression and less about the harming consequences of these transgressions than nonaggressive children. Contrary to our expectations, however, aggressive children did not attribute more happiness to the retaliator than nonaggressive children. In their attributions of happiness, younger aggressive children did not distinguish between unprovoked aggressor and retaliator. Younger nonaggressive children, however, only attributed happiness to retaliators, not to unprovoked aggressors. This finding may indicate that nonaggressive children have a more nuanced understanding of the emotional consequences following different moral transgressions. In contrast, aggressive children

generally expect an aggressor to feel happy, even if the aggression is acted out for purely instrumental reasons.

Furthermore, younger aggressive children attributed more anger to victims in the unprovoked situations than younger nonaggressive children. Aggressive children might be especially sensitive to transgressions that are carried out in the absence of provocation. Perhaps aggressive children often perceive peer aggression as unjustified and therefore are more likely than nonaggressive children to react angrily to these types of provocations. The literature on children's aggression highlights the role that anger plays in the development of behavioral problems, because the ability to control anger contributes significantly to the inhibition of aggression (e.g., Orobio et al., 2005). Aggressive children's anger attributions may therefore reflect a deficit in emotion regulation.

Interestingly, the relation between aggressive behavior and emotion attributions was restricted to the younger age group. In contrast, differences between the justifications given by aggressive and nonaggressive children were found only in the older sample. Possibly, in older elementary-school children, emotion attributions may lose their predictive validity for moral behavior because children increasingly differentiate a variety of different reasons for negative emotion attributions (Malti et al., 2009). However, children's justifications of their emotion attributions may become more predictive for inter-individual behavioral differences, as justifications have been shown to become more diverse during middle childhood (Keller et al., 1998).

The results regarding age differences in children's emotion attributions and justifications are consistent with findings from happy-victimizer research (e.g., Arsenio et al., 2006). Older children attributed less happiness and more sadness to the transgressors, and less anger in general, than did younger children. These findings suggest an increasing ability to coordinate the victim’s and the perpetrator’s perspectives and to shift attention towards the

victim's welfare. This ability may enable older children to control their immediate impulses (such as anger) and subordinate them to the moral concerns of fairness and the other's welfare.

Previous research indicates that children attribute immoral emotions (i.e. happiness) to perpetrators, even if they had previously judged the transgressions to be morally wrong (e.g., Nunner-Winkler & Sodian, 1988). This gap has also been apparent in children's justifications of their moral judgments and emotion attributions in this study. Children more often gave reasons that were immoral (sanction-oriented or undifferentiated) for their emotion attributions than for their moral judgments, whereas the opposite was the case if the reasons were moral. A possible explanation for this discrepancy is that moral judgments and moral emotions follow different developmental pathways; that is, the former is more indicative of the cognitive and the latter of the motivational component of morality (e.g., Nunner-Winkler & Sodian, 1988). However, in our study the findings on aggressive status did not support this "motivational hypothesis," because the justifications of both judgments and emotions were related to the child's aggressive status. To treat moral judgments and moral emotions as if they were in conflict implicates the risk of classifying moral judgments as rational and emotions as irrational. In addition to the theoretical arguments (see Blasi, 2001; Turiel, 2006), there are also methodological factors that may be in conflict with such an interpretation. Whereas the moral judgment probes in our test instrument assess children's *prescriptive* evaluations (e.g., "Is it right or wrong to do x?"), the questions on emotion attribution assess their *descriptive* understanding ("How would x feel?"). As shown by Keller et al. (2003), immoral emotion attributions are less frequent if the question is asked prescriptively ("How should x feel?") than if it is asked descriptively. Therefore, consistency between children's moral judgments and emotion attributions is more likely to be found if both are assessed either prescriptively or descriptively.

Limitations

There are several limitations to our study. Because only a few overtly aggressive girls could be recruited, we were unable to analyze the data for sex differences. It thus remains an open question whether our results apply across gender**.** Second, our results are restricted to overtly aggressive children and may not apply to other groups of aggressive children. For example, the aggression literature distinguishes between overtly aggressive behavior and relationally aggressive behavior (e.g., exclusion, rumor spreading), the latter being more frequent in girls (e.g., Crick & Werner, 1998). To increase our understanding of the specific moral deficits associated with these different forms of aggressive behavior, future research should distinguish between the different subgroups of aggressive children (cf. Murray-Close, Crick, & Galotti, 2006). Finally, we did not differentiate between children's moral understanding of different forms of both provocation and retaliation (physical vs. verbal), because our main hypothesis involved comparisons between retaliation and unprovoked aggression, and because we wanted to keep the study simple. However, previous research has shown that children's moral and affective understandings also differ as a function of provocation or retaliation type of (e.g., Astor, 1994; Smetana et al., 2003). Our results might have been more refined if we had also manipulated the type of provocation.

Despite these limitations, our study provides new insights into nonaggressive and aggressive children's moral development. Specifically, aggressive children showed domain-specific deviations in their affective and cognitive moral understandings of retaliation and unprovoked aggression. Finally, the findings support the proposition that an integrated analysis of moral judgments and emotions can make an important contribution to a more complete understanding of the moral precursors in the development of aggressive conduct.

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Footnotes

[1] The standard criterion to identify aggressive children is more extreme (one standard deviation above the sample mean) than the one we chose (half a standard deviation above the sample mean). However, it is common in the peer relations literature to use a less extreme criterion in order enlarge the behavioral groups, especially if the initial sample is relatively small (e.g., Schwartz, 2000).

Table 1

Mean Moral Judgments (*SD in Parentheses) by Condition and Age Group*

	Younger	Older	*M*
Severity			
Unprovoked aggression	2.20 (0.38)	2.51 (0.39)	2.37 (0.41)
Retaliation	2.19 (0.32)	2.14 (0.57)	2.16 (0.48)
Moral evaluation			
Unprovoked aggression	2.89 (0.24)	2.91 (0.29)	2.90 (0.27)
Retaliation	2.62 (0.73)	2.72 (0.70)	2.70 (0.71)
Deserved punishment			
Unprovoked aggression	2.06 (0.58)	1.94 (0.55)	1.99 (0.56)
Retaliation	1.78 (0.69)	1.79 (0.64)	1.79 (0.66)

Note. Condition: = unprovoked aggression vs. retaliation

Table 2

Mean Emotion Attributions (SD in Parentheses) as a Function of Age Group, Condition, and Role

	Aggressor				Victim			
	Unprovoked aggression		Retaliation		Unprovoked aggression		Retaliation	
	Younger	Older	Younger	Older	Younger	Older	Younger	Older
Happiness	.15 (.29)	.05 (.15)	.25 (.34)	.12 (.27)	.02 (.09)	.04 (.13)	.02 (.09)	.01 (.06)
Anger	.26 (.34)	.07 (.21)	.23 (.32)	.16 (.27)	.25 (.36)	.23 (.35)	.30 (.36)	.20 (.33)
Sadness	.18 (.31)	.32 (.38)	.15 (.29)	.27 (.36)	.51 (.41)	.51 (.43)	.51 (.40)	.46 (.40)
Fear	.16 (.28)	.29 (.39)	.09 (.26)	.20 (.36)	.19 (.26)	.13 (.29)	.18 (.29)	.20 (.28)
Neutral	.28 (.35)	.26 (.34)	.27 (.38)	.25 (.33)	.05 (.17)	.09 (.23)	.02 (.11)	.12 (.25)

Note. Condition = unprovoked aggression vs. retaliation; role = aggressor vs. victim.

Table 3

Mean Emotion Attributions (SD in Parentheses) of Aggressive and Nonaggressive Children as a Function of Age Group, Condition, and Role

	Aggressor				Victim			
	Unprovoked aggression		Retaliation		Unprovoked aggression		Retaliation	
	Younger	Older	Younger	Older	Younger	Older	Younger	Older
Happiness								
Aggressive	.30 (.39)	.04 (.14)	.28 (.36)	.18 (.32)	.04 (.14)	.04 (.14)	.02 (.10)	.00 (.00)
Nonaggressive	.05 (.15)	.05 (.15)	.23 (.32)	.10 (.24)	.00 (.00)	.04 (.14)	.01 (.09)	.01 (.07)
Anger								
Aggressive	.15 (.28)	.10 (.20)	.28 (.30)	.14 (.23)	.39 (.40)	.26 (.33)	.30 (36)	.16 (.28)
Nonaggressive	.32 (.35)	.06 (.21)	.21 (.34)	.16 (.29)	.17 (.31)	.22 (.36)	.30 (.36)	.22 (.35)
Sadness								
Aggressive	.15 (.28)	.38 (.36)	.07 (.17)	.22 (.29)	.37 (.41)	.50 (.43)	.57 (.41)	.40 (.35)
Nonaggressive	.19 (.34)	.29 (.39)	.19 (.34)	.29 (.39)	.59 (.40)	.51 (.43)	.47 (.40)	.48 (.42)
Fear								
Aggressive	.20 (.29)	.16 (.28)	.13 (.31)	.14 (.31)	.20 (.25)	.12 (.30)	.15 (.24)	.24 (.33)
Nonaggressive	.14 (.28)	.36 (.42)	.06 (.24)	.23 (.38)	.18 (.27)	.14 (.28)	.19 (.32)	.18 (.26)
Neutral								
Aggressive	.28 (.36)	.28 (.33)	.24 (.40)	.32 (.35)	.04 (.14)	.08 (.19)	.02 (.10)	.16 (.31)
Nonaggressive	.28 (.34)	.25 (.35)	.30 (.38)	.22 (.32)	.05 (.19)	.10 (.24)	.03 (.11)	.11 (.21)

Note. Condition = unprovoked aggression vs. retaliation; role = aggressor vs. victim.

Table 4

Mean Justifications (SD in Parentheses) by Age Group, Condition, and Context

	Moral Judgments				Emotion Attributions			
	Unprovoked aggression		Retaliation		Unprovoked aggression		Retaliation	
	Younger	Older	Younger	Older	Younger	Older	Younger	Older
Moral	.81 (.26)	.93 (.21)	.53 (.33)	.51 (.42)	.26 (.34)	.36 (.40)	.22 (.36)	.27 (.34)
Sanction	.04 (.13)	.01 (.07)	.03 (.11)	.04 (.12)	.39 (.40)	.49 (.40)	.20 (.35)	.28 (.35)
Justified act	.10 (.18)	.01 (.04)	.37 (.34)	.23 (.35)	.13 (.31)	.01 (.06)	.25 (.34)	.26 (.35)
Undifferentiated	.05 (.14)	.04 (.14)	.03 (.12)	.04 (.14)	.11 (.27)	.11 (.25)	.11 (.25)	.18 (.29)

Note. Condition = unprovoked aggression vs. retaliation; Context = moral judgment vs. emotion attribution.

Table 5

Mean Justifications (SD in Parentheses) of Aggressive and Nonaggressive children by Age Group, Condition, and Context

	Moral Judgments				Emotion Attributions			
	Unprovoked aggression		Retaliation		Unprovoked aggression		Retaliation	
	Younger	Older	Younger	Older	Younger	Older	Younger	Older
Moral								
Aggressive	.76 (.30)	.90 (.25)	.53 (.33)	.37 (.43)	.26 (.34)	.38 (.39)	.22 (.33)	.12 (.21)
Nonaggressive	.84 (.24)	.94 (.17)	.53 (.33)	.58 (.41)	.25 (.35)	.35 (.41)	.22 (.38)	.34 (.37)
Sanction								
Aggressive	.06 (.16)	.04 (.12)	.05 (.13)	.02 (.10)	.34 (.36)	.47 (.35)	.26 (.40)	.35 (.40)
Nonaggressive	.03 (.11)	.00 (.00)	.03 (.11)	.04 (.13)	.42 (.43)	.51 (.42)	.16 (.31)	.25 (.32)
Justified act								
Aggressive	.14 (.22)	.02 (.10)	.36 (.36)	.40 (.41)	.14 (.32)	.02 (.10)	.17 (.29)	.36 (.36)
Nonaggressive	.09 (.16)	.00 (.00)	.36 (.32)	.14 (.29)	.11 (.30)	.00 (.00)	.30 (.37)	.21 (.34)
Undifferentiated								
Aggressive	.05 (.15)	.04 (.20)	.02 (.10)	.04 (.14)	.07 (.18)	.13 (.27)	.07 (.17)	.16 (.28)
Nonaggressive	.05 (.14)	.04 (.14)	.04 (.13)	.04 (.14)	.13 (.31)	.10 (.24)	.14 (.28)	.19 (.30)

Note. Condition = unprovoked aggression vs. retaliation; Context = moral judgment vs. emotion attribution.