Contents lists available at SciVerse ScienceDirect

Journal of Experimental Child Psychology

Preschoolers' social dominance, moral cognition, and moral behavior: An evolutionary perspective

Patricia H. Hawley *, G. John Geldhof [1]

Department of Psychology, University of Kansas, Lawrence, KS 66045, USA

ARTICLE INFO	ABSTRACT
	Various aspects of moral functioning, aggression, and positive peer regard were assessed in 153 preschool children. Our hypotheses were inspired by an evolutionary approach to morality that construes moral norms as tools of the social elite. Accordingly, children were also rated for social dominance and strategies for its attainment. We predicted that aspects of moral functioning would be only loosely related to each other and that moral cognitions about rules (unlike emotion attributions and moral internalization) would demonstrate patterns suggestive of instrumentality. Results showed that cognitions about moral rules and internalized conscience were unrelated and that sociomoral behavior was more strongly related to the latter than to the former. In addition, promoting group norms (Selective Moral Engagement) positively predicted social dominance, whereas internalized conscience negatively predicted social dominance. Children who controlled resources via both prosocial and coercive means (i.e., bistrategic) showed enhanced moral cognitions about rules (despite high levels of aggression) but had deficits in emotional aspects of moral functioning in the eyes of teachers. Patterns of Selective Moral Engagement invite comparisons to tattling and impression management. The findings are contrasted with alternative hypotheses that are advanced from traditional yet prevailing approaches. © 2011 Elsevier Inc. All rights reserved.

* Corresponding author.
   E-mail address: phawley@ku.edu (P.H. Hawley).
[1] Current address: Institute for Applied Research in Youth Development, Lincoln-Filene Center, Tufts University, Medford, MA 02155, USA.

Introduction

Morality is seldom linked to power. Yet, behavior consistent with moral norms may be a part of an effective strategy of hierarchy ascendance. Consensus in academic circles frames morality in terms of justice, fairness, and harm, all of which would seem —by their very natures— to undermine hierarchical organization (e.g., Boehm, 2000). In contrast, the current study was inspired by evolutionary approaches to morality that construe moral norms as tools of the social elite (Alexander, 1987) and Foucauldian approaches that align prescriptions and prohibitions as "a discursive weapon to carry out children's personal agendas" (Jordan, Cowan, & Roberts, 1995, p. 340). Accordingly, we sought to document individual differences in moral functioning in relationship with peer status.

Developmental approaches to morality

In developmental circles, morality has been traditionally defined as cognitions, behaviors, and emotions related to issues of fairness, justice, and deliberate harm (Eisenberg, Fabes, & Spinrad, 2006; Guerra, Nucci, & Huesmann, 1994; Hoffman, 1982; Kochanska, 1997; Kohlberg, 1984; Piaget, 1932/1965; Turiel, 1998)—in other words, the capacity to appraise right from wrong, to deem an act as morally acceptable or unacceptable, to experience or report emotions that motivate moral action, to have these moral intentions override self-oriented preferences, and to behave consistently with one's morals (e.g., resist transgressions and temptation, apologize for slip-ups). The current work borrows from these cognitive, emotion, and internalization traditions.

Cognitive traditions of moral development

Children's moral cognitions and understanding of morally relevant emotions (e.g., emotion attributions) have been routinely accessed via the presentation of vignettes portraying a third party or the self morally transgressing against another (e.g., stealing) (Gasser & Keller, 2009; Kohlberg, 1984; Malti, Gasser, & Gutzwiller-Helfenfinger, 2010; Smetana, Campione-Barr, & Yell, 2003). Prompts have been devised to explore the universality of these norms (Turiel, 1998), to differentiate morality from more context-specific and flexible conventions (Turiel, 1998) and to examine how moral motivation is reflected in emotion attributions of the self and others (Malti, Gasser, & Buchmann, 2009; Nunner-Winkler, 2007). These approaches generally adopt the Kantian perspective, which assumes that moral knowledge motivates moral action (see also social information processing models encompassing morally relevant choices; Crick & Dodge, 1994; see Arsenio & Lemerise, 2004, for a review and critique). Consistent with this reasoning, those engaging in immoral behavior (e.g., behavior that harms others) are anticipated to have deficits in their moral knowledge and/or have inaccurate perceptions of the social world (e.g., hostile attribution bias) (Crick & Dodge, 1994).

Emotion traditions of moral development

Most current approaches agree that cognitions alone do not constitute morality. Guilt, shame, compassion, sympathy, and empathy, whether experienced or anticipated, are seen rather as bridging cognition and action (e.g., Batson, 1990; Eisenberg, 2000; Nichols, 2002). When moral emotions fail, behavior inconsistent with moral knowledge (e.g., aggression) increases in probability. Accordingly, emotions are considered by many to be the motivational core of morality (Huebner, Dwyer, & Hauser, 2009; Hume, 1740/1978) insofar as guilt, empathy, and shame reveal moral intentions, inhibit immoral action (e.g., aggression; Stuewig, Tangney, Heigel, Harty, & McCloskey, 2010), and motivate reparations (Eisenberg, 2000). As such, moral emotions presumably play a central role in moral intuitions (e.g., Haidt, 2001), the development of prosocial values and behavior (Eisenberg et al., 2006), and moral internalization (i.e., adopting local moral norms as part of one's personal motive system or one's internalized conscience) (Kochanska & Aksan, 2006). Moreover, even within the cognitive tradition, the providing of emotion-based reasons in judging the wrongness of an act may well reflect moral maturity in young children (e.g., Eisenberg, 1986).

Conscience and internalization

Kochanska's work from the socialization tradition is especially revealing as to individual differences in moral development. The first glimmers of conscience generally emerge during toddlerhood, as evidenced by the first indicators of guilt (Kochanska, Gross, Lin, & Nichols, 2002). Between 3 and 4 years of age, the two primary interrelated components of conscience are evident: moral emotions (e.g., empathy, guilt) and rule-compatible conduct (e.g., obeying rules, complying with adults). The emergence of "conscience" is marked by children's sensitivity to caregivers' signals, the willingness to correct mishaps, and the internalizing of adults' rules and norms as evidenced by behaving consistently with them when not observed.

Long-standing unresolved questions

The literatures on moral cognition, moral emotions, and moral internalization have not long been integrated in a meaningful and sustained way (but see Arsenio & Lemerise, 2004; Lemerise & Arsenio, 2000; Orobio de Castro, Merk, Koops, Veerman, & Bosch, 2005; Smetana & Killen, 2008), and there are "long-standing unresolved questions about the connections between children's understanding and their behavior involving aggression and other morally relevant acts" (Arsenio & Lemerise, 2004, p. 988). For example, many have found only weak, if any, direct relationships between morally relevant cognitions and antisocial behavior (e.g., Barriga, Morrison, Liau, & Gibbs, 2001; Malti et al., 2010; van der Velden, Brugman, Boom, & Koops, 2010), behavior widely held to violate foundational moral principles because of its intent to harm. Accordingly, aggression is seen by many as socially maladaptive explicitly because of the social disapproval it presumably invites (e.g., Arsenio & Lemerise, 2004; Gasser & Keller, 2009). Yet, perpetrators of proactive aggression (i.e., goal-directed aggression) appear to be aware of moral norms, but their instrumental goals override their moral knowledge (Arsenio & Lemerise, 2001; Hawley, 2003b; Sutton, Smith, & Swettenham, 1999). These patterns do not replicate for reactive aggression. Moreover, proactive aggressors and reactive aggressors experience different social repercussions (Little, Brauner, Jones, Nock, & Hawley, 2003).

This moral disconnect is also revealed by the "happy victimizer paradigm. These tasks have shown that when queried about anticipated emotion reactions in the context of a transgression (i.e., emotion attributions), young children understand that transgressions hurt victims but at the same time many report that they would feel "happy" after having transgressed because of their material gain (Arsenio & Kramer, 1992; Nunner-Winkler & Sodian, 1988). From this tradition, moral motivation (rule knowledge and emotion attribution) has shown very weak or inconsistent relationships with prosocial behavior in 6-year-olds and young adolescents, often not exceeding .09 (e.g., Malti et al., 2010), although sympathy (feeling sorry for a hurt child) appears to be more strongly related to behavior (Malti, Gummerum, Keller, & Buchmann, 2009). Thus, in the end, any deficiencies associated with aggression may well reside in the emotional domain.

An evolutionary perspective of enlightened self-interest

One theoretical perspective that we believe may help to account for conflicting results in the developmental literature is that of the theoretical biologist R. D. Alexander. His evolutionary approach to human nature and social organization advances the view that self-interest is satisfied via behavior conventionally considered as other-oriented and that moral systems are structured around status; that is, the differentially successful (e.g., those who wield power and enjoy high status) direct and promote group norms because they are selectively well-served by them (Alexander, 1987). In addition, by sanctioning others for norm violations, one can instrumentally advance one's own goals (cf. Fehr & Fischbacher, 2004; Fehr & Gächter, 2002). To do so successfully, however, one must understand the norms of the group and how they apply to others.

This view opposes more recent evolutionary views that align prosocial behavior with altruism (e.g., Warneken & Tomasello, 2009) and, in its original form (Alexander, 1987), may deny widespread true altruistic motivation. The current work, however, is agnostic on this latter point and instead merely

suggests that other-benefiting behavior may have multiple motivations, including beneficial outcomes for the self (see also Eisenberg, 1996; Eisenberg et al., 2006).[2]

Although Alexander's theory has not been directly tested to our knowledge (but see Hawley, 2003b), his specific prediction about invoking norms for self-serving purposes fits well patterns recently uncovered in work on tattling or "the reporting to a second party of a third party's counter-normative behavior" (Ingram & Bering, 2010, p. 945). Namely, the vast majority of tattling incidents were found by these authors to be self-serving, involve property entitlement, and win supportive assistance from authority figures. Moreover, tattling was highly correlated with social dominance in their very small sample ($r = .88$). This preliminary pattern suggests that tattling might be an effective strategy wielded by high-status children for the purposes of resource defense. In this sense, selectively invoking adult-derived rules may be viewed as an effective "discursive weapon" for advancing personal agendas and attaining power (Jordan et al., 1995) in ways that do not violate rules against aggression. And because tattling may result in punishment for the "offender," it may be considered in some cases as an act of aggression if the intent is to harm.

Our instantiation of elite peer status and power is derived from resource control theory (Hawley, 1999). Here, it is assumed that power is closely associated with control of the material world (Keltner, Gruenfeld, & Anderson, 2003), that power wins social capital (e.g., popularity, friendships) (Cillessen & Mayeux, 2004; Hawley, Card, & Little, 2007), and that power can be achieved by either coercive means (e.g., aggression, threats) or prosocial means (e.g., reciprocity, collaboration) or both (see also Raven & French, 1958; Yukl, 2006).

Powerful individuals can be highly socially competent and esteemed group members. For example, prosocial controllers, those who use predominately reciprocation for goal attainment, are highly socially skilled, agreeable, well-regulated, and consequently well-liked by peers and adults (Hawley, 2003a). Using both strategies (i.e., bistrategic control), however, most effectively secures material resources across all age groups (e.g., Hawley, 2002, 2003a), and despite being highly aggressive, bistrategic social dominants are well-accepted and popular among their peers during childhood and adolescence (i.e., they secure social capital; Hawley, 2003a, 2003b). In contrast, those using predominantly aggressive strategies (coercive controllers) experience rejection in large part because they possess characteristics traditionally expected of aggressive children (e.g., they are socially unskilled and low on agreeableness; Hawley, 2003a). Unlike coercive controllers, bistrategic controllers benefit from positive attributes such as extroversion and social perceptiveness (Hawley, 2002, 2003a; Sutton et al., 1999). Bistrategic controllers demonstrate that aggression, behavior customarily held to be immoral, need not undermine social success when carefully employed. This leads to the current question: Do the bistrategics' positive attributes extend to the moral domain? Early attempts suggest that they do in terms of some aspects of moral cognition (Hawley, 2003b). The current study was meant to replicate these findings and explore the moral functioning (e.g., moral cognitions, morally consistent behavior in the peer group, selective promotion of group norms, moral internalization) of these children in more detail.

Early childhood is an excellent stage for a study such as this because morally relevant skills and cognitions are emerging and being refined (Eisenberg, 2000; Kochanska, DeVet, Goldman, Murray, & Putnam, 1994). Norms, including moral standards of fairness and justice (e.g., not taking from others) and harm (e.g., not aggressing against others), are salient for this age group due to parent and teacher socialization efforts and an explicit character education curriculum. At the same time, norms are frequently tested and violated. Also important, young children's behavior and motives are still rather transparent to teachers because they are yet unskilled at impression management and complex moral rationalizations.

---

[2] Prosocial behaviors (voluntary actions that benefit others) are often casually equated with altruism ("voluntary behavior that is intended to benefit another and is not motivated by the expectation of external reward" [Eisenberg, 1996; p. 50]) in developmental circles. Yet, the above definition of prosocial behavior does not favor any one of a variety of possible underlying motivations, including the blatantly egoistic (Eisenberg, 1996; Eisenberg et al., 2006). Developmental studies, however, have tended to focus on altruistic prosocial motivation and have long shown that even at an early age, children are capable of altruism or the precursors thereof (Zahn-Waxler, Radke-Yarrow, & King, 1983) and prosocial preferences (Hamlin, Wynn, & Bloom, 2007). Altruistic prosocial motivation, however, lies outside the scope of the current work.

Questions of the current study

The current treatment of morality as having potentially instrumental functions (especially cognitions about norms) advanced expectations unlike those from traditional perspectives. First, we anticipated that moral rule cognitions (e.g., understanding accepted norms of justice and fairness) and promoting group norms would positively predict social dominance (i.e., resource control effectiveness) and both strategies for its attainment (prosocial and coercive). Good citizenship as reflected in sociomoral behavior should be uniquely related to prosocial strategies because such strategies (e.g., reciprocation), although not altruistic, demonstrate social skill and grace. In contrast, we expected that moral internalization, being less susceptible to self-interested motives, would be negatively related to power-related constructs. Accordingly, we expected to see the morality variables deviate from a positive correlational nexus, especially cognitions about moral rules and internalization.

With our analyses of resource control types, we hoped to illuminate the perhaps counterintuitive linear relationships further. We anticipated that bistrategics, unlike coercive controllers, would possess sophisticated knowledge about rules (Hawley, 2003b), be particularly adept at promoting group norms (as a discursive strategy), and engage in sociomoral behavior in visible social contexts (e.g., make apologies, make reparations), but at the same time be low on moral internalization. In contrast, we anticipated that coercive controllers would have a profile consistent with deficits in both the cognitive and emotion domains (e.g., low sociomoral behavior, low internalization, low moral cognitions), whereas prosocial controllers would have a profile consistent with conventional notions of moral maturity (e.g., mature moral cognitions and emotion attributions, exemplary sociomoral behavior, an internalized conscience). For noncontrollers, those who have demonstrated that, as a group, they cannot obtain resources in the presence of peers, we anticipated a lack of moral cognitive sophistication because if they understood the rules governing the social world, they would be more effective at moving through it. Due to the social inhibition of this group in general (Hawley, 2003a), we did not anticipate noncontrollers to promote group norms, but we expected that they still might score high on indicators of internalization because they are generally very compliant. Finally, although not a primary goal of the current study (or a novel contribution; Hawley, Johnson, Mize, & McNamara, 2007), we explored mean levels of aggression and peer regard to explore how blatantly immoral behavior varies across the resource control types and whether there are social costs incurred in the peer group and by whom.

On different data drawn from preschoolers, we addressed type differences on aspects of moral cognition (Hawley, 2003b). Those data, however, do not reflect teacher ratings of the moral behavior, emotions, and internalization of the children; therefore, these additions are significant and novel contributions of the current study.

Method

Participants

The participants were 153 children recruited from three preschools in a midsize U.S. Midwestern town with an average age of 4.85 years (*SD* = 0.86).[3] Approximately 52% of the children were girls. Written parental consent was obtained for all participating children according to American Psychological Association (APA) guidelines. Of all families invited, more than 85% provided parental consent. Approximately 77.8% of the sample was European American, 10.46% Asian or Asian American, 8.5% African or African American, less than 2% Hispanic, and less than 2% Native American. At least one teacher from each classroom participated.

---

[3] Aspects of these data have been published elsewhere, but different questions were pursued especially as they related to physical attractiveness. There, we showed that aggression does not lead to ostracism when balanced with prosocial strategies, and such individuals are judged to be physically attractive by teachers (Hawley, Johnson, et al., 2007).

Child moral functioning

Moral cognition and the child interview

Each child's level of moral cognition was based on an aggregate of interrelated items across two structured interview segments explicitly designed to address emotion attributions and moral cognitions about norms of conduct in contexts highly relevant to preschool children (i.e., object possession; Keller, Lourenco, Malti, & Saalbach, 2003). We presented six vignettes (cf. Keller et al., 2003; Malti, Gummerum, et al., 2009) asking children to adopt the position of a transgressor, where each transgression involved a desired object and thus involved moral norms of fairness and justice (Arsenio & Lover, 1995; Nunner-Winkler & Sodian, 1988).

Cognitions about rules. For three of the vignettes, we asked whether the transgression was "right" or "wrong," why the transgression was right or wrong, and how the victim(s) of the transgression would feel on being transgressed against (i.e., "good" or "bad"; cf. Nucci & Turiel, 1978). A typical vignette went as follows: "This is Tyler and Shaun. They were playing with the ball. Pretend this is you, and pretend you took the ball from them and are now playing with it. Is it right or wrong to take the ball? Why? How do Tyler and Shaun feel now that you are playing with the ball?" Children's responses were coded according to how they assessed the interaction (i.e., right or wrong) and the reasons given. When children replied "wrong," their responses to "why" fell predominantly into one of three classes: citations of norms or rules (e.g., "it's against the rules"), citations of victims' feelings (e.g., "it would make her sad"), or (more infrequently) "I don't know" or lack of response. For each vignette, children were credited (in a one-zero fashion per vignette) for moral reasoning if they replied "wrong" and cited either norms or the emotions of the victims. Responses across the three vignettes were then aggregated. The above-described moral reasoning score was in turn aggregated with a score across the three vignettes reflecting the degree to which children recognized that victims would feel bad and the reverse of replying that the transgression was "right" to form moral rule cognitions (α = .76).

Emotion attributions. For the remaining three vignettes, we asked participants to report how they would feel if they committed the transgression and why they would feel that way. A typical vignette of this variety went as follows: "This is Amanda. Pretend you took the bike and are now riding it. How would you feel if you were riding the bike? Why?" Thus, these vignettes were designed to assess cognitions about moral emotions (i.e., emotion attributions). As above, children were credited for anticipating a morally consistent affective state if they reported that they would experience a negative emotion (e.g., bad, sad) followed by either norm- or emotion-related reasons. Scores were aggregated across the three vignettes to form a score that reflected cognitions about moral emotions (moral emotion attributions) (α = .66).

Teacher ratings of internalized conscience and sociomoral behavior

Teacher ratings of children's internalized conscience, moral emotions, and sociomoral behavior were assessed using a subset of Kochanska and colleagues' (1994) conscience questionnaire. Three items were selected from each of the following subscales: guilt proneness, concern for good feelings with teachers, confession, apology, reparations, concern for others' transgressions, internalization, and empathy (see Appendix for all items). Responses to the items were submitted to exploratory factor analysis (EFA) using OLS (ordinary least squares) extraction and Harris–Kaiser (oblique) rotation. Results suggested that a three-factor solution was optimal (see Fig. 1; factor loadings are presented in Table 1).[4]

The first factor was indicated by three items from the concern for others' transgressions subscale (e.g., "is likely to scold another child who violates a classroom rule") and two items from the concern for good feelings with teachers subscale (e.g., "may become extra nice toward the teacher after being caught doing something wrong") (α = .70). Because all items reflect a concern for others' wrongdoing

---

[4] Although Kochanska and colleagues (1994) also factor-analyzed this scale, they did so at the subscale level. Thus, results from our respective EFAs cannot be constructively compared.
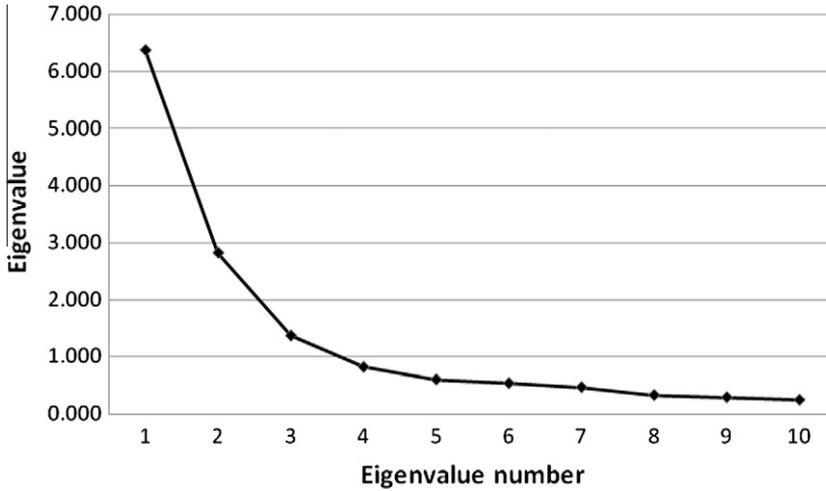
Fig. 1. First 10 eigenvalues from an EFA examining Kochanska and colleagues' (1994) measure of conscience.

Table 1
Rotated EFA factor loadings: Kochanska and colleagues' (1994) conscience questionnaire.

	Selective Moral Engagement	Internalized Conscience	Sociomoral Behavior
Concern for others' transgressions–1	.68		
Concern for others' transgressions–2	.60		
Concern for others' transgressions–3	.70		
Concern for good feelings with teachers–1	.41		
Concern for good feelings with teachers–3	.40		
Internalization–1	−.54	.30	.32
Internalization–2		.58	
Internalization–3	−.42	.57	
Guilt proneness–1		.64	
Guilt proneness–2		.63	
Guilt proneness–3		.85	−.39
Concern for good feelings with teachers–2		.55	
Confession–1	−.42	.60	
Apology–2		.43	
Apology–1			.87
Apology–3			.82
Empathy–1			.66
Empathy–2		−.34	.65
Confession–2			.40
Confession–3			.50
Reparations–1			.61
Reparations–2			.35
Reparations–3			.60
Empathy–3			

Note. Factor loadings with absolute magnitudes less than .30 are omitted. See Appendix for full item list.

or managing an authority figure's perceptions after one's own misdeeds (together with low rule internalization), we refer to this factor as Selective Moral Engagement, with a note to its similarity to both tattling (Ingram & Bering, 2010) and impression management. We purposefully named this Selective Moral Engagement to call to mind Bandura's (2002) concept of selective moral disengagement that involves the selective deactivation of internalized norms to self-servingly justify one's immoral

behavior. In contrast, Selective Moral Engagement suggests that norms are selectively activated, perhaps self-servingly.

The second factor was primarily indicated by items from the internalization subscale (e.g., "rarely repeats previously prohibited behavior even if an adult is not present") and guilt proneness subscale (e.g., "likely to look remorseful or guilty when caught in the middle of a forbidden activity") and, as such, represents children's Internalized Conscience (nine items, α = .84). The final factor we believe best represents Sociomoral Behavior because it is indicated by nine items reflecting social behaviors enacted as a consequence to wrongdoing such as apologizing, confessing transgressions to teachers, or making reparations (e.g., "when s/he has hurt a playmate, will try to make up for it by offering toys or prized possession to the other child") and comforting another distressed child (e.g., "likely to offer toys or candy to a crying playmate even without teacher suggestion") (α = .85). A number of items in the last two factors had significant dual loadings (although each item could be used to indicate only one factor) which may partially account for the high interfactor correlation between behavior and emotion (r = .62), as would be expected between factors representing guilt and reparations (Tangney, Stuewig, & Mashek, 2007). In contrast, Selective Moral Engagement and Sociomoral Behavior were uncorrelated (r = −.06), whereas Selective Moral Engagement and Internalized Conscience were moderately negatively correlated (r = −.24).

Aggression

Teacher-rated aggression was assessed via a multi-item scale (Little et al., 2003) assessing both overt aggression (direct physical or verbal attack) and relational aggression (purposeful manipulation of another's personal relationships) (Crick & Grotpeter, 1995). Three items representing overt aggression ("She's the kind of person who . . . fights with others; pushes, kicks, or punches others; [or] says mean things to others") and three representing relational aggression ("S/he is the kind of person who . . . ignores others or stops talking to them; gossips, tattles, or fibs about others; [or] keeps others from being in his/her group of friends") were aggregated for the current analyses (α = .88).

Positive peer regard

Interviewees were administered a standard sociometric nominations procedure; namely, children were shown black and white photographs of participating classmates displayed in a randomized array mounted to a magnetic whiteboard. Children were asked, "Who do you like to play with the most?" and "Who do you not play with?" (Coie & Dodge, 1983). In addition, children were asked, "Who is popular? Who do other children like to play with the most?" Nominations received were standardized by classroom (to control for variability in classroom size); each child's positive peer regard score was computed as an average of "like least" nominations (reverse scored), "like most" nominations, and "popularity" nominations (α = .60).

Identification of resource control groups and social dominance

Teacher-reported resource control strategies

In a multi-item questionnaire format, teachers were asked to rate each child using a 7-point scale (from *hardly true* to *mostly true*) assessing prosocial strategies of control (six items; "This child promises friendship [e.g., I'll be your best friend if . . .] to get what s/he wants," "This child promises to do something in return to get what s/he wants [e.g., sharing, reciprocating, turn-taking]"; α = .69) and coercive strategies of control (six items; "This child gets what s/he wants by bullying others," "This child gets what s/he wants by making verbal threats or threats of aggression"; α = .92). High scores indicate higher endorsement of strategy employment.

Creating the resource control subtypes

The resource control types were defined by dividing the distributions of teacher-reported descriptions of both the prosocial and coercive strategy use constructs into thirds (rather than using absolute cutoffs or criteria) after partialling age from both strategies. The five groups were formed as follows:

(a) bistrategic controllers, who scored above the 66th percentile on both dimensions (23 girls and 14 boys); (b) prosocial controllers, who scored above the 66th percentile on prosocial control and below the 66th percentile on coercive control (10 girls and 3 boys); (c) coercive controllers, who scored above the 66th percentile on coercive control and below the 66th percentile on prosocial control (10 girls and 7 boys); (d) noncontrollers, who scored below the 33rd percentile on both dimensions (16 girls and 20 boys); and (e) typical controllers, who scored below the 66th percentile on both dimensions but above the 33rd percentile on at least one of the control strategies (20 girls and 30 boys). The gender distribution for resource control type did not differ significantly from chance expectations, $\chi^2(4) = 8.78$, $p > .05$.

Social dominance

Teachers rated general resource control effectiveness (cf. resource control strategies above) across six items on a 7-point scale (e.g., "This child usually gets first access to preferred toys when with peers," "This child usually plays with the favored toys when with peers") ($\alpha = .91$). In addition, the teachers were asked to derive a linear dominance ranking according to who prevails over whom in object disputes (with higher values representing higher social dominance). Because these assessments were designed to measure the same construct via different means (i.e., rating scale and rank ordering, $r = .62$), they were aggregated to form our instantiation of power, social dominance ($\alpha = .80$).

Analytic strategy

First, we explore the intercorrelations among the key variables of interest. Second, we address our variable-centered hypotheses via regressions; namely, we explore the degree to which our morality-related variables predict our power variables (i.e., social dominance, prosocial strategies, and coercive strategies). Last, we address our person-centered hypotheses regarding resource control group mean differences, gender differences, and gender by resource control group interactions via analyses of variance (ANOVAs).

Results

Correlations

Table 2 displays the intervariable correlations among key constructs. A few patterns warrant mentioning. First, the strong positive correlational nexus among social dominance and the strategies is simply a matter of validity and replicates previously documented patterns (e.g., Hawley, 2003a, 2003b). Several entries are related to our hypotheses. As anticipated, moral rule cognitions and Selective Moral Engagement both were significantly positively related to social dominance (our instantiation of power) and the strategies for its attainment. Aggression evinced similar patterns. In contrast, Internalized Conscience was consistently negatively associated with the social dominance

Table 2
Intervariable correlations.

	1	2	3	4	5	6	7	8	9	10
1. Social dominance	1.00									
2. Prosocial strategies	**.75**	1.00								
3. Coercive strategies	**.82**	**.72**	1.00							
4. Moral rule cognitions	**.26**	**.32**	**.22**	1.00						
5. Moral emotion attributions	.06	.04	.02	**.31**	1.00					
6. Internalized Conscience	−**.40**	−**.27**	−**.59**	.00	.10	1.00				
7. Sociomoral Behavior	−.03	.18[*]	−.20[*]	**.24**	.13	**.57**	1.00			
8. Selective Moral Engagement	**.39**	**.54**	**.45**	.19[*]	.00	.00	.18[*]	1.00		
9. Aggression	**.68**	**.63**	**.81**	.16[*]	−.02	−**.67**	−**.31**	**.44**	1.00	
10. Positive peer regard	.20[*]	**.28**	.04	**.27**	.07	.16[*]	**.31**	.02	−.02	1.00

Note. Correlations significant at $p < .01$ are in boldface.
[*] $p < .05$.

constructs (especially coercive strategies, $r = -.59$). Second, the morality constructs were inconsistently interrelated. Moral emotion attributions were related to moral rule cognitions ($r = .31$, $p < .01$) but to nothing else. Both moral rule cognitions ($r = .24$, $p < .01$) and Internalized Conscience ($r = .57$, $p < .0001$) were positively associated with Sociomoral Behavior but were unrelated to each other ($r = .00$). Moral rule cognitions ($r = .19$, $p < .05$) and Sociomoral Behavior ($r = .18$, $p < .05$) were modestly associated with Selective Moral Engagement, and aggression was strongly so ($r = .44$, $p < .0001$). It is interesting to note, but not central to the current study, that aggression and coercive control were wholly unrelated to positive peer regard. Positive peer regard instead was significantly related to prosocial strategies ($r = .28$), moral rule cognitions ($r = .27$), and Sociomoral Behavior ($r = .31$) at the $p < .01$ level.

Predicting social dominance with morality

How do functional aspects of morality relate to key concepts of power? Table 3 displays the results of predicting social dominance, prosocial strategies, and coercive strategies with moral rule cognitions, moral emotion attributions, Internalized Conscience, Sociomoral Behavior, and Selective Moral Engagement. As can be seen in the table, the morality variables accounted for 36% of the variance of social dominance. Here, the strongest predictor (effects are shown independent of other variables in the model) was Internalized Conscience in a negative direction ($\beta = -.47$, $p < .0001$). Also predicting social dominance in a positive direction were Selective Moral Engagement ($\beta = .35$, $p < .0001$) and, only marginally, moral rule cognitions ($\beta = .14$, $p = .06$). Sociomoral Behavior and moral emotion attributions, as foreshadowed in the correlations, played little role.

Prosocial and coercive strategies were strongly positively correlated with each other (i.e., $r = .72$) because they share instrumentality. For this reason, they were residualized from one another to explore the predictors of each uniquely. Before the residualization, however, moral rule cognitions were significantly correlated with both (see Table 2). Thus, moral rule cognitions seem to be related to what the strategies have in common, namely, instrumentality. In terms of the residualized constructs (displayed on Table 3), moral rule cognitions played no role. Selective Moral Engagement emerged as a strong positive predictor of the unique variance associated with prosocial strategies, as did Sociomoral Behavior (positively) and Internalized Conscience (negatively). Together, they accounted for 26% of the variance in prosocial strategies. Coercive strategies were predicted primarily (46% of its variance) by a combination of an Internalized Conscience (negatively) and Selective Moral Engagement (positively).

Means by resource control type

Means by resource control type are displayed on Table 4. Data were standardized to a mean of 0 over the entire sample. As a consequence, the means displayed in Table 4 represent the degree to which a group on average is above the mean for the entire sample (for positive values), approximately at the mean for the entire sample (for means of 0), or below the mean of the entire sample (for negative values). Gender effects were minimal and emerged only for Selective Moral Engagement ($p < .05$)

Table 3
Morality predictors of social dominance, prosocial strategies, and coercive strategies of resource control.

Predictor	Social dominance		Prosocial strategies		Coercive strategies	
	β	p	β	p	β	p
Moral rule cognitions	.14	.06	.04	.65	.02	.83
Moral emotion attributions	.03	.67	−.03	.64	−.04	.49
Internalized Conscience	−.47	<.0001	−.26	<.01	−.53	<.0001
Sociomoral Behavior	.14	.12	.33	<.001	−.10	.23
Selective Moral Engagement	.35	<.0001	.35	<.0001	.30	<.0001
	$F(7,145) = 11.84$, $p < .0001$, $R^2 = .36$		$F(7,145) = 8.49$, $p < .0001$, $R^2 = .26$		$F(7,145) = 17.60$, $p < .0001$, $R^2 = .46$	

Note. Prosocial strategies and coercive strategies have been residualized from each other; thus, they share no common variance.

Table 4
Mean differences in attachment facets across the resource control subtypes.

Variable	Bistrategic controllers (a) M	Prosocial controllers (b) M	Coercive controllers (c) M	Typical controllers (d) M	Noncontrollers (e) M	p	R^2
Social dominance	$0.96_{b,c,d,e}$	$0.14_{a,e}$	$0.55_{a,d,e}$	$-0.21_{a,c,e}$	$-1.00_{a,b,c,d}$	<.0001	.58
Aggression	$1.02_{b,d,e}$	$-0.40_{a,c,e}$	$0.91_{b,d,e}$	$-0.22_{a,c,e}$	$-1.02_{a,b,c,d}$	<.0001	.62
Positive peer regard	0.29_e	$0.55_{c,d,e}$	-0.22_b	-0.12_b	$-0.22_{a,b}$	<.05	.07
Moral rule cognitions	0.38_e	0.24_e	-0.02_e	-0.01_e	$-0.46_{a,b,c,d}$	<.01	.09
Moral emotion attributions	-0.18	0.60	0.01	-0.01	-0.22	.20	.04
Internalized Conscience	$-0.56_{b,d,e}$	$0.57_{a,c,d}$	$-0.66_{b,d,e}$	$0.00_{a,b,c,e}$	$0.68_{a,c,d}$	<.0001	.26
Sociomoral Behavior	-0.01_b	$0.83_{a,c,d,e}$	$-0.50_{b,e}$	-0.12_b	$0.11_{b,c}$	<.01	.09
Selective Moral Engagement	$0.51_{d,e}$	$0.61_{d,e}$	$0.44_{d,e}$	$-0.10_{a,b,c,e}$	$-0.82_{a,b,c,d}$	<.0001	.28

Note. Selective Moral Engagement had a significant effect for gender at *p* < .05 favoring girls. Effects displayed on the table are independent of gender. The subscripts indicate significant differences using Fisher's LSD test (*p* < .05). Thus, the top row indicates that bistrategic controllers differ from all other groups (b–e) on resource control.

favoring girls (i.e., girls > boys). Effects displayed on the table are independent of age, and differences among groups at *p* < .05 are indicated with subscripts (Fisher's LSD [least significant difference]).

According to the logic above, the means for social dominance show that bistrategic controllers, prosocial controllers, and coercive controllers were above the sample average (*M*s. = .96, .14, and .55, respectively). Noncontrollers were well below the sample average (*M* = −1.00). The large R^2 value (R^2 = .58) reflects the definitional nature of this pattern. This configuration is not novel to the current study but rather replicates patterns documented elsewhere (e.g., Hawley, 2003a, 2003b; Hawley, Johnson et al., 2007). Nonetheless, it provides a useful backdrop with which to interpret the main findings of the study at hand.

In addition, as has been generally found (e.g., Hawley, 2003a, 2003b; Hawley, Card, & Little, 2007), bistrategic controllers were among the most aggressive in the group (*M* = 1.02) along with the coercive controllers (*M* = .91). The least aggressive were the noncontrollers (*M* = −1.02).

A very modest effect emerged for positive peer regard, with only 7% of the variance accounted for by the types. Nonetheless, bistrategic controllers (*M* = .29) and especially prosocial controllers (*M* = .55) won the positive reception of their peers.

As can be seen on Table 4, bistrategic controllers scored the highest on moral rule cognitions, as reflected in the child interview (*M* = .38), although the size of the effect was modest. Prosocial and coercive controllers were also above the mean, as evidenced by their positive values. Noncontrollers were the lowest with a mean of −.46. Supplemental analyses showed that this low mean for the noncontrollers was not due to a response pattern consistent with social inhibition; namely, the pattern of results was not due to a higher rate of responding "I don't know" when queried about why the act was right or wrong. These children were in fact least likely to respond "wrong" and most likely to respond "right."

For Internalized Conscience, bistrategic and coercive controllers scored similarly with their means of −.56 and −.66, respectively. That is, in the teachers' assessments, these children were the least likely to evidence moral internalization. Prosocial controllers and noncontrollers (especially), in contrast, were the highest on Internalized Conscience.

The means for Sociomoral Behavior indicate that the prosocial controllers were the most likely to dispense apologies, reparations, and comfort in the social group (*M* = .83), whereas coercive controllers were the least likely to do so (*M* = −.50). The other groups were relatively indistinguishable in this regard, all having scored around the group average. The means for Selective Moral Engagement show that bistrategic, prosocial, and coercive controllers performed these behaviors differentially, with the noncontrollers again being very low.

Discussion

The current study attempts to cast what is conventionally considered to be the moral lives of children in a different theoretical light. We used measures developed and validated in the moral

development literature but used the evolutionary explanatory frameworks of Alexander (1987) and resource control theory (Hawley, 1999) to explore the instrumentality of some facets of moral functioning. This is not to say that Alexander's is the only evolutionary view; during recent years, there has been an abundance of work highlighting humans' natural propensity toward prosociality and altruism in the conventionally accepted use of the terms (e.g., Hamlin et al., 2007; Warneken & Tomasello, 2009). Nonetheless, we expected (and found) that social dominance (power) variables were predicted by moral facets typically aligned with understanding fairness, justice, and harm. In contrast, moral internalization, which by our measure included moral emotions, mitigated aggressively wielded power (but see Galinski, Magee, Inesi, & Gruenfeld, 2006, for how manipulated power *induces* changes in behavior and other orientation). The analysis of resource control types further illuminated these relationships as we see the uncoupling of facets of moral functioning.

Can moral functioning be instrumental?

Selective Moral Engagement

Although not a primary goal of the current study per se, we believe that we uncovered something novel in Kochanska and colleagues' (1994) conscience questionnaire. We do not see anything surprising or counterintuitive in the first two factors reflecting children's internalized conscience and proclivity toward sociomoral behavior. Indeed, these factors replicate Kochanska's work nicely. On the other hand, although perhaps not immediately intuitive from traditional perspectives, the emergence of Selective Moral Engagement makes a good deal of sense to us in light of our view that some aspects of social functioning conventionally considered as "moral" can be instrumental. Indeed, humans are prone to monitor and enforce group norms (Fehr & Fischbacher, 2004; Fehr & Gächter, 2002).

We see the instrumentality of Selective Moral Engagement in the combination of correlations, regressions, and group mean differences. Namely, it may seem contradictory that Selective Moral Engagement significantly predicted both prosocial and coercive strategies and evinced positive correlations with both moral rule cognitions and (especially) aggression. Moreover, social dominants of all varieties (bistrategics, prosocials, and coercives) appear to have engaged in this behavior. Considering these findings together, Selective Moral Engagement strikes us as being similar to "tattling." The literature on tattling is very limited (e.g., reduction over time, incidence in sibling circles), suggesting to us that it has not long been formally recognized as a construct for analysis (but see Ingram & Bering, 2010). Most adults claim that tattling is an annoyance. At the same time, we recognize its occasional utility; we cannot be privy to every transgression in the peer group. Because the child who is tattled on may be sanctioned by adults, tattling (and Selective Moral Engagement) can in some cases serve as a very clever act of aggression that can be cloaked as a moral behavior (here, Selective Moral Engagement was positively correlated with aggression). Consequently, the tattler invites no punitive response from authority figures. High-status aggressive children engaged in it (bistrategics and coercive controllers), as did high-status nonaggressive children (prosocial controllers). For this reason, Selective Moral Engagement is positively associated with both prosocial and coercive strategies.

Moral rule cognitions

The patterns evinced by moral rule cognitions are not fully consistent with traditional approaches to morality in that they suggest some instrumentality (and, perhaps, a good deal of perspective-taking ability). For example, moral rule cognitions were modestly positively associated with Selective Moral Engagement; one must understand norms to report when they are violated. Like Selective Moral Engagement, moral rule cognitions were also positively correlated not only with social dominance and prosocial strategies but also with coercive strategies and aggression (Table 2). Because predictive ability drops out at the point of regressions after prosocial and coercive strategies have been residualized (i.e., their shared instrumentality has been removed), we see understanding moral norms to be useful for personal goal attainment. This conclusion is further supported by the means in Table 4, which show that, independent of age, two of the three socially dominant groups are above average on moral rule cognitions. The mean at the average for coercive controllers was unexpected given

the relatively low level of social skills these children have shown in previous studies (e.g., Hawley, 2003a); that is, we expected them to score lower than typical controllers. We return to this point below. Nonetheless, we see this pattern of results as being in line with Haidt's "action problem," namely, that behavior and cognition in the moral domain appear to be only loosely related. As anticipated, norm internalization (Internalized Conscience) was more strongly related to Sociomoral Behavior than was moral rule cognitions (although internalization and behavior share method variance, so this relationship should be interpreted with caution).

Moral internalization

Internalization of moral norms, in contrast to self-reporting right from wrong, appears to inhibit aggressive instrumentality, as evidenced in the correlations and regressions. That is not to say that an internalized conscience undermines power: Prosocial controllers are a case in point. These children are low on aggression, are well-liked, understand moral norms, have internalized said norms, and engage in a good deal of reparative prosocial behavior. And although moral emotion attributions did not differ significantly across groups, prosocial controllers stood out on this dimension. Yet, at the same time, they are higher than average at material goal attainment and enjoy social capital. In contrast, the high level of guilt and internalization exhibited by the noncontrollers might suggest that they are more fearful or overcontrolled than "morally mature" per se given their low performance on moral rule cognitions (Kochanska, Murray, & Coy, 1997). Noncontrollers, however, exhibit levels of sociomoral behavior second only to prosocial controllers in the opinions of teachers, again showing the uncoupling of behavior and cognition in some children.

Varieties of coercive power and winning peer regard

In light of coercive controllers' affective deficits (i.e., low internalization), it should come as little surprise that they are also the lowest on Sociomoral Behavior. In this sense, this group matches well expectations from traditional approaches (high aggression, low sociomoral behavior, and poor internalization). Here, however, the bistrategics subvert traditional predictions; they do not evidence a strongly internalized conscience, but they are no different from typical and noncontrolling children in terms of their sociomoral behavior in the peer group. This pattern captures the sophistication of the bistrategics; they are highly effective in the material world, well-aware of moral norms, and unencumbered by guilt, yet they know well enough how to treat their peers (apologies and reparations). They do not suffer the same social consequences of the coercive controllers, as can be seen in their mean levels of positive peer regard (Table 4). We have made the case elsewhere that this behavioral profile in its normative (not extreme) manifestation is a sort (although not the only or even most preferred sort) of human competence (e.g., Hawley, 2003a; Stump, Ratliff, Wu, & Hawley, 2009). From our results, prosocial controllers also match well expectations from traditional perspectives, namely, the view that popularity is gained by good behavior, having a conscience, and nonaggression. But it must be noted that noncontrollers possess these attributes as well. Yet, they are as socially rejected as the aggressive coercive controllers. Thus, we believe that these traditional views of social inclusion, although pleasing, are oversimplified.

We did not expect that coercive controllers would score as high as typical controllers on moral rule cognitions. There are a number of possible explanations. Perhaps these children are as good as others at simply telling the researcher what he or she wants to hear, namely, that an act is wrong regardless of the schemas the children activate in the play group. Perhaps these children (along with the bistrategics) have the moral orientation of proactive aggressors; that is, those children who aggress against others for instrumental gain (vs. reactive aggression, which is a lashing out in frustration) are more likely to morally disengage if they foresee emotional or material gains resulting from the transgression (e.g., Arsenio, Adams, & Gold, 2009; see also Gasser & Keller, 2009). Or, finally, their pattern may simply be due to measurement error. Namely, our arbitrary criteria for the dimensional cutoffs may lead to a good deal of error. This error in turn serves to blur—not heighten—group differences on dependent measures. In the current study, this blurring may occur most strongly at the 66th percentile on coercive strategies, the defining point of distinguishing typical controllers from coercive controllers. Even though these groups differ in important

ways in the current work (e.g., aggression, Internalized Conscience), moral cognition may fall victim to our method.

Limitations and alternative hypotheses

In addition to measurement error inherent in our typology, moral cognitive measures such as ours are susceptible to impression management bias (e.g., Johnson & Hogan, 1981); children's (and adults') reports will often cast them in a positive light. In addition, despite our supplemental analyses, self-reports are susceptible to issues associated with inhibition and, conversely, social engagement. As such, self-reports make a poor stand-in for alternative methods for assessing behavior such as observations and teacher reports (as we have done). Even so, moral vignettes in the "happy victimizer" tradition are known to evince individual differences in responding in children under 7 years of age (e.g., Keller et al., 2003; Malti, Gummerum et al., 2007), and as our results show, this variability, at least in moral rule cognitions, was associated with other variables of theoretical importance and in expected directions, including Sociomoral Behavior. On the other hand, hypotheses regarding moral emotion attributions were unfulfilled.

One might rightly suspect the quality of the moral cognitive responding of the aggressive children. Perhaps they construe taking another child's toy as a conventional rule rather than a moral rule. Or, one might predict that bistrategics cite rules for why it is wrong over emotion responding, a pattern deemed less morally mature (Eisenberg, 1986). Indeed, a quick supplemental analysis suggested a trend that coercive controllers and bistrategic controllers are especially likely to cite "rule reasons" (although no similar trend emerged for emotion reasons). However, our standardized interview inspired by the happy victimizer paradigm was not designed to clarify which kind of rules the children were referring to (i.e., moral rules or conventional rules) or whether said rules were authority dependent, whether they were applicable to all, or how participants justify the rules they cite. These latter qualities are key attributes characteristic of work that carefully distinguishes "true" moral cognitions from conventional reasoning (e.g., Turiel, 2008).

Perhaps suspicions arise about our "prosocial strategies." Are they really prosocial? We have chosen to align these tactics with prosociality rather than with, for example, malevolent manipulation because the currency of exchange inherent in prosocial strategies (here, friendship and promising something in return) strikes us as lying within rules of reciprocation and cooperation, classes of behavior that are more prosocial than coercive. When this type of bargaining is performed by preschoolers who are unable to bury their "true motives" under impression management strategies, it is easier to see these behaviors as barefaced manipulation than when adults perform them (less overtly) in their daily social exchange processes. The disapproving interpretation of prosocial strategies probably comes most easily when considering the profiles of juvenile bistrategic controllers, presumably because they appear to be truly calculating. But their calculating natures lie not in the character of prosocial strategies per se but rather in bistrategics' *selective engagement of prosocial strategies balanced with aggression*. In stark contrast, prosocial controllers across multiple studies show a profile suggesting that they are shining examples of human social competence and citizenship. If prosocial strategies are unsavory, then it would follow that prosocial controllers are psychopaths because they are best at cloaking their iniquity. In the end, we see that the logic fails and conclude that prosocial strategies are ultimately instrumental (cf. altruism), and their power lies in their ability to strengthen social bonds (Hawley, 1999). Their relationship with more altruistic motivations and prosocial behavior conventionally defined is an important future question.

Larger implications

Despite the above-mentioned limitations and alternatives, we believe that moral functioning in humans is more complex than simply "all good things go together" and social functioning is more complex than "be nice and people will like you." Even in the face of contradictory evidence, positive relationships among facets of moral functioning are generally expected, with those facets anticipated to evince negative relationships with aggression and positive relationships with socially valued

behavior. At the same time, strong and robust relationships are not consistently forthcoming in published works (where publication is generally predicated on the lack of null results). When facets of moral functioning become decoupled, predominant views chalk this up to some level of incompetence in that child. Although we deeply appreciate this latter point, important from the current evolutionary perspective, individuals appear to be strongly motivated to behave in ways consistent with self-interest. So much the better if we can do so while appearing to behave consistently with moral standards. Indeed, Alexander (1987) claimed that moral structures evolved in part to serve self-interest in a manipulative fashion (although we need not be consciously aware of this connection as we move through the social world).

We know that moral cognitions are not sufficient to inhibit antisocial behavior (see also Arsenio et al., 2009, on reactive vs. proactive aggressors). Classic experiments in social psychology demonstrated how cognitions and behavior are startlingly easily disassociated and how we can be manipulated to behave in ways that are at odds with our own principles (Bandura, 1990; Batson, Thompson, Seuferling, Whitney, & Strongman, 1999; Festinger, 1957; Haney, Banks, & Zimbardo, 1973; Milgram, 1963). Thus, oft times, the decoupling of cognitions from behaviour is due less to the incompetence of the individual, but rather more to the context in which one finds oneself.

Bistrategics, well-armed with an understanding of norms and others' perspectives, seem to be in an especially strong position to mitigate social censure when they have behaved poorly. In this sense, their moral reasoning "is more like a lawyer defending a client than a judge or scientist seeking the truth" (Haidt, 2001, p. 820). From Alexander's view, and therefore the evolutionary view adopted in the current work, the documented patterns are not anomalies but rather are expected from a perspective of enlightened self-interest.

Appendix A

Items from Kochanska's and colleagues internalization scale.

	This student…
Concern for Others' Transgressions	(1) is likely to scold another child who violates a classroom rule. (2) gets upset when a peer breaks a classroom rule. (3) is not likely to react when a peer breaks a classroom rule. (*reversed*)
Concern for Good Feelings with Teachers	(1) may become extra nice toward the teacher after being caught doing something wrong. (2) is not overly concerned about being forgiven after having done something naughty. (*reversed*) (3) after doing something s/he is not supposed to do, later checks with teacher to see if s/he is "good now".
Internalization	(1) rarely repeats previously prohibited behavior even if an adult is not present. (2) can stop her/himself in the middle of doing something forbidden without any intervention from an adult. (3) if out of teacher sight, s/he may ignore a classroom rule (*reversed*).

Appendix A (*continued*)

Guilt Proneness

(1) is likely to look remorseful or guilty when caught in the middle of a forbidden activity.

(2) may hang his/her head and look down after being naughty.

(3) Is not too upset by mishaps or accidents s/he has had (*reversed*).

Apology

(1) will spontaneously say "sorry" after having done something wrong.

(2) unless specifically asked to, is not likely to apologize on his/her own (*reversed*).

(3) will spontaneously say "sorry" to a peer when necessary.

Empathy

(1) will try to comfort or reassure another in distress.

(2) is likely to offer toys or candy to a crying playmate even without teacher suggestion.

(3) is not likely to become upset if a playmate cries (*reversed*).

Confession

(1) may deny s/he did something wrong even when confronted with the evidence. (*reversed*)

(2) may confess to doing something naughty even if unlikely to be found out.

(3) seems compelled to tell teacher when s/he does something wrong.

Reparations

(1) seems relieved when given an opportunity to repair damage s/he has caused.

(2) is not particularly likely to offer to clean up if s/he has caused a mess (for example, a spill). (*reversed*)

(3) when s/he has hurt a playmate, will try to make up for it by offering toys or prized possession to the other child.

References

Alexander, R. D. (1987). *The biology of moral systems*. Hawthorne, NY: Aldine de Gruyter.

Arsenio, W. F., Adams, E., & Gold, J. (2009). Social information processing, moral reasoning, and emotion attributions: Relations with adolescents' reactive and proactive aggression. *Child Development, 80*, 1739–1755.

Arsenio, W., & Kramer, R. (1992). Victimizers and their victims: Children's conceptions of the mixed emotional consequences of victimization. *Child Development, 63*, 915–927.

Arsenio, W., & Lemerise, E. A. (2001). Varieties of childhood bullying: Values, emotion processes, and social competence. *Social Development, 10*, 59–73.

Arsenio, W. F., & Lemerise, E. A. (2004). Aggression and moral development: Integrating social information processing and moral domain models. *Child Development, 75*, 987–1002.

Arsenio, W. F., & Lover, A. (1995). Children's conceptions of sociomoral affect: Happy victimizer, mixed emotions, and other expectancies. In M. Killen & D. Itart (Eds.), *Morality in everyday life* (pp. 87–128). New York: Cambridge University Press.

Bandura, A. (1990). Selective activation and disengagement of moral control. *Journal of Social Issues, 46*, 27–46.

Bandura, A. (2002). Selective moral disengagement in the exercise of moral agency. *Journal of Moral Education, 31*, 101–119.

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.

Batson, C. D. (1990). How social an animal? The human capacity for caring. *American Psychologist, 45*, 336–346.

Batson, C. D., Thompson, E. R., Seuferling, G., Whitney, H., & Strongman, J. A. (1999). Moral hypocrisy: Appearing moral to oneself without being so. *Journal of Personality and Social Psychology, 77*, 525–537.

Boehm, C. (2000). *Hierarchy in the forest: The evolution of egalitarian behavior*. Cambridge, MA: Harvard University Press.

Cillessen, A. H. N., & Mayeux, L. (2004). From censure to reinforcement: Developmental changes in the association between aggression and social status. *Child Development, 75*, 147–163.

Coie, J. D., & Dodge, K. A. (1983). Continuities and changes in children's social status: A five-year longitudinal study. *Merrill–Palmer Quarterly, 29*, 261–282.

Crick, N., & Dodge, K. A. (1994). A review and reformulation of social information-processing mechanisms in children's social adjustment. *Psychological Bulletin, 115*, 74–101.

Crick, N., & Grotpeter, J. K. (1995). Relational aggression, gender, and social–psychological adjustment. *Child Development, 66*, 710–722.

Eisenberg, N. (1986). *Altruistic emotion, cognition, and behavior*. Hillsdale, NJ: Lawrence Erlbaum.

Eisenberg, N. (1996). Caught in a narrow Kantian perception of prosocial development: Reactions to Campbell and Christopher's critique of moral development theory. *Developmental Review, 16*, 48–68.

Eisenberg, N. (2000). Emotion, regulation, and moral development. *Annual Review of Psychology, 51*, 665–697.

Eisenberg, N., Fabes, R. A., & Spinrad, T. (2006). Prosocial development. In N. Eisenberg (Ed.), *Handbook of child psychology: Social, emotional, and personality development* (pp. 646–718). Hoboken, NJ: John Wiley.

Fehr, E., & Fischbacher, U. (2004). Third-party punishment and social norms. *Evolution and Human Behavior, 25*, 63–87.

Fehr, E., & Gächter, S. (2002). Altruistic punishment in humans. *Nature, 415*, 137–140.

Festinger, L. (1957). *A theory of cognitive dissonance*. Stanford, CA: Stanford University Press.

Galinski, A. D., Magee, J. C., Inesi, M. E., & Gruenfeld, D. H. (2006). Power and perspectives not taken. *Psychological Science, 17*, 1068–1074.

Gasser, L., & Keller, M. (2009). Are the competent the morally good? Perspective taking and moral motivation of children involved in bullying. *Social Development, 18*, 798–816.

Guerra, N. G., Nucci, L., & Huesmann, L. R. (1994). Moral cognition and childhood aggression. In L. R. Huesmann (Ed.), *Aggressive behavior: Current perspectives* (pp. 13–33). New York: Plenum.

Haidt, J. (2001). The emotional dog and its rational tail: A social intuitionist approach to moral judgment. *Psychological Review, 108*, 814–834.

Hamlin, J. K., Wynn, K., & Bloom, P. (2007). Social evaluation by preverbal infants. *Nature, 450*, 557–560.

Haney, C., Banks, C., & Zimbardo, P. (1973). Interpersonal dynamics in a simulated prison. *International Journal of Criminology & Penology, 1*, 69–97.

Hawley, P. H. (1999). The ontogenesis of social dominance: A strategy-based evolutionary perspective. *Developmental Review, 19*, 97–132.

Hawley, P. H. (2002). Social dominance and prosocial and coercive strategies of resource control in preschoolers. *International Journal of Behavioral Development, 26*, 167–176.

Hawley, P. H. (2003a). Prosocial and coercive configurations of resource control in early adolescence: A case for the well-adapted Machiavellian. *Merrill–Palmer Quarterly, 49*, 279–309.

Hawley, P. H. (2003b). Strategies of control, aggression, and morality in preschoolers: An evolutionary perspective. *Journal of Experimental Child Psychology, 85*, 213–235.

Hawley, P. H., Card, N. A., & Little, T. D. (2007). The allure of a mean friend: Relationship quality and processes of aggressive adolescents with prosocial skills. *International Journal of Behavioral Development, 31*, 22–32.

Hawley, P. H., Johnson, S. E., Mize, J. A., & McNamara, K. A. (2007). Physical attractiveness in preschoolers: Relationships with power, status, aggression, and social skills. *Journal of School Psychology, 45*, 499–521.

Hoffman, M. L. (1982). Development of prosocial motivation: Empathy and guilt. In N. Eisenberg (Ed.), *The development of prosocial behavior* (pp. 281–313). Cambridge, UK: Cambridge University Press.

Huebner, B., Dwyer, S., & Hauser, M. (2009). The role of emotion in moral psychology. *Trends in Cognitive Sciences, 13*, 1–6.

Hume, D. (1978). *A treatise of human nature*. Oxford, UK: Oxford University Press (Original work published 1740).

Ingram, G. P. D., & Bering, J. M. (2010). Children's tattling: The reporting of everyday norm violations in preschool settings. *Child Development, 81*, 945–957.

Johnson, J., & Hogan, R. (1981). Moral judgment and self-presentations. *Journal of Research in Personality, 15*, 57–63.

Jordan, E., Cowan, A., & Roberts, J. (1995). Knowing the rules: Discursive strategies in young children's power struggles. *Early Childhood Research Quarterly, 10*, 339–358.

Keller, M., Lourenco, O., Malti, T., & Saalbach, H. (2003). The multifaceted phenomenon of "happy victimizers": A cross-cultural comparison. *British Journal of Developmental Psychology, 21*, 1–18.

Keltner, D., Gruenfeld, D. H., & Anderson, C. (2003). Power, approach, and inhibition. *Psychological Review, 110*, 265–284.

Kochanska, G. (1997). Multiple pathways to conscience for children with different temperaments: From toddlerhood to age 5. *Developmental Psychology, 33*, 228–240.

Kochanska, G., & Aksan, N. (2006). Children's conscience and self-regulation. *Journal of Personality, 74*, 1587–1618.

Kochanska, G., DeVet, K., Goldman, M., Murray, K., & Putnam, S. P. (1994). Maternal reports of conscience development and temperament in young children. *Child Development, 65*, 852–868.

Kochanska, G., Gross, J. N., Lin, M.-H., & Nichols, K. E. (2002). Guilt in young children: Development, determinants, and relations with a broader system of standards. *Child Development, 73*, 461–482.

Kochanska, G., Murray, K., & Coy, K. C. (1997). Inhibitory control as a contributor to conscience in childhood: From toddler to early school age. *Child Development, 68*, 263–277.

Kohlberg, L. (1984). *The psychology of moral development: The nature and validity of moral stages*. San Francisco: Harper & Row.

Lemerise, E. A., & Arsenio, W. F. (2000). An integrated model of emotion processes and cognition in social information processing. *Child Development, 71*, 107–118.

Little, T. D., Brauner, J., Jones, S. M., Nock, M. K., & Hawley, P. H. (2003). Rethinking aggression: A typological examination of the functions of aggression. *Merrill–Palmer Quarterly, 49*, 343–369.

Malti, T., Gasser, L., & Buchmann, M. (2009). Aggressive and prosocial children's emotion attributions and moral reasoning. *Aggressive Behavior, 35*, 90–102.

Malti, T., Gasser, L., & Gutzwiller-Helfenfinger, E. (2010). Children's interpretive understanding, moral judgments, and emotion attributions: Relations to social behaviour. *British Journal of Developmental Psychology, 28*, 275–292.

Malti, T., Gummerum, M., Keller, M., & Buchmann, M. (2007). Contemporaneous and 1-year longitudinal prediction of children's prosocial behavior from sympathy and moral motivation. *Journal of Genetic Psychology, 168*, 277–299.

Malti, T., Gummerum, M., Keller, M., & Buchmann, M. (2009). Children's moral motivation, sympathy, and prosocial behavior. *Child Development, 80*, 442–460.

Milgram, S. (1963). Behavioral study of obedience. *Journal of Abnormal & Social Psychology, 67*, 371–378.

Nichols, S. (2002). Norms with feeling: Towards a psychological account of moral judgment. *Cognition, 84*, 221–236.

Nucci, L., & Turiel, E. (1978). Social interactions and the development of social concepts in preschool children. *Child Development, 49*, 400–407.

Nunner-Winkler, G. (2007). Development of moral motivation from childhood to early adulthood. *Journal of Moral Education, 36*, 399–414.

Nunner-Winkler, G., & Sodian, B. (1988). Children's understanding of moral emotions. *Child Development, 59*, 1323–1338.

Orobio de Castro, B., Merk, W., Koops, W., Veerman, J. W., & Bosch, J. D. (2005). Emotions in social information processing and their relations with reactive and proactive aggression in referred aggressive boys. *Journal of Clinical Child and Adolescent Psychology, 34*, 105–116.

Piaget, J. (1965). *The moral judgment of the child*. London: Routledge & Kegan Paul (Original work published 1932).

Raven, B. H., & French, J. R. P. (1958). Legitimate power, coercive power, and observability in social influence. *Sociometry, 21*, 83–97.

Smetana, J. G., Campione-Barr, N., & Yell, N. (2003). Children's moral and affective judgments regarding provocation and retaliation. *Merrill–Palmer Quarterly, 49*, 209–236.

Smetana, J. G., & Killen, M. (2008). Moral cognition, emotion, and neuroscience: An integrative developmental view. *European Journal of Developmental Science, 2*, 324–339.

Stuewig, J., Tangney, J. P., Heigel, C., Harty, L., & McCloskey, L. (2010). Shaming, blaming, and maiming: Functional links among the moral emotions, externalization of blame, and aggression. *Journal of Research in Personality, 44*, 91–102.

Stump, K. N., Ratliff, J. M., Wu, Y. P., & Hawley, P. H. (2009). Theories of social competence from the top-down to the bottom-up: A case for considering foundational human needs. In J. L. Matson (Ed.), *Practitioner's guide to social behavior and social skills in children* (pp. 23–37). New York: Springer.

Sutton, J., Smith, P. K., & Swettenham, J. (1999). Social cognition and bullying: Social inadequacy or skilled manipulation? *British Journal of Developmental Psychology, 17*, 435–450.

Tangney, J. P., Stuewig, J., & Mashek, D. J. (2007). Moral emotions and moral behavior. *Annual Review of Psychology, 58*, 345–372.

Turiel, E. (1998). The development of morality. In W. Damon & N. Eisenberg (Eds.), *Handbook of child psychology, Vol. 3: Social, emotional, and personality development* (5th ed., pp. 863–932). New York: John Wiley.

Turiel, E. (2008). The development of children's orientations toward moral, social, and personal orders: More than a sequence of development. *Human Development, 51*, 21–39.

van der Velden, F., Brugman, D., Boom, J., & Koops, W. (2010). Moral cognitive processes explaining antisocial behavior in young adolescents. *International Journal of Behavioral Development, 34*, 292–301.

Warneken, F., & Tomasello, M. (2009). The roots of human altruism. *British Journal of Psychology, 100*, 455–471.

Yukl, G. (2006). *Leadership in organizations* (6th ed.). Upper Saddle River, NJ: Pearson–Prentice Hall.

Zahn-Waxler, C., Radke-Yarrow, M., & King, R. (1983). Early altruism and guilt. *Academic Psychology Bulletin, 5*, 247–259.