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Abstract

The study analyses adolescents' positively charged versus negatively charged moral emotion expectancies. Two hundred and five students ($M = 14.83$ years, $SD = 2.21$) participated in an interview depicting various situations in which a moral norm was either regarded or transgressed. Emotion expectancies were assessed for specific emotions (pride, guilt) as well as for overall strength and valence. In addition, self-importance of moral values was measured by a questionnaire. Results revealed that positively charged emotion expectancies were more pronounced in contexts of prosocial action than in the context of moral transgressions, whereas the opposite was true for negatively charged emotions. At the same time, expectations of guilt and pride were substantially related to the self-importance of moral values.

Moral emotions are an essential part of moral life. Yet, Moral Psychology has just begun to systematically investigate the role of moral emotions in moral development, decision-making and behavior (cf. Hauser, Young, & Cushman, 2008). As documented by the so-called "happy victimizer expectancy", moral emotion expectancies (i.e. anticipations of moral emotions) reliably predict children's moral behavior in various experimental as well as natural settings (for an overview see Krettenauer, Malti & Sokol, 2008). In adolescence, they well differentiate between delinquent and non-delinquent youth (Arsenio, Gold, & Adams, 2004; Cimbora & McIntosh, 2003; Krettenauer & Eichler, 2006).

Whereas research on moral emotion expectancies offers valuable insights into moral development and behavior, it has been dealing with a fairly a limited range of emotions so far. Research mostly focused on negative self-evaluative emotions as a consequence of immoral actions (e.g. guilt, shame). These emotions were pit against positively charged outcome oriented emotions (e.g. joy over having gained a desirable object). By contrast, positively charged self-evaluative emotions as a consequence of rule-conforming behavior (e.g. pride, self-satisfaction) were largely neglected. Johnston and Krettenauer (in press) reported a correlation between positively charged self-evaluative emotions and adolescents' self-reported prosocial behavior that was significantly larger than the correlation between prosocial behavior and negatively charged emotions. This finding points at the need to systematically study both negatively and positively charged self-evaluative emotion expectancies.

Lewis (2000) specified various cognitive processes that serve as critical stimuli for pride and guilt. If an action is evaluated as consistent with standards, rules or goals

and, at the same time, attributed to internal and controllable factors (e.g. effort), pride is a likely emotional consequence. By contrast, if an action is considered incongruent with standards, rules or goals and attributed to internal and controllable factors, guilt is considered to be the primary emotional outcome. According to this model, positive self-evaluative emotions mirror negative-self evaluative emotions: whenever a person takes responsibility for an action that is congruent with certain standards or rules, s/he will expect pride to the same extent this person will expect guilt when engaging in behavior that is inconsistent with these standards.

A more recent extension of Lewis' model by Tracy and Robin (2004) integrates notions of the self into this attributional framework. According to Tracy and Robin, standards, rules and goals need to be considered relevant to one's self or identity in order to elicit self-evaluative emotions. It is, thus, identity-goal relevance in addition to congruence that renders standards and rules particularly important for these emotions.

The present study investigates positively charged moral emotion expectancies in contradistinction to negatively charged emotions. Conceptually, it relies on the framework offered by Lewis (2000) and extended by Tracy and Robin (2004). However, it suggests some modifications to this framework. The study (a) investigates contextual variations in positively charged emotion expectancies in comparison to contextual variations in negatively charged emotion expectancies, and (b) studies the association between positively versus negatively charged moral emotion expectancies and the self-importance of moral values. The study focuses on adolescent development because this age period is considered crucial for the formation of a moral self (Hart, 2005).

Moral emotion expectancies across situational contexts

According to attributional models of self-evaluative emotions, positively charged moral emotions mirror negative emotions and vice versa. Although this idea seems to be straightforward, it likely needs to be modified. As is well-documented by research on decision-making, immediate emotional reactions are more intense following decisions to act rather than decisions not to act. This effect has been referred to as the *actor effect* or *omission bias* (cf. Zeelenberg, van der Pligt, & de Vries, 2000). It was argued that a decision-maker is held more responsible for actions than inactions because of the more active role s/he takes in these situations (cf. Zeelenberg, van der Pligt, & de Vries, 2000). Research on the actor effect has mostly dealt with regret and has not included the moral emotions of guilt or pride. However, guilt is clearly related to regret. Situations that trigger feelings of guilt typically also elicit regret (Zeelenberg & Breugelmans, 2008). Guilt together with emotions such as shame and anger form a cluster of *hot regret* as opposed to *wistful regret* (Gilovich, Medvec, & Kahneman, 1998). Thus, it can be reasonably expected that actions cause stronger feelings of guilt than inactions. Consistent with this expectation, Williams and Bybee (1994) found that children as well as adolescents when asked about experiences of guilt in an open ended interview most often reported guilt feelings in the context of moral transgressions, i.e. actions. Guilt feelings over inaction, by contrast, were much less common. They were lowest in 5th graders and increased over the course of adolescence.

Considering research on the actor effect, the expectancy of guilt is likely to be stronger in the context of moral transgressions, where an actor actively causes harm to someone else, than in contexts of inaction. If the actor effect plays a role for positively charged self-evaluative emotions, it might buffer the expectancy of pride resulting from

inaction as well. Inaction in the context of moral transgressions means to observe a moral rule, i.e. *not* to act in a harmful way. Therefore, when individuals decide to act morally, positively charged self-evaluative emotions are perhaps less strong as compared to negatively charged self-evaluative emotions when engaging in moral transgressions. This asymmetry of pride and guilt as a consequence of action versus inaction is left out in attributional models of self-evaluative emotions.

However, morality is not only about negative obligations, i.e. obligations not to harm others or not to infringe on others' rights. It also includes positive obligations to help others in need (Fishkin, 1982). Research on the domain specificity of morality bore out that children are able to differentiate between these two domains from an early age (e.g. Kahn, 1992; Arsenio, 1988). Prosocial obligations require individuals to actively pursue an action, whereas negative obligations demand the opposite. Therefore, it is plausible to assume that the relationship between acting morally versus immorally and experiencing positively versus negatively charged emotions is context dependent. Prosocial actions likely set off positive self-evaluative emotions. However, considering the actor effect, the failure to act prosocially presumably elicits less intense negatively charged emotions. By contrast, in the context of negative morality the actor effect intensifies negatively charged self-evaluative emotions following immoral actions and lowers positively charged emotions when conforming to a moral rule.

In sum, then, the study proposes that positively and negatively charged emotion expectancies do not simply mirror each other. It is expected that positively charged moral emotion expectancies are stronger when performing prosocial actions as compared to meeting a negative moral obligation. By contrast, negatively charged moral emotion

expectancies should be stronger when transgressing a negative moral obligation as compared to not conforming to a positive moral obligation. It is considered an open question whether these differences between situational contexts are stable over the course of adolescence or moderated by age. As demonstrated by Williams and Bybee (1994), older adolescents more often experience guilt feelings over inaction. As a consequence the proposed effect of situational context on moral emotion expectancies might become smaller with increasing age, at least for negatively charged emotion expectancies.

Moral emotion expectancies and the self-importance of moral values

As described above, Tracy and Robins (2004) extended the attributional model of self-evaluative emotions by introducing the notion of identity-goal relevance. It was argued that standards and rules must be relevant to the self in order to elicit self-evaluative emotions. This line of reasoning resonates with research on the development of the moral self. In this research it is generally assumed that self and morality are two independent developmental systems that are largely unconnected in childhood but become gradually integrated in the course of adolescent development (cf. Bergman, 2002). It is, thus, the integration of moral values into the adolescent self-concept that gives rise to a moral self, which is a self that profoundly cares about matters of morality and ethical conduct. The process of moral self-integration was first proposed by Damon (1984) and received support by research on moral exemplars (Hart & Fegley, 1995).

The development of the moral self is a differential process; some adolescents integrate moral values into their self-concept whereas others do not (cf. Krettenauer, 2010). At the same time, self-importance of moral values marks a reliable dimension of individual differences in adolescence. This dimension is likely associated with moral

emotions and emotion expectancies. Consistent with the model proposed by Tracy and Robins (2004) it can be assumed that those adolescents who consider moral values as central to their self expect stronger self-evaluative reactions when transgressing a moral rule or, conversely, conforming to it. Thus, there should be positive correlations between positively as well as negatively charged emotion expectancies and the self-importance of moral values. However, these correlations are probably not equally strong for negatively and positively charged emotion expectancies. Adolescents who consider moral values as important to their sense of self have higher expectations to act consistent with their moral beliefs. Otherwise, the stronger association between moral judgment and behavior that has been consistently found for these individuals (cf. Hardy & Carlo, 2005) would be difficult to explain. Higher expectations might affect positively versus negatively charged self-evaluative emotions in different ways. Failing to meet higher standards probably elicits stronger negatively charged self-evaluative responses because of the greater discrepancy between self-ideal and action (Blasi, 1999). However, this does not imply that conforming to higher moral standards leads to the same increase in positively charged emotional responses. For individuals with higher moral standards, moral actions are closer to the self-ideal than for persons with lower expectations. As a consequence, positively charged self-evaluative emotions following a moral action are probably less strong in these individuals as compared to individuals with lower moral expectations. Thus, it is expected that both negatively and positively charged emotion expectancies are positively correlated with self-importance of moral values. However, this correlation should be stronger for negative than for positive emotions. It is assumed that individuals

who consider moral values as important to their sense of self experience immoral actions as failures that deviate from their self-ideal more strongly than moral actions.

Method

Participants

Participants in this study included 155 teenagers from grade 7 ($n = 48$; 10 males), grade 9 ($n = 53$; 19 males) and 11 ($n = 54$; 18 males). In addition, a sample of 50 first-year undergraduate students was recruited (14 males). Overall, male participants made up 29.8% of the sample ($n = 61$). Participants ranged in age from 11.33 to 19.08 years ($M = 14.83$, $SD = 2.21$). Most participants were either Caucasian ($n = 156$; 76.1%) or Asian (Chinese, Korean; $n = 15$; 7.4%) with few others. Senior public and high school students were recruited from consenting schools in the Kitchener/Waterloo area, Ontario, Canada, and were paid $15 for their involvement in the study. For grade 7 and 9 participants, parents/guardians were asked to provide informed consent. Undergraduate students were recruited through first-year psychology courses at a mid-size university in the Waterloo Region and these participants received class credit as well as monetary compensation ($15) for their participation. After providing informed consent, all participants were required to do an interview as well as to complete a written questionnaire.

Measures

Moral Emotion expectancies

Moral emotion expectancies were assessed in an interview that consisted of 18 vignettes describing everyday situations in which a moral obligation is either regarded or disregarded (e.g. helping someone who is hurt, stealing a desirable item one cannot afford). The situations involved the three moral norms of property, honesty, and physical

integrity. They describe three different types of moral conflicts people typically face in their everyday life (cf. Wark & Krebs, 1996): *antisocial*, *prosocial* and *temptation*. In an *antisocial* context the person observes others transgressing a moral norm and has to decide whether or not to intervene and stop victimizers from harming others. In a *prosocial* context the person is presented with an opportunity to help others, and in a *temptation* context the person is tempted to break a moral rule in order to gain personal profit. Thus, the interview vignettes follow a 2 (regarded vs. disregarded) x 3 (type of moral norm) x 3 (situational context) design. The 18 scenarios were presented in randomized order. Note that regarded and disregarded stories were strictly parallel. For for each vignette describing an action where a moral norm was disregarded there was a parallel story depicting the same situational characteristics with a different outcome.

  As described in the introduction, the distinction between negative versus positive obligations is crucial for analyzing context variations in positively versus negatively charged moral emotion expectancies. In the context of the present study, this distinction is represented by prosocial stories featuring issues of positive morality (donating, helping others in need) versus temptation stories where an actor is tempted to infringe on other people's rights out of egoistic desires. Thus, these two types of situational contexts are expected to reveal the strongest difference with regard to positively versus negatively charged emotion expectancies. Antisocial situations, where the protagonist has to decide whether or not to intervene and stop victimizers from harming others, blend issues of negative morality (infringements on others' rights) with issues of positive morality (assisting others in need) and are therefore expected to define a middle ground between prosocial and temptation stories.

Following each vignette, participants were asked to indicate how they would feel if they were in the same situation by distributing ten plastic chips on a poster board depicting a range of emotions (*guilty*, *proud*, *embarrassed*, *satisfied*, *scared*, *sad*, *happy*, *angry*). In addition, participants were offered a neutral category (*okay*). Both the printed emotion word and a drawing of a corresponding facial expression were presented on the poster. Participants were instructed to indicate the quality of their emotion expectancy by putting as many chips on each emotion as they liked. They were not required to use all ten chips for each scenario. This procedure was similar to that of Arsenio et al. (2004). Participants were limited to ten chips per scenario to encourage them to ponder about the relative importance of the various emotions for their overall emotional experience rather than to rate the strength of each single emotion. In a pilot study, the number of ten chips was found to be most adequate since no participant had expressed a desire to use more than ten chips. In the main study, participants on average used 5.68 chips per scenario ($SD = 3.05$). Thus, the majority of participants in most scenarios did not make use of the maximum number of chips available to them.

After distributing the chips, participants were asked to indicate the overall valence and strength of their emotion expectancy by rating their overall feeling in each situation using a 7-point Likert type scale ranging from 1 = *very bad* to 7 = *very good*. This measure is similar to the one used by Krettenauer and Eichler (2006).

In the context of the present study, two different strategies were used to assess positively versus negatively charged moral emotion expectancies. First, the two emotions that clearly and unambiguously represent these two types of emotions were selected: pride and guilt. Ratings for these emotions most specifically represent self-evaluative

emotion expectancies. However, in some instances these ratings may be overly specific. Individuals might experience emotions other than pride and guilt in a self-evaluative way (e.g. self-directed anger or sadness). Thus, emotions that are typically not considered self-evaluative sometimes might have a self-evaluative component. To compensate for this ambiguity, the study used ratings of participants' overall emotions expectancies in addition to ratings of pride and guilt. It is assumed that an overall positive emotion expectation following a moral action reflects the overall strength of positively charged self-evaluative emotions, whereas an overall negative emotion expectation following a moral transgression indicates negatively charged self-evaluative emotions. This assumption was investigated empirically before running the main analyses.

Specific emotion ratings for pride and guilt. Scores for pride and guilt ratings were based on chip allocations. Positively charged moral emotion expectancies were calculated as the average number of chips placed on *proud* across vignettes in which a moral norm is regarded. By contrast, negative emotion expectancies were calculated as the average number of chips placed on *guilty* for those vignettes in which a moral norm is disregarded. Averaging scores for *proud* across all nine vignettes yielded an overall score of $M = 1.60$, $SD = 1.25$. Cronbach's alpha for this score was .77. For *guilt* an overall score of $M = 2.86$, $SD = 1.79$ was obtained with Cronbach's alpha of .87. In addition to these overall scores, context specific scores were calculated by averaging the number of emotion chips for three situational contexts (prosocial, antisocial, temptation) separately across three moral norms. For these context specific scales Cronbach's alpha was .74 (prosocial), .69 (antisocial) and .70 (temptation) regarding guilt feelings, and .64 (prosocial), .65 (antisocial) and .69 (temptation) with regard to *proud*. These context

specific scores were used for analyzing contextual variations in positively versus negatively charged emotion expectancies.

Overall positive versus negative emotion ratings. For the overall valence and strength of emotion expectancies, scores were calculated by averaging emotion scale ratings across norm-disregarded vignettes and norm-regarded vignettes, respectively. Note that for all norm-disregarded scenarios the rating scale was reversed in advance so that higher numerical values reflected stronger self-evaluative emotions for both positively and negatively charged emotion expectancies. For overall emotion ratings averaged across all disregarded scenarios, and thus reflecting overall strength of negatively charged moral emotion expectancies, the grand mean was $M = 5.57$, $SD = 0.66$, with a Cronbach's alpha of .77. Averaged ratings for all regarded scenarios reflecting positively charged moral emotion expectancies were slightly lower with a grand mean of $M = 5.46$, $SD = 0.66$ and Cronbach's alpha of .75. As with emotion specific ratings for pride and guilt, separate average scores were calculated for the three situational contexts (prosocial, antisocial, temptation). For these context specific scales Cronbach's alpha was .69 (prosocial), .68 (antisocial) and .71 (temptation) regarding overall ratings reflecting negatively charged emotions, and .65 (prosocial), .66 (antisocial) and .69 (temptation) with regard to overall ratings in regarded scenarios.

Self-importance of moral values. Self-importance of moral values was assessed by a questionnaire procedure developed by Barriga, Morrison, Liau and Gibbs (2001). This instrument measures the importance of moral values to an individual's self-concept. It consists of 8 moral and 8 non-moral characteristics (e.g. honest, caring, fair versus funny, outgoing) participants are asked to rate with regard to their self-importance on a 5-point

scale from 5 = *extremely important to me* to 1 = *not important to me*. Summed scores of the eight moral items ranged from 17 to 40 (*M* = 31.43, *SD* = 4.58). Cronbach's alpha for the eight moral items was .80. To account for the fact that this scale might reflect a general tendency to select socially desirable attributes rather than specifically moral characteristics, an overall score representing the centrality of moral characteristics to the self was derived while taking into account the self-importance of non-moral but socially desirable attributes. Standardized residuals from a regression predicting the centrality of moral characteristics from the centrality of non-moral characteristics were calculated.

Results

Preliminary Analyses

Overall and emotion specific ratings

In the first step, it was investigated how overall emotion ratings relate to specific emotion ratings. To this end, overall emotion ratings in the regarded and the disregarded scenarios were each regressed on specific emotion ratings as obtained in the same scenarios. Note that the specific emotion rating for *okay* (neutral) was not included in these regression analyses because neutrality was supposed to be unrelated to the valence and strength of overall emotion ratings. At the same time, excluding this specific emotion rating from the analyses warrants statistical independence of the emotion specific ratings that were ipsative in nature.

The first regression with overall emotion ratings for all disregarded scenarios as the dependent variable and emotion ratings for *guilty*, *proud*, *angry*, *scared, sad, satisfied, happy* and *embarrassed* for the same scenarios as predictors yielded a multiple R^2 of .479, $F(8, 196) = 22.52$, $p < .01$. Overall emotion ratings in disregarded scenarios

were most strongly related to happiness ($\beta = -.36$, $p < .01$), followed by sadness ($\beta = .28$, $p < .01$), satisfaction ($\beta = -.25$, $p < .01$), guilt ($\beta = .24$, $p < .01$) and anger ($\beta = .17$, $p < .01$). Proud, scared and embarrassed turned out to be insignificant predictors, thus, did not uniquely contribute to the overall emotion ratings in disregarded scenarios.

Similar results were obtained for overall emotion ratings in the context of regarded scenarios as dependent variable. Specific emotion ratings predicted overall ratings with an R^2 of .446, $F(8, 196) = 19.71$, $p < .01$. The strongest predictors of overall positive emotion ratings were proud ($\beta = .38$, $p < .01$) and happy ($\beta = .23$, $p < .01$) followed by anger ($\beta = -.27$, $p < .01$), sadness ($\beta = -.24$, $p < .01$), and guilt ($\beta = -.19$, $p < .01$). Embarrassed and scared did not uniquely contribute to overall emotion ratings.

Thus, overall emotion ratings reflected a range of specific emotions. In disregarded scenarios, guilt feelings were a significant predictor in addition to sadness and anger. If directed towards the self, emotions of sadness and anger can be self-evaluative. Moreover, two outcome-oriented emotions, happiness and satisfaction, that indicate lack of moral evaluation in the context of moral transgressions inversely contributed to overall emotion ratings in disregarded scenarios. For regarded scenarios, *proud* was the strongest predictor besides *guilty*, *sad* and *angry* which inversely contributed to positively charged emotion expectancies. In both regression analyses, *embarrassed* and *scared* turned out to be unrelated to overall emotion ratings. Feeling scared clearly reflects considerations external to the self. Embarrassment, by contrast, has different meanings depending on the context (cf. Lewis, 2000). Embarrassment, as it is related to exposure, is externally regulated. Embarrassment as a self-evaluative emotion has been characterized as "less intense shame" (Lewis, 2000, p. 632). According to Lewis

(2000), failures associated with standards, rules or goals of lesser importance result in embarrassment rather than shame. Thus, the finding that embarrassment did not uniquely contribute to overall emotion ratings might reflect the fact that the various moral scenarios as used in the present were all of some importance for respondents. As a consequence, self-evaluative emotions exceeded the level of embarrassment.

Main Analyses

For all analyses two separate procedures were run. First, specific emotion ratings for pride and guilt were used as criterion variables. The same type of analysis was then run for overall emotion ratings in regarded and disregarded scenarios, respectively.

Positively versus negatively charged moral emotion expectancies across situational contexts

The role of situational context in emotion expectancies was analyzed by a 2 (positively versus negatively charged emotions) x 3 (prosocial, antisocial, temptation context) x 4 (Grade 7, 9, 11, 1st year university) mixed model MANOVA, with an a priori contrast between prosocial versus temptation scenarios. Grade level as a proxy for age-group was included in these analyses in order to examine whether differences between situational contexts are consistent across age or not.

For specific emotion ratings, main and interaction effects are summarized in Table 1. Significant main effects were obtained for positive versus negative emotions, situational context, and age-group. These main effects, however, need to be considered in the context of several significant interactions. Age-group interacted with positive versus negative emotions but not with situational context. As expected, there was a significant interaction between positively versus negatively charged emotion expectancies and

situational context. This interaction was not moderated by age-group as indicated by the non-significant three-way interaction. An a priori contrast between prosocial and temptation scenarios yielded similar results (see Table 1). The contrast between prosocial and temptation context was not significant, nor was the interaction between age-group and context and the three-way interaction between positively versus negatively charged emotions, situational context and age-group. However, a significant interaction between positively versus negatively charged emotions and situational context was found.

A closer inspection of the cell means for positive versus negative emotions by situational context revealed that expectations of pride after a moral action were highest in the prosocial context compared to the temptation context, with the antisocial context falling in between (see Table 3). The difference between these three situational contexts was significant as indicated by an univariate analysis of variance with repeated measures on situational context, $F(2, 203) = 4.38$, $p < .05$. This univariate analysis also yielded a significant a priori contrast between prosocial and temptation scenarios, $F(1, 204) = 8.78$, $p < .01$. For expectations of guilt when transgressing a moral rule, scores were highest in the temptation context, and lowest in the antisocial context, with prosocial actions in between. Again, the difference between these three situational contexts was significant, $F(2, 203) = 9.69$, $p < .01$, with a significant contrast between prosocial and temptation scenarios, $F(1, 204) = 6.50$, $p < .05$.

Turning to overall emotion ratings, a main effect for positive versus negative emotions and situational context was found (see Table 2). By contrast, neither the main effect of age-group nor the interactions between age-group and positive versus negative emotions or age-group and situational context were significant. Similar to emotion

specific ratings, a significant interaction between positive and negative emotions and situational context was found. This effect was consistent across age-groups as indicated by a three-way interaction that was not significant. Similar results were obtained for an a priori contrast between prosocial and temptation scenarios (see Table 2). The contrast between prosocial and temptation contexts was significant, whereas the interaction between age-group and context was not. Consistent with the full analysis that included all three situational contexts, the three-way interaction between positively versus negatively charged emotions, situational context and age-group was not significant for the a priori contrast. However, a strong interaction between positively versus negatively charged emotions and situational context (prosocial versus temptation) was found.

As evidenced in Table 3, overall positive emotion ratings following a moral action were highest in the prosocial context and lowest in the temptation context, with the antisocial context in between. The difference between these three situational contexts was significant as indicated by an ANOVA with repeated measures on situational context, $F(2, 202) = 80.95$, $p < .01$, including a significant a priori contrast between prosocial and temptation scenarios, $F(1, 203) = 155.71$, $p < .01$. For negatively charged emotion expectancies, the opposite trend was found. Thus, negatively charged emotion expectancies were strongest in temptation contexts and lowest in prosocial contexts with antisocial contexts in between, $F(2, 202) = 30.16$, $p < .01$. Again, the a priori contrast between prosocial and temptation scenarios was significant, $F(1, 203) = 52.34$, $p < .01$.

Positively versus negatively charged moral emotion expectancies and the self-importance of moral values

The relation between emotion expectancies and self-importance of moral characteristics was analyzed by calculating bivariate correlations. It was investigated whether the correlation between positively charged emotion expectancies and the self-importance of moral values was significantly lower than the correlation between negatively charged emotions and the moral self. The difference was tested by a one-tailed t-test according to the procedure proposed by Cohen and Cohen (1983).

Regarding specific emotion ratings, self-importance of moral values was significantly correlated with guilt $r(203) = .193, p < .01$, but not with pride, $r(203) = .057, p = .41$. The difference between the two correlation coefficients was significant, $t(202) = 2.13, p = .017$. Thus, ratings for guilt feelings after a moral transgression were associated with self-importance of moral values to a significantly greater extent than ratings for pride in situations where a moral norm was regarded.

Similar findings were obtained for overall emotion ratings. Self-importance of moral values correlated substantially with negatively charged emotion expectancies following a moral transgression, $r(203) = .47, p < .01$. For positively charged emotion expectancies, this correlation was lower but significant, $r(203) = .31, p < .01$. Again, the two correlation coefficients differed significantly, $t(202) = 2.16, p = .018$. Note, that these correlations between emotion expectancies and self-importance of moral values were not moderated by adolescents' age.

Discussion

The present study aimed at investigating positively charged moral emotion expectancies in contradistinction to negatively charged self-evaluative emotions.

Whereas negative emotion expectancies have been intensively studied in the past, positive emotion expectancies have been largely neglected.

Findings from the present study suggest that positively charged emotion expectancies do not simply mirror negatively charged emotion expectancies. Both types of emotion expectancies evidenced context-specificity. Specific emotion ratings for pride as well as overall positive emotion ratings following a moral action were higher in prosocial contexts than in temptation contexts, where egoistic desires conflict with other people's rights and welfare. The reverse trend was found for guilt ratings and overall negative emotions. Overall, the expectation of self-evaluative emotions following actions was stronger relative to emotions following inactions. This finding confirms a well-documented pattern referred to as the *actor effect* in research on decision-making. The present study goes beyond this research in that it shows that the actor effect does not only apply to feelings of regret but to self-evaluative emotions of pride and guilt as well. Moreover, the present study demonstrates that in the context of moral norms, the affective consequences of actions are not uniform because moral norms sometimes prescribe actions (positive obligations) and sometimes require inaction (negative obligations). Interestingly, situations that blend together issues of positive and negative morality, when people have to decide whether or not to intervene and to stop victimizers from infringing on others' rights (dubbed *antisocial* in the present study), appear to define a middle ground with regard to their potential to elicit positively and negatively charged emotion expectancies. This was consistent with the theoretical expectations. However, it should be noted at this point that antisocial scenarios as used in the present study do not only blend issues of negative and positive morality but also might raise issues about

responsibility diffusion or concerns of self-preservation that mitigate emotional reactions of guilt and pride. Thus, there are alternative explanations for the fact that antisocial scenarios fall in between prosocial and temptation stories with regard to emotional reactions. These alternative explanations could not be ruled out by the present study.

The differences between prosocial, antisocial and temptation contexts as obtained in the present study were consistent across age-groups and thus turned out to be stable over the course of adolescent development. This result deviates from Williams and Bybee (1994), who reported an increase in guilt feelings over inaction in adolescence. The difference perhaps is due to methodological factors, as Williams and Bybee used free recall methods whereas the present study assessed emotional reactions to standardized scenarios. Free recall might be cognitively more demanding and therefore might yield age differences that are not present when using other methods.

The present study provides evidence for a systematic relation between moral emotion expectancies and the developing moral self in adolescence. The more important moral values were for adolescents' self-definition the stronger moral emotion expectancies tended to be. This finding is consistent with theoretical models linking self-evaluative emotions to the self (Tracy & Robins, 2004). However, the association between the moral self and moral emotion expectancies was found to be less strong for positive than for negative emotions. It was assumed that individuals who consider moral values as important to themselves experience immoral actions as failures that more strongly deviate from their self-ideal than moral actions. It is important to note that this assumption was not tested directly in the present study and therefore remains speculative.

In addition to the limitations pointed out so far, the sample of the present study was rather ethnically homogenous and imbalanced with regard to gender. In the present study, preliminary analyses did not reveal significant gender differences for moral emotion expectancies and were therefore not reported. Still, the sample restrictions pose limitations to the generalizability of the findings. It also needs to be emphasized that the study dealt with moral emotion expectancies rather than moral emotions as such. Although moral emotion expectancies do play an important role in moral decision-making (Baumeister, Vohs, DeWall, & Zhang, 2007) the processes that lead to emotion expectancies might be different from appraisals that lead to the corresponding emotions. Future research should aim at directly assessing emotional reactions following moral actions and inactions rather than mere cognitive representations of these emotions. In a similar vein, measures of the self-importance of moral values should not only be based on self-reports, as such measures almost inevitably call for socially desirable responding. Although the present study implemented some safeguards against this tendency, it is an open question whether more implicit measures of the moral self construct (cf. Frimer & Walker, 2009) would have generated similar findings.

References

Arsenio, W. F. (1988). Children's conceptions of the situational affective consequences of sociomoral events. *Child Development, 59,* 1611-1622.

Arsenio, W. F., Gold, J., & Adams, E. (2004). Adolescents' emotion expectancies regarding aggressive and nonaggressive events: Connection with behavior problems. *Journal of Experimental Child Psychology, 89,* 338-355.

Barriga, A. Q., Morrison, E. M., Liau, A. K., & Gibbs, J. C. (2001). Moral cognition: Explaining the gender difference in antisocial behavior. *Merrill-Palmer Quarterly, 47,* 532-562.

Baumeister, R. F., Vohs, K. D., DeWall, C. N., & Zhang, L. (2007). How emotion shapes behavior: Feedback, anticipation, and reflection, rather than direct causation. *Personality and Social Psychology Bulletin, 11,* 167-203.

Bergman, R. (2002). Why be moral? A conceptual model from developmental psychology. *Human Development, 45,* 104-124.

Blasi, A. (1999). Emotions and moral motivation. *Journal for the Theory of Social Behavior, 29,* 1-19.

Cimbora, D. M., & McIntosh, D. N. (2003). Emotional responses to antisocial acts in adolescent males with conduct disorder: A link to affective morality. *Journal of Clinical Child and Adolescent Psychology, 32,* 269-301.

Cohen, J., & Cohen, P. (1983). *Applied multiple regression/correlation analysis for the behavioral sciences.* Hillsdale: Erlbaum.

Damon, W. (1984). Self-understanding and moral development from childhood to adolescence. In W. M. Kurtines & J. L. Gewirtz (Eds.), *Morality, moral behavior, and moral development* (pp. 109-127). New York: Wiley.

Fishkin, J. S. (1982). *The limits of obligation.* New Haven: Yale University Press.

Frimer, J. A., & Walker, L. J. (2009). Reconciling the self and morality: An empirical model of moral centrality development. *Developmental Psychology, 45,* 1669-1681.

Hardy, S., & Carlo, G. (2005). Identity as a source of moral motivation. *Human Development, 48,* 232-256.

Hart, D. (2005). The development of moral identity. In G. Carlo & C. P. Edwards (Eds.), *Moral motivation trough the life span* (pp. 165-196). Lincoln: University of Nebraska Press.

Hart, D., & Fegley, S. (1995). Prosocial behavior and caring in adolescence: Relations to self-understanding and social judgment. *Child Development, 66,* 1346-1359.

Hauser, M. D., Young, L., & Cushman, F. (2008). Reviving Rawl's linguistic analogy: Operative principles and the causal structure of moral actions. In W. Sinnott-Amstrong, W. (Ed.). *Moral Psychology* (Vol. 2, pp. 107-143). Cambridge: MIT Press.

Johnston, M. & Krettenauer, T. (in press). Moral self and moral emotion expectancies as predictors of anti- and prosocial behaviour in adolescence: A case for mediation?. *European Journal of Developmental Psychology.*

Kahn, P. H. (1992). Children's obligatory and discretionary moral judgments. *Child Development, 63,* 416-430.

Krettenauer, T. (2010). *The dual moral self: Moral centrality and internal moral motivation.* Manuscript submitted for publication.

Krettenauer, T., & Eichler, D. (2006). Adolescents' self-attributed moral emotions following a moral transgression: relations with delinquency, confidence in moral judgment, and age. *British Journal of Developmental Psychology, 24,* 489-506.

Krettenauer, T., Malti, T., & Sokol, B. W. (2008). Development of moral emotions and the happy-victimizer phenomenon: A critical review of theory and application. *European Journal of Developmental Science, 2,* 221-235.

Lewis, M. (2000). Self-conscious emotions: Embarrassment, pride, shame, and guilt. In M. Lewis & J. M. Haviland-Jones (Eds.), *Handbook of Emotions* (pp. 623-636). New York: Guilford.

Tracy, J., & Robins, R. W. (2004). Putting the self into self-conscious emotions: A theoretical model. *Psychological Inquiry, 15,* 103-125.

Wark, G. R., & Krebs, D. L. (1996). Gender and dilemma differences in real-life moral judgment. *Developmental Psychology, 32,* 220-230.

Williams, C., & Bybee, J. (1994). What do children feel guilty about? Developmental and gender differences. *Developmental Psychology, 30,* 617-623.

Zeelenberg, M., & Breugelmans, S. M. (2008). The role of interpersonal harm in distinguishing regret from guilt. *Emotion, 8,* 589-596.

Zeelenberg, M., van der Pligt, J., & de Vries, N. K. (2000). Attributions of responsibility and affective reactions to decision outcomes. *Acta Psychologica, 104,* 303-315.

Table 1

Summary of MANOVA with Specific Emotion Ratings as Dependent Variable

Factor	df	F	p	η²
Within subjects				
Positive vs. negative emotions (EMO)	1, 201	160.43	.00	.444
Situational Context (CON)	2, 200	4.14	.02	.040
EMO x CON	2, 200	11.07	.00	.100
Between subjects				
Agegroup (AGE)	3, 201	5.83	.00	.080
AGE x EMO	3, 201	6.79	.00	.092
AGE x CON	6, 402	1.85	.09	.027
AGE x EMO x CON	6, 402	0.34	.92	.005
A priori contrast (prosocial versus temptation)				
CON	1, 201	0.26	.87	.00
CON x EMO	1, 201	14.19	.00	.07
AGE x CON	3, 201	1.59	.19	.02
AGE x EMO x CON	3, 201	0.18	.90	.00

Table 2

Summary of MANOVA with Overall Emotion Ratings as Dependent Variable

Factor	df	F	p	η^2
Within subjects				
Positive vs. negative emotions (EMO)	2, 199	3.99	.04	.019
Situational Context (CON)	2, 198	8.41	.00	.078
EMO x CON	2, 198	107.61	.00	.521
Between subjects				
Agegroup (AGE)	3, 199	1.85	.14	.027
AGE x EMO	3, 199	0.85	.47	.013
AGE x CON	6, 398	1.31	.25	.019
AGE x EMO x CON	6, 398	1.67	.13	.025
A priori contrast (prosocial versus temptation)				
CON	1, 199	8.87	.03	.04
CON x EMO	1, 199	214.72	.00	.52
AGE x CON	3, 199	1.78	.15	.03
AGE x EMO x CON	3, 199	1.50	.22	.02

Table 3

Means and Standard Errors for Positively Versus Negatively Charged Moral Emotion

Expectancies across Situational Contexts

	Prosocial	Antisocial	Temptation
Specific emotion ratings			
Pride	1.77 (0.11)	1.59 (0.10)	1.46 (0.10)
Guilt	2.83 (0.15)	2.61 (0.13)	3.12 (0.14)
Overall emotion ratings			
Positive	5.72 (0.05)	5.62 (0.06)	5.03 (0.06)
Negative	5.34 (0.05)	5.59 (0.05)	5.77 (0.07)

Note. Standard errors in parentheses