

The relation of elementary-school children's externalizing behaviour to emotion attributions, evaluation of consequences, and moral reasoning

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Abstract

This study examined the relation of elementary-school children's externalizing behaviour to emotion attributions, evaluation of consequences, and moral reasoning. Externalizing behaviour was rated by the parents using the Child Behaviour Checklist (CBCL/4-18). Moral development was assessed by three stories describing different types of rule violation and a moral conflict in friendship including obligations and self-interest. The children were asked about the emotions they would attribute to the hypothetical victimizer (or protagonist) and the self-as-victimizer (or protagonist), the evaluation of the interpersonal consequences of the rule violation (or action decision) as well as their justifications. Boys who made selfish action decisions and attributed positive emotions to the protagonist of the moral dilemma displayed more externalizing behaviour than girls. Furthermore, boys with consistent moral (negative) emotion attributions to the self-as-victimizer across the rule violations showed less externalizing behaviour than boys with inconsistent moral emotion attributions. Younger children who anticipated negative interpersonal consequences of transgressions displayed higher rates of externalizing behaviour than younger children who anticipated less negative consequences. Moral reasons in the context of emotion attributions to the self-as-victimizer were negatively associated with externalizing behaviour.

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Children's externalizing behaviour refers to a syndrome that comprises problem behaviours like aggressive, delinquent, disruptive, and under controlled behaviour patterns (Hinshaw, 2002). To date, we do not know enough about how children's social cognitions in the moral domain relate to their externalizing behaviour, though researchers have elaborated the important role of moral development in behavioural regulation and related externalizing problem behaviours (Eisenberg et al., 2000). Within the social information processing model (Crick & Dodge, 1994), children with aggressive and externalizing behaviour have been shown to display social-cognitive distortions, such as the tendency to evaluate the intentions of a protagonist in ambiguous stories as hostile and the negative consequences of an action as intended (e.g., Burgess, Wojslawowicz, Rubin, Rose-Krasnor, & Booth-LaForce, 2006; Orobio de Castro, Veerman, Koops, Bosch, & Monshouwer, 2002).

In moral psychology, there is an ongoing theoretical debate on whether moral cognitions, moral emotions, or both are deficient in children and adolescents with moral misconduct and associated externalizing behaviour (Gibbs, 2003). Research has not clarified the diverging standpoints to date. In this paper, we therefore explore the question of how moral emotions and moral cognitions (i.e., evaluations and justifications) are related to elementary-school children's externalizing behaviour. This question is of high significance, because moral development may serve as a protective factor in the

intra-individual development of children's externalizing problem behaviour (Hastings, Zahn-Waxler, Robinson, Usher, & Bridges, 2000).

Emotion Attributions and Externalizing Behaviour

Research within the social information processing model has theoretically elaborated and empirically validated the idea that aggressive behaviour is partially caused by distortions in emotional information processing (Arsenio & Lemerise, 2001; Lemerise & Arsenio, 2000; Orobio de Castro, Merk, Koops, Veerman, & Bosch, 2005). Likewise, moral researchers have suggested that (im)moral behaviour is related to moral emotions (e.g., Hoffman, 2000; Keller & Edelstein, 1993). Research on children's emotion attributions after moral rule violations revealed that although young children understand the validity of moral rules and judge rule violations as wrong independent of sanctions (Turiel, 1983), they still attribute positive emotions to hypothetical victimizers (the so-called *happy victimizer phenomenon*). At elementary-school age, there seems to be a shift from the attribution of positive emotions to negative (moral) ones (Arsenio & Kramer, 1992; Nunner-Winkler & Sodian, 1988). In the happy-victimizer research paradigm, a negative emotion attribution after moral transgressions is considered as *moral emotion*, and researchers assume that the attribution of moral emotions and corresponding moral and/or empathic reasoning reflect the internalization of the moral norm (Montada, 1993; Nunner-Winkler, 1999). Children's attributions of moral emotions to a transgressor may thus be a central motivational component in the development of moral commitment or, vice versa, moral misconduct and related externalizing behaviour (Hoffman, 2000).

Previous research on the relationship between children's emotion attributions to hypothetical victimizers and externalizing behaviour has revealed inconsistent findings, however (see Arsenio, Gold, & Adams, 2006, for a review): While some studies documented a negative relation between the attribution of moral emotions and aggressive behaviour (Asendorpf & Nunner-Winkler, 1992), other studies found no association (Menesini, Sanchez, Fonzi, et al., 2003), or even documented a positive relation (Arsenio & Fleiss, 1996).

Studies that differentiate between emotions attributed to the hypothetical victimizer and those attributed to the self in the role of the victimizer may help to clarify these inconsistencies. The findings of these studies revealed that younger children attributed moral emotions more frequently to themselves than to the hypothetical victimizer (Keller, Lourenco, Malti, & Saalbach, 2003; Van Zee, Lemerise, Arsenio, Gregory, & Sepcaru, 2000). Keller et al. (2003) concluded that only self-attributed emotions are a salient indicator of an internalized moral norm and moral motivation (cf. Arsenio & Lover, 1995).

So far, investigations on the relation between self-attributed emotions and externalizing behaviour are rare. A study by Krettenauer and Eichler (2006) revealed that the intensity of self-attributed moral emotions negatively predicted adolescent's delinquency. Malti (in press) documented that self-attributed moral emotions – but not other-attributed ones – predicted aggression in kindergarten-children negatively. In this study, we follow up on this latter research and investigate the relation between other- and self-attributed emotions and elementary-school children's externalizing behaviour.

Moral Evaluation of Consequences and Externalizing Behaviour

Externalizing problem behaviours are related to biased social cognitions in various stages of the social information process (Camodeca & Goosens, 2005; Crick & Dodge, 1996; Guerra, Nucci, & Huesmann, 1994; Guerra & Slaby, 1989), and research within this theoretical tradition has documented that aggressive children tend to think that aggressive behaviour may have positive consequences (e.g. Huesmann & Guerra, 1997).

Previous studies in the happy-victimizer paradigm mostly focused on children's *descriptive* emotion attributions, however (how a protagonist *would* feel after a moral transgression). Keller et al. (2003) and Lourenço (1997) also included a *deontic* moral question (how the protagonist *ought* to feel), and the moral/aretaic evaluation of the victimizer as a person (e.g., whether he or she is a good or a bad person). The findings revealed that even if young children attributed positive emotions to victimizers they knew that the protagonist 'should feel bad' after a moral transgression and evaluated the victimizer negatively as a 'bad' person. Children also evaluated a happy victimizer as worse than a sad victimizer (Nunner-Winkler & Sodian, 1988). Arsenio et al. (2006) concluded from this research that the important question is not about moral rule internalization, because even young children already have moral awareness, but more about when (young) children spontaneously apply their moral understanding in situations where moral rules and self-interest are in conflict (p. 595). We therefore think that it is relevant to include a moral dilemma in the present study. This may help to elaborate whether children's moral development differs in dependence of type of method (i.e., hypothetical rule violation and moral dilemma) used.

Aggressive children tend to differ from non-aggressive children in that they evaluate victimizers less negatively (Arsenio & Fleiss, 1996; Malti, 2003). This finding can be interpreted in various ways: On the one hand, it is possible that they identify with the

transgressor given their past experience of bullying and victimizing others and may reduce dissonance by evaluating the transgressor positively (Festinger, 1957). On the other hand, this result could reflect an egocentric bias in aggressive children, which hinders them from taking the perspective of a third-party observer in the evaluation of the action (Gibbs, 2003). In the present study, the issue of moral evaluation is addressed by a further question, which we see as particularly interesting in relation to externalizing behaviour, i.e. the evaluation of the interpersonal consequences of a transgression or an action choice in a dilemma for the relationship between the victimizer/protagonist and the victim. Given that externalizing behaviour is related to problems with social interaction and that the quality of relationships with peers influences moral development (Dunn, Cutting, & Demetriou, 2000), it is reasonable to assume that children with externalizing behaviour may interpret rule-transgressing behaviour, or selfish action choices, as irrelevant or without negative interpersonal consequences. This argument was indirectly supported by Ramos-Marcuse & Arsenio (2001), who showed that children with behavioural problems reported fewer attempts to respond positively to a victim after rule transgressions. Children with externalizing behaviour possibly employ mechanisms of moral disengagement, e.g., by trying to relieve the victimizer of responsibility, and to minimize his or her role in the harm caused by denying the negative consequences of a transgression for the relationship (Bandura, 1999; Gini, 2006).

Moral Reasoning and Externalizing Behaviour

In cognitive-developmental theory, externalizing behaviour and moral misconduct have been associated with moral developmental delay, expressed as an *egocentric bias* (Gibbs, 2003, p. 136; Kohlberg, 1976; Piaget, 1965; see Stams et al., 2006, for a recent

meta-analysis on juvenile delinquents moral judgment). This egocentric bias is reflected in hedonistic justifications for morally relevant action decisions, emotion attributions, and moral evaluations. Developmentally, hedonistic reasoning decreases, and reasoning oriented toward the concerns of others and generalized principles increases (Keller, Edelstein, Schmid, Fang, & Fang, 1998, p. 2; Eisenberg, Boehnke, Silbereisen, & Schuler, 1985). Aggressive problem behaviour, however, seems to be associated with a focus on hedonistic aspects in moral rule violations: For example, in a study by Arsenio and Fleiss (1996) aggressive children referred to the desirable gains from rule transgression more frequently than non-aggressive children, and several studies supported this link between hedonistic reasoning and externalizing behaviour (e.g., Bear & Rys, 1994; Manning & Bear, 2002; Menesini et al., 2003). Hughes and Dunn (2000) found that hard-to-manage preschoolers gave less empathic justifications than their peers and this was associated with problems in language and social understanding, thus pointing to more general cognitive deficits in these children. However, Sutton, Smith, and Swettenham (1999) suggested that the relation between poor moral understanding and aggressive behaviour is not necessarily generally valid. They argue that some aggressive children may use the understanding of moral conflicts in a machiavellianistic way in order to achieve personal goals. This view was supported empirically by Hawley (2003), who found that teacher-rated relational aggression is positively related to girls' moral reasoning as assessed by the happy-victimizer task.

To study these contradictory viewpoints further, it seems necessary to integrate moral reasoning on the one hand and affective-motivational components of morality (e.g., emotion attributions) on the other into one model, because this may shed light on the question of which components of morality are particularly problematic in children with

externalizing behaviour (cf. Arsenino & Lemerise, 2004). Furthermore, we compare children's moral reasoning after moral rule violations as well as in a morally problematic dilemma situation. The attribution of moral emotions in the happy-victimizer task cognitively presupposes the ability to coordinate perspectives of the self and other (Harris, 1989; Keller, 2004). In contrast, the dilemma situation is cognitively more demanding and assesses cognitive ability from the perspective of a general, third-person observer: the child has to reflect his or her own action choice in light of what is the morally right choice in a situation of conflicting moral obligations and self-interest (Keller, 2004, p. 271). As previous research has indicated that children with problem behaviours may lack social-cognitive skills, it is possible that their deficiencies are more strongly pronounced in the cognitively more demanding dilemma situation than in the evaluation of already performed rule violations. Given that Nunner-Winkler (1999) found remarkable differences in justification content depending on the type of question asked, the present study assesses justifications in the context of emotion attributions and evaluations.

Aims of the Study and Hypotheses

The study aims at investigating relations between elementary-school children's externalizing behaviour and, *first*, other- and self-attributed emotions, *second*, evaluations of interpersonal consequences, and, *third*, moral reasoning in the context of emotion attributions and evaluation of consequences. We hypothesized in line with the theory of Hoffman (2000) that the anticipation of moral emotions is negatively related to children's externalizing behaviour, but that self-attributed emotions relate more closely to externalizing behaviour than emotion attributions to victimizers. Based on the assumption

that externalizing behaviour is associated with developmentally delayed moral cognitions, we hypothesized that children with externalizing behaviour less frequently anticipate negative interpersonal consequences after rule violation or after an action choice in a moral dilemma. In line with cognitive-developmental theory we expected that hedonistic reasoning would positively relate to externalizing behaviour, but that the relation between moral reasoning and externalizing behaviour may also depend on the type of question asked, because reasoning differs in descriptive and prescriptive question contexts. We also assumed that the type of measurement (happy-victimizer task and moral dilemma) may influence the relation between children's moral reasoning and externalizing behaviour.

As previous studies found age trends in moral development (e.g., Keller, 1996; Lagattuta, 2005) and in externalizing behaviours (Tremblay et al., 1999), we controlled for age effects. We also considered gender, because findings on gender differences in moral development are rather inconsistent (Walker, 2006), and boys display more externalizing behaviour than girls at elementary-school age (Moffitt, Caspi, Rutter, & Silva, 2001). The socioeconomic background of the family was controlled as well, because it seems to influence moral development (Dunn et al., 2000) and externalizing behaviour (Hill, Degnan, Calkins, & Keane, 2006). Moreover, we explored interaction effects between moral development and age, gender, and socioeconomic background in the prediction of externalizing behaviour, because previous studies found these to be of relevance (Schultz & Shaw, 2003).

METHOD

Sample

The data for the present study were taken from a research project on aggression and social-cognitive development in middle childhood (Malti, 2003). Children from three different elementary schools in two cantons in Switzerland participated, and school board permission was obtained. One hundred and fifty-three out of 198 parents (77%) gave written consent for their child's participation. Of the 153 children, one child was too old and was eliminated from the data analyses. Sixty-one percent of the corresponding parents filled in a questionnaire, and thus, the final sample size included 93 elementary-school children aged six to ten years with a mean age of 8.41 ($SD = 1.30$) and their parents. There were 48 girls (52%) and 45 boys (48%). Of the participating children 56% belonged to the first and second grade, and 44% to the third and fourth grade. The children in the first and second grade had a mean age of 7.48 ($SD = .66$). The children in the third and fourth grade had a mean age of 9.61 ($SD = .65$). Regarding the socioeconomic status of the sample, a revised version of the Hollingshead (1979) four-factor index was calculated (Dodge, Pettit, & Bates, 1994). The sample represented basically middle-class families ($M = 12.3$; $SD = 4.0$; range 3-20). Despite the rather high drop-out rate of the parents, no systematic sample bias seemed to obtain, given that the socioeconomic distribution of the sample was quite comparable to the socioeconomic distribution of Zurich's population (Malti, 2003).

Procedure

Children were individually interviewed in a separate room at school. Interviewers were undergraduate psychology students, who received training in the interview technique. After a child had entered the room, the interviewer explained that she was going to ask questions about picture stories. All interviews were audiotaped for coding and later

transcribed. At the end of the interview, children were praised for their participation, and sent back to their classroom. Parents were sent a questionnaire by mail; they filled it in, and returned it to the research team.

Materials and Coding

Externalizing behaviour. Parents rated the externalizing behaviour of the children using the German version of the Child Behaviour Checklist (CBCL/4-18; Achenbach & Edelbrock, 1983; Arbeitsgruppe Deutsche Child Behavior Checklist, 1999). Of the 33 items, the item ‘*my child thinks too much about sex*’ was excluded, because we considered this item to be age-inadequate. The reliability of the scale was $\alpha = .91$. The mean score of externalizing behaviour in the sample was 8.8 ($SD = 7.2$; range 0-38).

Moral development. We used three stories describing different types of moral transgression and an interpersonal-moral conflict to assess children’s moral development. The first story referred to the physical consequences of a transgression: ‘Harming another child’ (Keller et al., 2003; Turiel, 1983). The second and third stories referred to the psychological consequences of a moral transgression: ‘Stealing’ (Keller et al., 2003; Nunner-Winkler & Sodian, 1988), and ‘not comforting a needy child’ (Eisenberg, 1982). The fourth story, a moral conflict concerning three children of elementary-school age (Selman, 1980), has been cross-culturally validated in previous studies (Keller, 1996; Keller et al., 1998). We illustrated the stories by a three-frame sequence of gender-matched cartoons. In the first story (harming), a child (victim) swings, and the protagonist (victimizer) stands next to the swing (cartoon 1). The

corresponding text explains that the protagonist is desperate to swing, and pushes the first child (victim) off the swing. In the second story (stealing), a child (victim) leaves its jacket with a nice chocolate bar in the school hall (cartoon 1). Another child (victimizer) takes the chocolate bar (cartoon 2). In cartoon 3, the first child (victim) recognizes that the chocolate bar has been stolen. In the third story (not comforting), two children sit next to each other in a school room (cartoon 1). In cartoon 2, one child (victimizer) is eating a large snack. The other child (victim) has no snack for the school break. Cartoon 3 shows the hungry child (victim) asking for some of the snack, but the other child (victimizer) refuses. In the fourth story (moral dilemma), two children are presented as close friends. A third child is new in school and does not yet have any friends in the class (cartoon 1). When the friends talk about the new child, the protagonist requests his/her friend to understand that it is a difficult situation when you are new in class, but the friend does not like the new child. The best friend asks the protagonist to meet him/her as usual on their special meeting day, and the protagonist promises the best friend to do so (cartoon 2). The friend mentions new toys, but also wants to talk about an important problem. Later that day, the protagonist receives a phone call from the new child, who invites him/her to his/her house to watch an interesting movie on TV and eat pizza (cartoon 3). However, the invitation of the new child is at the very time of his/her meeting with the best friend. After the first three stories, the children were asked the following questions:

1. Moral judgment: Is it right to do what the victimizer did? Why/why not?
2. Emotion attribution to victimizer: How does the victimizer feel? Why?
3. Evaluation of interpersonal consequences: Does this (what the victimizer did) have consequences for the relationship? Why/why not?

4. Emotion attribution to self-as-victimizer: How would you feel if you had done that?
Why?

In the fourth story (moral dilemma), the questions on emotion attributions (2-to 4) were identical. The first question on moral judgment was replaced by the following two questions:

1a. Action choice: How does the protagonist decide in this situation? Why?

1b. Moral evaluation of the choice: Is this (the protagonist's decision) the right decision, or not? Why?

Coding of moral judgment, action choice, and moral evaluation of action choice:

The first question (moral judgment) assessed children's understanding of rule violations. Answers were coded as 'right' and 'not right'. Action choice in the dilemma was coded as 'old friend', and 'new child'. The children were prompted once in case of a 'don't know' answer, and all children decided on one option. Children's moral evaluation of the choice was assessed in question 1b of the dilemma and coded as 'right' and 'not right'.

Coding of emotion attributions: Questions two and four measured children's emotion attributions. The attributed emotions were coded as 'positive', 'negative', 'mixed', and 'neutral'. The category 'neutral' occurred very rarely and only in the first three stories, so it was combined with the category 'good' for statistical analyses. For further statistical analyses, a negative emotion attribution after moral transgressions was assigned 2 points, a mixed attribution 1 point, and a positive emotion attribution 0 points, and scores were averaged across the three stories. Emotion attributions to victimizer in the three stories were correlated (harming and stealing, $r(85) = .55, p < .001$, harming and not comforting, $r(84) = .47, p < .001$, and stealing and not comforting, $r(86) = .43, p < .001$), as were the emotion attributions to the self-as-victimizer predominantly (harming

and stealing, $r(82) = .50, p < .001$, harming and not comforting, $r(79) = .10, ns$, and stealing and not comforting, $r(80) = .18, p < .10$). The interrelations between the emotion-attribution scores of the vignettes have been documented elsewhere as well (Malti, Gummerum, & Buchmann, in press). The scores were averaged across the stories. Thus, the higher the score of the corresponding scales, the more negative the emotion attribution. For example, a score of 2 indicated that children attributed negative emotions across all three stories. The mean score of the emotion attribution to victimizer scale was 1.34 ($SD = 0.75$), and for the emotion attribution to self-as-victimizer scale, it was 1.84 ($SD = 0.35$). The mean difference between the two scales was significant ($t(90) = 5.74, p < .001$). In the moral dilemma, the category ‘mixed’ occurred very rarely (2%) and was combined with the category ‘negative’ for statistical analyses. Given that the emotion attributions were not independent of the action choice made, a combined score of action choice (old friend/new child) and emotion attribution (positive/negative) was created. Nine percent of the children opted for the answer that the protagonist would go to the friend and feel good, 24% reported that the protagonist would feel bad after this decision; 23% of the children opted for the choice that the protagonist would go to the new child and feel good, and 44% reported that the protagonist would feel bad after this decision.

Coding of evaluation of consequences: Children’s answers were coded as ‘yes’ and ‘no’. The evaluation that there would be negative consequences was assigned 1 point, and the evaluation that there would be no consequences 0 points. The three variables were interrelated (harming and stealing, $r(78) = .37, p < .01$, harming and not comforting, $r(75) = .29, p < .05$, and stealing and not comforting, $r(79) = .39, p < .001$), and a mean score across the first three stories was computed. A high score implied a more frequent evaluation that there would be consequences for the relationship between the victimizer

and the victim. The mean score of the scale was 0.62 ($SD = 0.38$). In the moral dilemma, a combined score of action choice (old friend/new child) and evaluation of negative interpersonal consequences (yes/no) was created: 20% reported that the protagonist would opt for the friend and that this decision would be without consequences, 13% reported that going to the friend would have consequences; 22% thought that the protagonist would opt for the new child without consequences, and 45% decided meeting the new child would have consequences.

Coding of moral reasoning. Children's reasons were classified using the coding system employed in previous studies (e.g., Keller et al, 2003):

- a. Moral reasons: Reasons concerning moral norms, rules, obligations (e.g., 'it is not right to steal') or the obligation of promise (e.g., 'she has promised to meet her').
- b. Empathic concern/internal consequences: Reasons related to the quality of the relationship, altruism/empathy; or to internal negative consequences for the actors (e.g., 'it hurts so badly'; 'He will have a bad conscience').
- c. Hedonistic reasons: Reasons of interest for an object or self-interest (e.g., 'she can eat the chocolate, and she loves chocolate'; 'it is such a great movie').
- d. Sanctions/authority-oriented reasons: Reasons referring to an authority or to sanctions by an authority (e.g., 'his mother will tell him off').

Children's answers were coded categorically (1 = the category was used; 0 = the category was not used). Interrater reliability was calculated by two independent raters. The percentage agreement over all categories was 94%; all disagreements were discussed and a consensus was found.

RESULTS

Descriptive Results

Almost all children judged that the transgressions were not right (96%), and justified this with moral or empathic reasons (66%, 32%). In the case of the moral dilemma, 8% of the children opted for the friend and judged this decision to be wrong, whereas 30% opted for the friend and judged this decision to be right; 31% of the children opted for the new child and judged this decision to be wrong, and 31% opted for the new child and judged this decision as right. The descriptive results for externalizing behaviour and the continuous study variables of the rule transgressions (i.e., emotion attributions and evaluation of consequences) by gender are displayed in table 1.

Table 1
Means and Standard Deviations of Continuous Study Variables by Gender

	Girls		Boys	
	M	SD	M	SD
Externalizing behaviour	8.17	7.64	9.53	6.67
Emotion attribution victimizer	1.59	0.63	1.07	0.78
Emotion attribution self-as-victimizer	1.91	0.26	1.75	0.42
Evaluation of consequences after rule violation	0.61	0.41	0.63	0.36

Table 1 shows the mean raw scores of externalizing behaviour by gender. Girl's mean raw score of externalizing behaviour was 8.17 ($SD = 7.64$; $T = 58$), and it was 9.53 for boys ($SD = 6.67$; $T = 57$). Furthermore, girls attributed more negative emotions to the victimizer ($t(89) = 3.52$; $p < .01$) and to the self-as-victimizer ($t(89) = 2.17$, $p < .05$) than boys. Almost two thirds of the time children evaluated that the rule violations would have consequences for the relationship (see table 1), and no gender difference occurred. In the moral dilemma, 25% of the children opted for the new child and attributed the

protagonist positive emotions, and 18% of the children attributed themselves positive emotions after this decision; 58% of the children anticipated consequences after the action decision in the moral dilemma. There were no gender differences in emotion attributions or evaluations.

Regarding moral reasoning, 37% of the children referred to moral justifications, 41% to empathic, 13% to hedonistic, and 9% to sanction-oriented justifications after the rule violations. Interestingly, the percentage distribution of the reasoning categories in the moral dilemma was very similar to that in the rule violations (moral: 43%; empathic: 41%, and hedonistic: 16%). Regarding the association between the justifications and gender, results revealed that girls used more often empathic reasons ($t(89) = 1.95, p = .05$), and hedonistic reasons less often than boys after rule violations ($t(89) = -3.94, p = .000$). Furthermore, externalizing behaviour was negatively associated with age ($r(92) = -.22, p < .05$) and with socioeconomic status ($r(92) = -.20, p = .05$). No other significant relations between the study variables and age or socioeconomic status (SES) occurred.

A correlation analysis between the main study variables showed that boys' externalizing behaviour was negatively related to moral emotion attribution to the self-as-victimizer ($r(43) = -.35, p < .01$). Furthermore, moral emotion attribution to the victimizer and the self-as-victimizer were significantly interrelated in girls ($r(46) = .51, p < .001$). Girls' evaluation of the consequences after an action decision was positively related to evaluation of the consequences of rule violations ($r(39) = .36, p < .05$) and negatively related to negative (moral) emotion attribution to the victimizer ($r(39) = -.34, p < .05$). Emotion attribution to the protagonist and the self-as-protagonist in the dilemma were interrelated for boys ($r(35) = .50, p < .000$) and girls ($r(38) = .61, p < .000$).

Emotion Attributions and Externalizing Behaviour

The influence of emotion attributions on externalizing behaviour was tested by multiple linear regression analyses. Four separate regression models were run to predict children's externalizing behaviour: In all models, externalizing behaviour was specified as the dependent variable, and age, gender, and SES were entered as independent variables. To keep the sample size at an acceptable minimum, however, separate models with the following independent variables were computed: (1) emotion attribution to victimizer, (2) emotion attribution to protagonist after an action decision, (3) emotion attribution to self-as-victimizer, and, (4) emotion attribution to self-as-protagonist after an action decision. Interaction terms were created by calculating the product of the mean centred main effects. The significance of the interaction terms was tested in preliminary analyses and revealed only two significant interactions: the interaction of emotion attribution to protagonist with gender and of emotion attribution to self-as-victimizer with gender. In the second and third model, the variables were therefore entered in two steps: In the first step, the variables as described above were entered, and in the second step, the interaction terms were entered.

The first model was not significant. The second model predicted externalizing behaviour significantly ($R^2 = .21$, $F(6, 69) = 2.72$, $p < .05$). Externalizing behaviour was negatively predicted by age ($\beta = -.32$, $p < .01$), and positively by the interaction term of emotion attribution to protagonist x gender ($\beta = .86$, $p < .001$). Post-hoc comparisons showed that boys with positive emotion attributions after the decision to go to the new child displayed significantly higher values in externalizing behaviour than girls ($t(15) = -2.61$, $p < .05$), whereas no difference was obtained for girls and boys with other attribution patterns. The third model predicted externalizing behaviour significantly as

well ($R^2 = .12$, $F(5, 90) = 2.36$, $p = .05$). In the model, age ($\beta = -.22$, $p < .05$) and the interaction term of self-attributed emotions after rule violations x gender predicted externalizing behaviour ($\beta = -.25$, $p < .05$). To further analyze the interaction effect, the continuous variable “self-attributed emotions” was dichotomized: The first group contained children who attributed moral emotions to the self consistently across the three transgressions (78%), and the second group consisted of children who inconsistently attributed moral emotions (22%). Boys with inconsistent emotion attributions to the self showed a higher level of externalizing behaviour than boys with consistent moral emotion attributions ($F(2, 59) = 6.02$, $p < .01$), whereas no difference was obtained for the girls ($F(2, 68) = 2.10$, ns; see Figure 1).

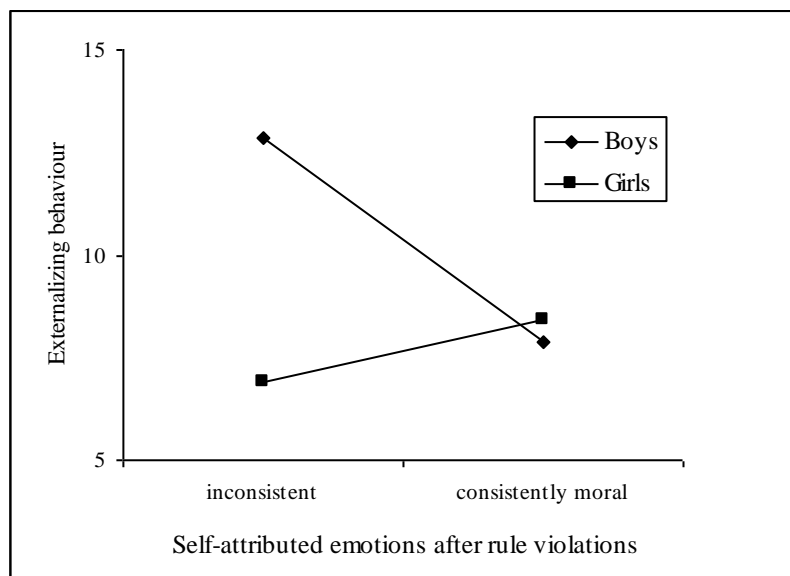


Figure 1. Interaction of emotion attribution to self-as-victimizer with gender: Prediction of externalizing behaviour

The fourth model did not significantly predict externalizing behaviour.

Evaluation of Interpersonal Consequences and Externalizing Behaviour

Two regression models were run to analyze the second research question regarding the role of evaluation of the consequences in externalizing behaviour. In the first model, the evaluation of consequences after rule violations, age, gender, and SES were entered as independent variables in the first step. Preliminary analysis showed significant interaction between the evaluation of consequences and age and the interaction term was therefore entered in the second step. In the second model, evaluation of consequences after an action decision, age, gender, and SES were entered. Externalizing behaviour was significantly predicted by the first model ($R^2 = .12$, $F(5, 88) = 2.35$, $p = .05$);). It was predicted by the interaction between evaluation of consequences and age group ($\beta = -.84$, $p < .05$). The slopes for boys and girls were calculated, and interaction was plotted using the procedure outlined by Aiken and West (1991, see figure 1). The slopes for boys and girls were .45 and $-.01$, $p < .05$ for the first slope.

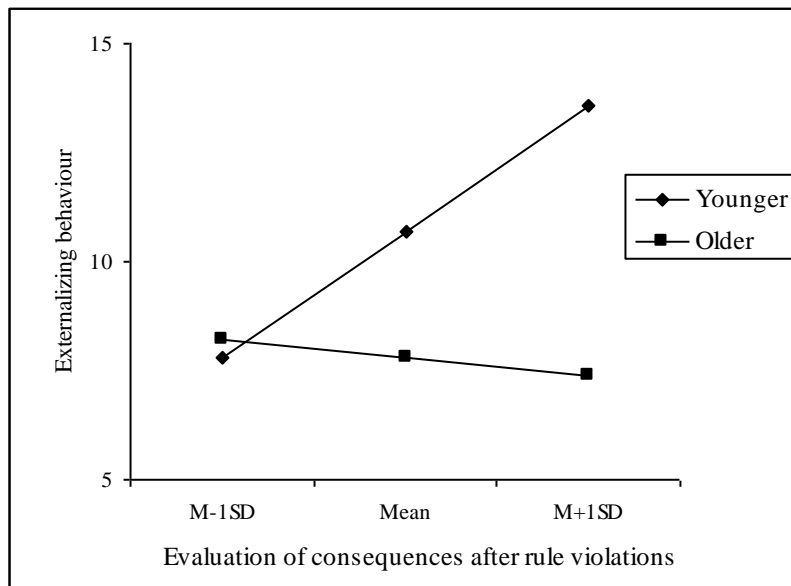


Figure 2. Interaction of evaluation of consequences after rule violations with age group: Prediction of externalizing behaviour

The results showed that in the younger age group, the level of externalizing behaviour increased with the level of anticipation of interpersonal consequences after rule violations.

In the older age group, level of externalizing behaviour did not relate to anticipation of consequences. The second model was not significant.

Moral Reasoning and Externalizing Behaviour

Table 2 displays the frequencies of the justifications by situational and question context.

Table 2
Percentage Frequency of Justifications by Situation and Question Context

<i>Context Rule Violations</i>	Justifications			
	Moral	Empathic	Hedonistic	Sanctions
Emotion attribution victimizer	36	31	25	8
Emotion attribution self-as-victimizer	47	35	7	11
Evaluation of consequences	27	58	7	8
<i>Context Moral Dilemma</i>				
Emotion attribution protagonist	41	34	25	-*
Emotion attribution self-as-protagonist	59	25	16	-
Evaluation of consequences	29	63	8	-

Note. *not coded in the moral dilemma

In both situations (i.e., rule violation and moral dilemma), moral reasons occurred most often in the context of self-attributed emotions (47%, 59%), whereas empathic reasons were most frequent in the context of the evaluation of consequences (58%, 63%). Hedonistic reasons were most frequent in the context of emotion attribution to

victimizer/protagonist (25%, 25%). Sanction-oriented reasons were similarly distributed across the question contexts of the rule violations.

A series of multiple linear regressions was run to analyze the research question on the context-dependent role of moral reasoning in externalizing behaviour. The reasoning categories in each question context as well as age, gender, and SES were specified as independent variables, and six regression models (one for each question context and type of method) were computed. No interaction terms were considered, in order to keep the cell sample size at an acceptable minimum. The results revealed that only one of the models predicted externalizing behaviour significantly: reasoning in the context of the emotion attributions to the self-as-victimizer ($R^2 = .21$, $F(6, 90) = 3.78$, $p < .01$). Moral reasons in the context of self-attributed emotions after rule violations significantly predicted negative externalizing behaviour ($\beta = -.27$, $p < .05$), whereas hedonistic reasoning significantly predicted positive externalizing behaviour ($\beta = .23$, $p < .05$). Furthermore, age was negatively related to externalizing behaviour as well ($\beta = -.21$, $p < .05$).

DISCUSSION

The present study included indicators for both moral emotions and moral cognition (i.e., evaluations and moral reasoning) in relation to externalizing behaviour, because researchers assume that both components are important as antecedents of misconduct and associated externalizing behaviour (Aksan & Kochanska, 2005). Further, the present study is to our knowledge the first to consider externalizing behaviour in relation to other- and self-attributed moral emotions, as well as moral cognitions after hypothetical

rule violations and action choices involving the violation of obligations in a moral dilemma.

The first research question addressed the relation between other- and self-attributed emotions and externalizing behaviour. The results revealed that boys who attributed moral emotions to the self inconsistently across the rule violations had higher scores on externalizing behaviour than boys who consistently attributed negative emotions to the self, whereas no difference was obtained for the girls. The stability of the attributed moral emotions across violations may express children's ability to apply their internalized-rule understanding to different rules and to situations with conflicting motives, and it may thus reflect the strength of their moral motivation (cf. Arsenio et al., 2006). Furthermore, boys with positive (i.e., hedonistic) emotion attributions to the protagonist after the decision to visit a new child in spite of an obligation towards a friend displayed significantly higher values in externalizing behaviour than girls with this attribution pattern, whereas no difference was obtained for girls and boys with other patterns of action decision/emotion attributions. This finding that boys' positive emotion attribution after a selfish action decision is related to problem behaviour independent of the corresponding justifications raises the question whether empathic reasons in this case might be used instrumentally as 'socially acceptable' reasons that cover selfish interests. In future research, it would therefore be interesting to further explore conflicting selfish and other-oriented motives in a moral dilemma and their relations with social behaviour. This finding is also consistent with our previous findings that kindergarten children who consistently attributed moral emotions to themselves across different rule violations were rated as less aggressive by kindergarten-teachers than children who attributed positive or inconsistent emotions to themselves (Malti, 2007). Similarly, a study by Hastings et al.

(2000) documented that children's clinically relevant levels of externalizing behaviour were related to less moral emotions (i.e., empathy). While we found the other-self split in emotion attribution after rule violations as reported in the previous literature on the happy-victimizer paradigm (e.g. Keller et al., 2003) we did not find it in emotion attribution in the moral dilemma. Possibly, this differentiation between a protagonist and the self is more important in a pre-given moral transgression than in a moral dilemma, where the person has to take a subjective stance reflecting on an action choice and the possible consequences for self and other, including moral judgment and feelings.

The gender effect on the relation between self-attributed moral emotions after rule violations and externalizing behaviour is in line with research by Zahn-Waxler (2000), who found that girls are in general more concerned about the needs of others, and this may explain their diminished risk of externalizing behaviour (Hastings et al., 2000, p. 532; Denham et al., 2002; Kerr, Lopez, Olson, & Sameroff, 2004). Likewise, it is consistent with research documenting a relation between deficits in emotional understanding and externalizing behaviour in boys (e.g., Orobio de Castro, Merk, Koops, Veerman, & Bosch, 2005).

The second research question focused on the associations between evaluation of the negative consequences of rule violations, action decision and externalizing behaviour. The results were surprising and showed in particular that the younger children who frequently anticipated negative interpersonal consequences of rule violations showed a higher level of externalizing behaviour than younger children who anticipated fewer interpersonal consequences of rule violations. This finding does not confirm the assumption of cognitive-developmental theory which associated an egocentric bias or less perspective-taking ability – as expressed in lower anticipation of consequences – with

externalizing behaviour (cf. Fitzgerald & White, 2003). Research within the social information processing model has shown that children with externalizing behaviour seem to make errors in every step of the social information process, e.g., that they anticipate more hostile intentions and anger. It is, therefore, possible that they also evaluate the consequences for the relationship more negatively than children without these problems, because they may infer that the victimizer has hostile, malicious intentions (Camodeca & Goossens, 2005). Alternatively, children with externalizing behaviour may have realized that their rule-transgressing behaviour has negative consequences for the future of a relationship given that they have daily experience of conflict with peers and rejection (Coie & Dodge, 1998), and therefore they more frequently evaluate transgressing behaviour as having negative consequences. Thus, they are possibly not desensitized, but rather have a particular sensitivity for rule transgressions among peers. We did not find a relation between evaluation of consequences in the moral dilemma and externalizing behaviour, however. This latter finding is unexpected and somewhat difficult to interpret, because children anticipated almost equally frequently that rule violations and action decisions have consequences. As this is to our knowledge the first study investigating the relation between evaluations of negative interpersonal consequences after moral transgressions and a moral dilemma and externalizing behaviour, it will be necessary to explore further exactly how these evaluation processes are related to children's externalizing behaviour.

Regarding the third research question on the relation between moral reasoning and externalizing behaviour, we were particularly interested in how this relation is influenced by the question context. It was assumed that the justifications of the emotions attributed to the victimizer or protagonist may refer to a more descriptive aspect of

morality, whereas the justifications of the emotions attributed to the self-as-victimizer or protagonist and the justifications of the evaluation of the consequences may refer to more prescriptive aspects of morality that relate more closely to externalizing behaviour. The findings confirmed that type of moral reasoning differed for each question context and that the relation with externalizing behaviour was context-dependent: Moral justifications of emotion attributions to the self-as-victimizer were negatively associated with externalizing behaviour, and hedonistic reasoning about emotion-attributions to the self-as-victimizer showed a positive association with externalizing behaviour (cf. Arsenio & Fleiss, 1996; Gasser, 2007). It is interesting that hedonistic and moral reasoning related only within the domain of self-attributed emotions after rule violations to externalizing behaviour. As we expected, these justifications express the moral motivation of the child and thus relate to the actual behaviour, whereas neither the justifications of the emotions attributed to the hypothetical victimizer nor the justifications of the evaluation express rule understanding that is personally committing. A study by Woolgar, Steele, Steele, Yabsely, and Fonagy (2001) revealed similarly that five-year-old children's punishment justifications in the context of emotion attributions to a small degree predicted cheating behaviour in a cheating task. However, the justifications of the attributed emotions were assessed within an emotion-expectation task with doll figures, and it is not clear whether these two different methodologies are directly comparable. Interestingly and contrary to our expectations, moral reasoning in the moral dilemma did not relate to externalizing behaviour. Given the cognitively more demanding character of the dilemma situation, the assessment of moral reasoning in the context of rule violations may reflect the moral-judgment ability of children of this age better. Further research is needed to examine in

more detail the influence of justifications after moral rule violations and in moral dilemmas on externalizing behaviour.

In addition to the research questions, several other results deserve attention: Girls attributed more moral emotions to the victimizer and the self-as-victimizer than boys, and such gender differences in emotion attribution have not been found in previous studies (e.g., Keller et al., 2003). Likewise, girls used empathic concerns more frequently and hedonistic reasoning less frequently than boys. This result is, however in line with research documenting that girls show higher concern for others than boys (Zahn-Waxler, 2000), but there is also evidence that younger girls are not more empathic than boys (Eisenberg, Spinrad, & Sadovsky, 2006). It is also interesting that we found no gender differences in externalizing behaviour, which may be related to the rather moderate range of externalizing behaviour in our sample. Furthermore, we found that externalizing behaviour was higher in children of lower socioeconomic status, thus supporting the assumption that familial socioeconomic conditions influence children's social behaviour (Dodge et al., 1994; Edelstein, 1999).

The present study has some limitations, however: First, we only assessed children's other-and self-attributed emotions, evaluation of consequences, and reasoning in the context of moral transgressions and a moral dilemma, but did not include other types of situations. Domain theory has established, however, that children's reasoning may differ depending on the domain of moral reasoning (Turiel, 1998): in other words, inter-individual differences in emotion attribution and reasoning may be even more noticeable across different situations such as provocation and retaliation (Smetana, Campione-Barr, & Yell, 2003). Second, we assessed moral development within each situation with one vignette only, and thus the reliability of the measurement is necessarily restricted, given

that different vignettes may elicit different justifications or emotion attributions, due, for example, to variance in the severity of the transgressions or dilemmas presented. Nonetheless, the depicted vignettes have been validated in many previous studies. Third, externalizing behaviour was only measured via parent ratings. In future research, it would therefore be interesting to compare parent- and teacher ratings of externalizing behaviour in relation to children's moral development.

Despite its limitations, the present study is the first investigating the relation of other- and self-attributed moral emotions, evaluation of consequences, and moral reasoning after moral transgressions and a moral dilemma to elementary-school children's externalizing behaviour. Future research should focus on identifying longitudinal relations between children's externalizing behaviour and moral development in different contexts of rule transgression. This may foster a better understanding of the typical developmental antecedents of children's externalizing behaviour.

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