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Physical attractiveness in preschoolers: Relationships with power, status, aggression and social skills

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Abstract

Several lines of theory and research suggest that power (e.g., social dominance) and status (e.g., social prominence and positive peer regard) are enjoyed by those blessed with good looks. The present work addresses the relations among physical attractiveness, power, status, and aggression from a resource control theoretic perspective that suggests that group members find power holders physically attractive, even if they are aggressive. Teacher ratings of physical attractiveness, social dominance, peer reception, aggression, and social skills were collected on 153 preschoolers (3–6 years) from a Midwestern city. Positive peer regard was derived via sociometric nominations. Raters unfamiliar with the children assessed their physical attractiveness from photographs. Results show that teachers' perceptions of physical attractiveness are a function of power, status, and social skills. Additionally, teachers rated aggressive children who employ both prosocial and coercive strategies of resource control (bistrategic controllers) to be among the most physically attractive. These relations did not emerge for raters unbiased by children's behavior. Results suggest social dominance achieved via prosocial means begets attractiveness ratings, even if accompanied by high levels of aggression. The implications for intervention are discussed.

Keywords: Physical attractiveness; Social dominance; Aggression; Person-centered approach; Social prominence; Positive peer regard

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"Beauty is power; a smile is its sword. ~~Charles Reade~~"

Publisher's Error: Quote is by Charles Reade, 19 c novelist

Beauty is and has been ~~I~~ believed to be a marked social asset. Accordingly physical attractiveness is perceived to be associated with intelligence (Eagly, Ashmore, Makhijani, & Longo, 1991; Feingold, 1992), self-sufficiency (Dion & Berscheid, 1974), social competence (Eagly et al., 1991; Langlois et al., 2000), prosociality (Dion, 1973; Langlois & Styczynski, 1979), and friendliness (Dion, Berscheid, & Walster, 1972). Even young children express clear social preferences for beauty, perhaps stemming from these stereotyped assumptions (Dion, 1973). Teachers have higher expectations of and are more lenient toward attractive children (Clifford & Walster, 1973; Dion, 1974). As adults, the attractive make more money than the unattractive (10–15% more; Hammermesh & Biddle, 1994).

The belief that beauty advances social power is thus very nearly cliché, perhaps with good reason. Yet surprisingly little work has been done linking physical attractiveness in young children to various indices of power (e.g., social dominance) and status (e.g., social prominence, positive peer regard). The present study attempts to address this gap by examining the perceived physical attractiveness of young children in relation to measures of power and social status (and associated strategies such as aggression): Does attractiveness advance power and status, or do power and status make one attractive (even if one is aggressive)? Finally, what role does a child's appearance play in his/her attainment of status within the peer group?

Power and status

Power has been differentially defined depending on the domain of inquiry. Social psychologists have defined power as the capacity to influence the states and behaviors of others by virtue of the control of social (friendship, ostracism) and material resources (economic, entertainment; Keltner, Gruenfeld, & Anderson, 2003). With this conceptualization in mind, the closest instantiation of the power concept in the developmental domain is social dominance from a resource control theoretic perspective. Here, social dominance is defined as a child's relative ability to compete for (attain and defend) material and social resources in the peer group via various strategies (Hawley, 1999).

Status and related concepts derive more from the evaluation of others; positive regard or social prominence may be granted or denied to those of power (Keltner et al., 2003). These group evaluations have been traditionally derived in the developmental and sociological literatures via sociometric interviews or nominations procedures. Social preference, for example, reflects the degree to which one is positively regarded (i.e., liked) by peers, and popularity may be seen as the degree to which one is seen as socially prominent. The relationship between social preference and social prominence has been the target of considerable recent discussion (e.g., Cillessen & Mayeux, 2004; Hawley, Card, & Little, 2007; Lease, Musgrove, & Axelrod, 2002).

Power, status and aggressive self-expression

Aggression is of central interest when it comes to power (social dominance) and status (social preference, social prominence) in children. Aggression appears to have differential relations to these concepts; namely, aggression appears to be one of a number of strategies

to achieve social dominance (via resource control) in preschoolers (Hawley, 2003a; Ostrov & Keating, 2004) as well as an effective way to achieve and maintain social prominence in adolescents (Adler & Adler, 1998; Cillessen & Mayeux, 2004) and preschoolers (Nelson, Robinson, & Hart, 2005). In contrast, aggression is not believed to pave the way to being liked by others (i.e., social preference). Indeed, decades of research in developmental psychopathology have shown that aggression and antisocial behavior are associated with a higher risk for peer rejection (Coie, Dodge, & Kupershmidt, 1990; Hughs, White, Sharpen, & Dunn, 2000; Keane & Calkins, 2004) and social–psychological maladjustment (Ostrov, Woods, Jansen, Casas, & Crick, 2004), as well as unappealing qualities such as impulsivity (Pope, Bierman, & Mumma, 1991; Tremblay, Pihl, Vitaro, & Dobkin, 1994), perspective taking deficits (Chandler, 1973; Coie & Dodge, 1998), and moral deficiencies (Bear, 1989; Bear & Rys, 1994). Hence, early intervention programs are held to be useful to ameliorate developmental disadvantages that may emerge at later ages in large part due to the evident stability of negative behavior (e.g., Campbell, Shaw, & Gilliom, 2000; Keane & Calkins, 2004; Ostrov et al., 2004).

In contrast to the developmental psychopathology view, it has also long been known that many aggressive children are not rejected (e.g., Coie, Dodge, Terry, & Wright, 1991) and that aggression can be associated with centrality in the social network (i.e., status; Bagwell, Coie, Terry, & Lochman, 2000; Farmer & Rodkin, 1996). Additionally, more recent work has shown that subsets of aggressive children are socially skilled, morally astute, and socially alluring (e.g., Bost, Vaughn, Washington, Cielinski, & Bradbard, 1998; Cairns, Xie, & Leung, 1998; Hawley, 2003a,b; Rodkin, Farmer, Pearl, & van Aker, 2000; Sutton, Smith, & Swettenham, 1999). Work within a resource control theoretic perspective (see below), for example, has demonstrated that individuals who balance prosociality with surprisingly high levels of aggression fare well psychologically as well as socially from early childhood through adolescence (e.g., Hawley, 2002, 2003a,b; Hawley et al., 2007). We have referred to the apparent social appeal of aggressive youths elsewhere as the *peer-regard aggression paradox* (e.g., Hawley et al., 2007).

Resolving the paradox: Variable-centered vs. person-centered approaches

Both of these views – though on the surface appear diametrically opposed – have tremendous face validity. Both the aggressive-rejected child and the aggressive-popular are familiar to developmentalists and the lay population alike. Resolution to the quandary is gained by inspecting the different methods used in these bodies of work. Presently dominant in psychological and developmental literatures is what has been referred to as a variable-centered approach (e.g., Laursen & Hoff, 2006). These methods focus on the relations among variables across individuals (e.g., correlations, regressions, structural equations modeling) and as such guide the bulk of our exploration and theorizing.[1] At the same time, great strides in psychology have been made via 'person-centered' approaches which explore individual functioning in

[1] Variable centered approaches, though typically accepted without question, are sometimes based on erroneous assumptions about how psychological constructs operate within individuals. As a consequence, psychologists should not take for granted that they lead to a full or even veridical representation of human functioning. For extended discussions, please see Jones & Nesselroade (1990), Cairns, Bergman, & Kagan (1998), and Laursen & Hoff (2006).

terms of patterns on a limited set of variables of theoretical import (e.g., emotionality and control in parenting; Baumrind, 1966). When linear relationships among, for example, social acceptance and aggression are explored, the former approach has been employed (e.g., Cillessen & Mayeux, 2004). When 'types' or subgroups of children discussed, a more person-centered model has been used (e.g., Hawley, 2003a,b; Rodkin et al., 2000). These approaches lead to distinct, but complementary contributions as we hope to show in the present study.

Aggression and physical attractiveness

Variable- and person-centered approaches to aggression can be seen as giving rise to two distinct hypotheses regarding the relationship between aggression and physical attractiveness. If one's physical attractiveness is believed by the beholder to index one's competencies (as is typically believed), then we might reasonably expect aggressive individuals to be rated as physically unattractive because aggression is associated with qualities that conflict with the positive outcomes and skills enjoyed by the physically attractive (a variable-centered analysis would in this case result in negative correlations). On the other hand, it is also clear that aggressive children of a certain ilk win and maintain a degree of centrality and status within the peer group. This subgroup of popular children are rated by peers as more aggressive and attractive than unpopular peers (i.e., a person-centered statement; e.g., Adler & Adler, 1998; Lease, Kennedy, & Axelrod, 2002). Additionally, youth seen as athletic, aggressive, and 'cool' are also rated as attractive (Estell, Farmer, Pearl, Van Aker, & Rodkin, 2003; Rodkin et al., 2000). Thus, these latter studies illustrate that any expected correlation would be mitigated by a subgroup of individuals high on both aggression and attractiveness (a limitation of a variable-centered analysis), and that beauty may advance power and status even if accompanied by aggression. This relationship may especially hold in girls for whom, it has been argued, beauty paves the path to status (e.g., Adler & Adler, 1998; Eder, 1995; Vaughn & Langlois, 1983), and this status (e.g., perceived popularity) may be maintained via aggression (e.g., Cillessen & Mayeux, 2004).

Competing views of aggression and physical attractiveness appear also to be associated with variable-centered and person-centered contributions. An additional approach that attempts to explain this apparent conundrum theoretically is resource control theory.

Resource control theory and social dominance (power)

The present resource control theoretic approach asserts that a subgroup of aggressive social dominants will be viewed favorably by others, and furthermore suggests that these favorable views will be reflected in physical attractiveness ratings. The roots of the present theoretical approach are evolutionary, but the details of this aspect of the theory need not be explored here.[2] Two aspects of the theory are particularly important for our present purposes. First, the theory hypothesizes that those who are especially effective at resource control (i.e., social dominants) will win positive social attention such as being admired and

[2] Instead, I direct the interested reader to Hawley (1999), Vaughn (1999), Hawley and Little (1999), Hawley (2006), and Hawley (2007).

sought out for social partners because they are skilled in the material and social domains (Hawley, 1999). Second, resource control theory posits two primary broad categories of resource control strategy, prosocial and coercive. Prosocial strategies gain access to resources indirectly via positive behaviors such as reciprocity and cooperation. Coercive strategies, in contrast, gain access to resources directly and agonistically such as by taking, threatening, or manipulating others. These strategies can be used alone or in combination to access resources, which in turn give rise to a person-centered typology.

Accordingly, our program has focused on *types* of resource controlling individuals depending on their relative employment of the two strategies. While prosocial controllers and coercive controllers employ one strategy over the other, bistrategic controllers employ both, non-controllers employ neither, and typical controllers are more or less average on both. Consistent with our predictions, we have generally found bistrategic controllers – like prosocial controllers, and unlike coercive controllers – to possess attributes associated with traditional measures reflecting skills; they tend to be extroverted, socially perceptive, and morally astute (Hawley, 2002, 2003a). Unlike prosocial controllers, however (but like coercive controllers), bistrategic controllers are high on traditional measures of aggression.[3] Nonetheless, they are socially attractive to peers (Hawley, 2003a,b). Because of the superior abilities to compete for resources associated with this type (e.g., access toys, teachers, attain personal goals), they are considered to be of the highest social dominance status by definition. What has remained unaddressed by this work until now is the role of a child's physical appearance.

Questions of the present study

The opening quote by Charles Reade (a 19th century English novelist) suggests to us what has long been implied in the field of psychology; namely, that certain social and material benefits are granted to those blessed with good looks. Reade suggests that power over others is one of these benefits. But we wonder whether his implied causal direction is the only correct one. That is, could it be that those who wield power 'with a smile' (e.g., prosocial and bistrategic controllers, both of whom employ prosocial strategies of resource control) are perceived as more physically attractive than those who wield their power 'without a smile' (e.g., coercive controllers) or those who fail to wield power altogether (e.g., typical and non-controllers)?

To address this first question, we employed a person-centered approach to explore mean differences of key variables across resource control types. Teachers rated each participating child in their class on prosocial and coercive strategies of resource control (from which we derived types), relative success at resource control independent of strategies, physical attractiveness, and reception within the peer group. If beauty fosters power, then children rated as socially dominant (i.e., effective resource controllers) should be evaluated as more attractive than lower ranked children (i.e., bistrategic controllers would be more attractive than typical and non-controllers). And, if bistrategic controllers are rated as more attractive than other types, then we cannot conclude that aggressive behavior alone makes one

[3] Thus, we see a unique combination of traits that may be overlooked by variable-centered approaches (see also Estell et al., 2003; Rodkin et al., 2000 for a unique combination of traits in athletic, aggressive adolescents).

unattractive to others. Because teachers' opinions about physical attractiveness are influenced by their familiarity with the children in the social mileu, we would not be able to rule out the reverse proposition; namely, that power is deemed beautiful (i.e., that effective resource control/social dominance influence attractiveness ratings). Thus, to control for behavioral knowledge of the children, we had independent raters assess photographs of each participant for physical attractiveness. If beauty advances power, then the independent observers' ratings should be consistent with the teachers'; bistrategic controllers should be more physically attractive to these unbiased judges. If power is deemed beautiful by teachers, however, then there should be little relationship evident between physical attractiveness ratings of the independent raters and a child's social dominance type.

Secondarily, we seek to understand the predictors of perceptions of attractiveness by utilizing traditional variable-centered approaches (e.g., correlations, regressions). Namely, we will explore whether teachers' perceptions of physical attractiveness can be attributed to child behavioral characteristics (e.g., aggression, assertion, positive social skills) and/or his or her power and status in the social group (i.e., social dominance, social prominence and positive peer regard). Furthermore, because status is assumed to be especially highly related to attractiveness in girls, we will compare these predictors in boys and girls. Finally, we will assess the role of child characteristics, including physical attractiveness, in predicting a child's status with peers (i.e., social prominence, positive peer regard).

Method

Participants

Participants included 153 children recruited from 3 preschools in a small Midwestern city. Approximately 77.8% of the sample was European-American, 8.5% African or African-American,<2% Hispanic, 10.46% Asian or Asian-American, and <2% Native American. The average age of these children was 4.85 years (SD=0.86). Seventy nine of the children were girls (51.63% of the sample) and 74 were boys (48.37% of the sample). Written parental consent was obtained for all participating children according to APA guidelines. Of all families invited, over 85% provided parental consent. At least one teacher from each classroom participated.

Procedure

In late Fall semester or Spring, at least one teacher from each classroom completed a battery of multi-item questionnaires on each of the participating children addressing physical attractiveness, aggressive and assertive behavior, positive social skills, resource control strategies, social dominance and social prominence.[4] When two teachers of the same classroom completed the questionnaires, the average of their responses was taken to represent the children of their classroom. Participating children were interviewed twice for

[4] Because this study is part of a larger multivariate study, traditional variable-centered factor analysis will be used as a variable reduction technique. Factor analysis can also be person-centered, but it relies on multiple measures within individuals over time (e.g., Hawley & Little, 2003; Jones & Nesselroade, 1990).

15–20 min within the course of 3–4 weeks (depending on class size and thus number of interviews administered) by six highly trained (by the principle investigator) undergraduate research assistants. Tests that are relevant for the present work include a standard nominations sociometric procedure. Finally, a separate group of undergraduate research assistants rated the children's physical attractiveness.

Physical attractiveness

Teacher ratings

Teachers rated the physical attractiveness of each of the participating children across three items on a 7-point scale (e.g., "S/he is pretty/handsome", "S/he is good-looking"; $\alpha = 0.78$). All teacher ratings were then standardized within classroom to control for cross-classroom differences. There were no significant differences across ethnicities in attractiveness ratings ($p > 0.25$).

Independent observer ratings

Five adult research assistants (2 males, 3 females) who were wholly unacquainted with the participants rated black and white photographs of the children (taken for the sociometric procedure) on a 5-point scale from 'less attractive' to 'very attractive'. The same raters additionally performed a Q-sort procedure in which they sorted the photographs into 5 categories ranging from least to most physically attractive, with a quasi-normal fixed distribution (Vaughn & Langlois, 1983). Data from the rating scale and q-sort were then averaged to create an attractiveness rating for each child ($\alpha = 0.77$). The ratings were standardized by classroom to maintain consistency between the raters and the teachers, and to control for any between classroom differences. Again, there were no significant differences across ethnicities in attractiveness ratings ($p > 0.25$).

Identification of resource control groups and power

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 (6 items., "This child promises friendship (ex: "I'll be your best friend if…') to get what s/he wants", "… promises to do something in return to get what s/he wants (ex: sharing, reciprocating, turn-taking)"; $\alpha = 0.69$), coercive strategies of control (6 items; "This child gets what s/he wants by bullying others", "…gets what s/he wants by making verbal threats or threats of aggression"; $\alpha = 0.92$). High scores indicate higher endorsement strategy employment.

Creating the resource control subtypes

Because social dominance and strategy use is by definition a relative differential (Hawley & Little, 1999), 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 cut-offs or criteria). After partialling age from both prosocial and coercive strategies, the five groups were formed as follows: (a) *bistrategic controllers* score in the top 66th percentile on both dimensions (23 girls, 14 boys),

(b) *prosocial controllers* score in the top 66th percentile on prosocial control but average or low on coercive control (10 girls, 3 boys), (c) *coercive controllers* score in the top 66th percentile on coercive control but average or low on prosocial control (10 girls, 7 boys), (d) *noncontrollers* scored in the lower 33rd percentile on both dimensions (16 girls, 20 boys), and (e) *typical controllers* scored less than the 66th percentile on both, but 33rd percentile on neither or one of the control strategies (20 girls, 30 boys). The gender distribution for resource control type did not significantly differ from chance expectations ($\chi^2_{(4)}=8.78$, $p>0.05$).

Social dominance (i.e., power)

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", "…usually plays with the favored toys when with peers"; $\alpha=0.91$). Additionally, 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; $r=0.62$), they were aggregated to form our instantiation of power, *Social Dominance* ($\alpha=0.80$).

Status in the peer group

Teacher assessment

As part of the teacher questionnaire battery, we posed a number of sociometric-type nomination questions; namely, "Who do the children like to play with the most? Who is popular?", "Who do *you* consider to be the peer leader?", and "Who do *the children* consider to be the peer leader?". Children's scores based on teacher nominations were standardized within classroom to control for classroom size.

Child sociometrics

Interviewees were shown black and white photographs of participating classmates displayed in a randomized array mounted to magnetic whiteboard. In a typical nominations procedure (e.g., Coie & Dodge, 1983), the children were asked, "Who do you like to play with the most?" (i.e., 'like most' nominations), "Who do you not play with?" (i.e., 'like least' nominations), and "Who do other kids like to play with the most? Who is really popular?" (e.g., perceived popularity; Parkhurst & Hopmeyer, 1998; cf.. Cillessen & Mayeux, 2004). Finally, we asked the children, "Who is a leader? Who do other kids follow?", but dropped that item due to the children's evident inability to understand the concept of leadership outside of daily queuing (e.g., "everybody gets to be line leader"). Again, children's scores based on child nominations were standardized within classroom to control for classroom size.

Social prominence and positive peer regard

Exploratory factor analysis on the above teacher assessments and sociometric items revealed a 2-factor solution (see Appendix Table 1 for full factor solution). *Social Prominence* is an aggregate of teacher-nominated leadership (teacher's view and children's

view) and teachers' perceptions of popularity ($\alpha = 0.75$). *Positive Peer Regard* is an aggregate of children's 'like most' nominations, 'like least' nominations (reverse coded), and children's nominations of popularity ($\alpha = 0.60$). For each factor, a child's score was derived as an average of the factor's identifying component parts (i.e., unit weighted factor scores).

Aggressive self-expression

Aggression and assertion

Two constructs emerged from an exploratory factor analysis that included aspects of the teacher nominations procedure and teacher rating scales (see Appendix Table 2 for full factor pattern). *Aggression* ($\alpha = 0.83$) included teacher nominations for "Who tends to quarrel with others?", "Who is a classroom bully?", teacher ratings across three items of emotion manipulation-negative (e.g., "S/he can act sad or angry, even when s/he is not; $\alpha = 0.55$; cf. emotion manipulation-positive below), and teacher ratings of aggression (which, for the purposes of this study, is an aggregate of teacher rated overt aggression and relational aggression; $\alpha = 0.85$).[5] Also emerging from the factor analysis was a factor we refer to as *Assertion* ($\alpha = 0.81$) because it was composed of the aggregate of teacher ratings across three items each of extraversion (e.g., "is extroverted/energetic"; $\alpha = 0.89$), openness to experience (e.g., "is creative/curious"; $\alpha = 0.79$), surgency (e.g., "s/he immediately approaches to explore when s/he sees something new or unusual"; $\alpha = 0.70$), and reverse-coded neuroticism (e.g., "is fearful/nervous"; $\alpha = 0.59$). We interpret this factor to represent a milder and more socially acceptable form of aggressive self expression than aggression.

Positive social skills

As part of the same exploratory factor analysis referenced above, an additional factor emerged which we refer to as *Positive Social Skills* ($\alpha = 0.83$) because it appears to embody positive aspects of sociability and personal control (see Appendix Table 2 for full factor pattern). Five three-item constructs identified it, including emotion manipulation-positive (e.g., "S/he knows how to make someone smile; $\alpha = 0.70$), attention to social cues (e.g., "She can tell when someone is upset; $\alpha = 0.75$), agreeableness (e.g., "is kind/agreeable"; $\alpha = 0.79$), conscientiousness (e.g., "is thorough/planful"; $\alpha = 0.79$), and reverse-coded hyperactivity (e.g., "S/he has difficulty sitting still during lessons, fidgets uneasily in his/her seat, and may also be talkative and noisy; $\alpha = 0.72$).

[5] A multi-item aggression scale was designed to make distinctions among forms and functions of aggression (Little, Brauner, Jones, Nock, & Hawley, 2003; Little, Jones, Henrich, & Hawley, 2003). Two subscales reflecting overt and relational aggression were employed for the present study. Overt aggression (direct physical or verbal attack; Coie & Dodge, 1998) was represented by the following three items: "She's the kind of person who… fights with others; pushes, kicks, or punches others; says mean things to others". Relational aggression (purposeful manipulation of another's personal relationships; Crick & Grotpeter, 1995) was represented by the following three items: "S/he is the kind of person who… ignores others or stops talking to them; gossips, tattles, or fibs about others; keeps others from being in his/her group of friends". Because overt and relational aggression were highly correlated in the preschoolers (i.e., $r = .60$), they were aggregated here for simplicity.

Inter-factor correlations are presented in Appendix Tables 1 and 2.

Analytic strategy

The present study can be seen as a fusion of person-centered and variable centered techniques. As described above, we first grouped the variables conceptually and then performed exploratory factor analysis as a data reduction strategy. Remaining analyses were then performed on the higher-order factors. Our person-centered analyses were predicated on the types formed by prosocial and coercive resource control. Then, utilizing the reduced number of dimensions, we explored resource control group mean differences, gender differences, and gender by resource control group interactions by way of MANOVAs on grouped interrelated variables (followed by univariate ANOVAs).[6] Finally, we used regression (variable-centered) analyses separately for girls and boys to explore the predictors of teachers' perceptions of attractiveness, as well as the role of physical attractiveness in predicting children's social prominence and positive peer regard.

Results

Before addressing our person- and variable-centered hypotheses, we will first explore the correlational relationships among the key constructs central to the study.

Inter-variable partial correlations

Table 1 shows the inter-variable partial correlation coefficients controlling for age. Teacher-rated physical attractiveness and independent-rater physical attractiveness were modestly correlated ($r=0.20$, $p<0.01$). Though the ratings of the independent observers were mostly uncorrelated with the other constructs (except for social dominance; $r=0.24$, $p<0.01$), teacher ratings of attractiveness were correlated with social dominance ($r=0.27$, $p<0.001$), social prominence ($r=0.32$, $p<0.001$), positive peer regard ($r=0.29$, $p<0.001$), and positive social skills ($r=0.40$, $p<0.001$).

Aggression, assertion, and social dominance were all highly intercorrelated beyond the 0.001 level. Nonetheless, these variables displayed divergent relationships with positive social skills and positive peer regard. Namely, aggression was negatively correlated with positive social skills ($r=-0.33$, $p<0.001$), and social dominance was positively correlated with positive peer regard ($r=0.20$, $p<0.01$). Social prominence evinced several positive relations (i.e., with assertion, social skills, social dominance, and positive peer regard) while positive peer regard was positively related to positive social skills.[7]

[6] Technically, exploring mean differences across a pre-determined typology is already a fusion of person- and variable-centered goals and methods. For extended discussion, please see Bergman and Trost (2006), and Laursen and Hoff (2006).

[7] For the variable-minded, it may be tempting to think in terms of mediation, where, for example, aggression mediates the relationship between physical attractiveness and social dominance. Although attractiveness is correlated with social dominance, it is not correlated with aggression (a necessary condition for mediation; Baron & Kenny, 1986). Person-centered approaches can shed light on alternatives (i.e., unique combinations of variables within like individuals) when variable-centered approaches yield null results as the present study demonstrates (Bergman, 1998).

Table 1
Inter-construct partial correlation coefficients (with age partialled)

	Physical Attractiveness Teacher	Physical Attractiveness Rater	Social Dominance	Social Prominence	Positive Peer Regard	Aggression	Assertion
Physical Attractiveness Rater	0.20*	–					
Social Dominance	0.27**	0.24*	–				
Social Prominence	0.32**	0.07	0.49**	–			
Positive Peer Regard	0.29**	0.16	0.20*	0.25*	–		
Aggression	−0.16	0.17	0.60**	0.16	−0.10	–	
Assertion	0.12	0.10	0.76**	0.29**	0.04	0.56**	–
Positive Social Skills	0.40**	0.03	0.07	0.22*	0.40**	−0.33**	−0.02

Note: *$p<0.01$, **$p<0.001$.

Table 2 shows the correlations by gender. Both boys and girls evinced similar correlational patterns with the exception of the relationship between teacher-rated physical attractiveness and social prominence which emerged for boys ($r=0.48$, $p<0.001$), but not for girls ($r=0.14$, $p>0.05$; $z=-2.45$, $p<0.01$).

Table 2
Inter-construct partial correlation coefficients (with age partialled) by gender

Physical Attractiveness Teacher	Physical Attractiveness Rater	Social Dominance	Social Prominence	Positive Peer Regard	Aggression	Assertion	Positive Social Skills	
Physical Attractiveness Teacher	–	0.25	0.32	0.48**	0.31*	−0.19	0.15	0.41**
Physical Attractiveness Rater	0.18	–	0.23	0.14	0.12	0.20	0.17	0.04
Social Dominance	0.22	0.26	–	0.54**	0.27	0.51**	0.74**	0.14
Social Prominence	0.14	0.04	0.45**	–	0.27	0.11	0.27	0.20
Positive Peer Regard	0.28*	0.20	0.13	0.23	–	−0.03	0.04	0.27
Aggression	−0.11	0.13	0.67**	0.23	−0.19	–	0.56**	−0.34*
Assertion	0.08	0.06	0.77**	0.30*	0.04	0.58**	–	0.01
Positive Social Skills	0.47**	−0.02	0.01	0.30*	0.56**	−0.40**	−0.05	–

Note: Boys are represented above the diagonal and girls are represented below *$p<0.01$, **$p<0.001$.

Table 3
Significance tests for post-hoc ANOVAs

Variables	Full Model (*df* 9, 143)		Main Effect for Resource Control type (*df* 4, 143)		Main Effect for Gender (*df* 1, 143)		Type* Gender (*df* 4, 143)		R^2
	F	p	F	p	F	p	F	p	
Physical Attractiveness Teacher	2.30	0.02	4.23	0.003	1.13	0.29	0.62	0.65	0.13
Physical Attractiveness Rater	0.64	0.76	1.17	0.32	0.02	0.88	0.25	0.91	0.04
Social Dominance	22.15	<.0001	49.42	<0.0001	2.96	0.09	0.09	0.99	0.58
Social Prominence	0.30	<0.002	4.61	<0.01	0.93	0.34	0.37	0.83	0.13
Positive Peer Regard	1.67	0.10	2.48	0.05	0.19	0.66	0.95	0.44	0.09
Aggression	19.50	<0.0001	40.17	<0.0001	0.11	0.74	0.34	0.85	0.55
Assertion	13.84	<0.0001	30.74	<0.0001	3.02	0.08	0.50	0.73	0.47
Positive Social Skills	2.55	<0.01	3.32	<0.01	2.91	0.09	0.22	0.93	0.14

Person-centered analyses: Mean differences by resource control type and gender

Physical attractiveness

Separate two-factor (gender and resource control subtype) ANOVAS with teacher-rated physical attractiveness and independent rater physical attractiveness as dependent variables revealed only a main effect of resource control group for teacher-rated physical attractiveness ($F(4, 143)=4.23$, $p<0.01$). There were no main effects for gender or gender by resource control group interaction for either dependent variable (see Table 3 for significance tests and Table 4 for means).

As can be seen in Table 4, bistrategic ($M=0.44$) and prosocial controllers ($M=0.44$) were seen as the most attractive by teachers, and equally so. Coercive controllers were seen as the least physically attractive by teachers ($M=-0.46$).

Table 4
Least squares means by resource control group

Variables	Bistrategic Controllers	Prosocial Controllers	Coercive Controllers	Typical Controllers	Non-Controllers
Physical Attractiveness Teacher	$0.44_{c,d}$	0.44	-0.46_{a}	-0.25_{a}	0.01
Physical Attractiveness Rater	0.18	0.09	0.04	−0.07	−0.12
Social Dominance	$1.00_{b,c,d,e}$	$0.22_{a,e}$	$<55_{a,d,e}$	$-0.23_{a,c,e}$	$-0.99_{a,b,c,d}$
Social Prominence	$0.46_{d,e}$	−0.06	−0.15	-0.16_{a}	-0.19_{a}
Positive Peer Regard	0.24	0.37	−0.18	−0.06	−0.16
Aggression	$0.57_{b,d,e}$	$-0.19_{c,a}$	$0.96_{b,d,e}$	$-0.20_{a,c,e}$	$-0.67_{a,c,d}$
Assertion	$0.66_{d,e}$	0.28_{e}	$0.60_{d,e}$	$-0.13_{a,c,e}$	$-0.86_{a,b,c,d}$
Positive Social Skills	0.02	$0.59_{d,c}$	-0.40_{b}	-0.12_{b}	0.08

Note: The subscripts indicate significant differences using the Tukey HSD test, $p<0.05$. Bistrategic controllers are denoted by ‘a’, prosocial controllers by ‘b’, coercive controllers by ‘c’, typical controllers by ‘d’, and non-controllers by ‘e’.

Social dominance, aggression, and assertion

A two-factor (gender and resource control type) MANOVA with the dependent variables of social dominance, aggression, and assertion revealed a multivariate effect for resource control subtype ($F(12, 373.34)=18.99$, $p<0.0001$). The following univariate tests additionally revealed that all three dependent variables differed significantly across subtypes (see Table 3 for significance tests and Table 4 for means). Neither a significant main effect for gender nor significant gender by resource control group interactions emerged for these variables.

As shown in Table 4, bistrategic controllers ($M=0.57$) and coercive controllers ($M=0.96$) were rated as the most aggressive by teachers, while non-controllers were rated as the least aggressive ($M=-0.67$). A very similar pattern emerged for assertion ($M_{\text{bistrategic contollers}}=0.66$, $M_{\text{coercive controllers}}=0.60$, $M_{\text{non-controllers}}=-0.86$). Serving as a validity check for the resource control groupings, all groups that employ strategies to control resources (i.e., bistrategic, prosocial, and coercive controllers) were rated as above average on social dominance ($M_{\text{bistrategic contollers}}=1.00$, $M_{\text{prosocial controllers}}=0.22$, $M_{\text{coercive controllers}}=0.55$,) while typical controllers and non-controllers were rated as below average ($M_{\text{typical contollers}}=-0.23$, $M_{\text{non-controllers}}=-0.99$).

Social prominence, positive peer regard, and positive social skills

A two-factor (gender and resource control type) MANOVA with the dependent variables social prominence, positive social skills, and positive peer regard and revealed a multivariate effect for resource control subtype ($F(12, 373.34)=3.11$, $p<0.0003$). The following univariate tests additionally revealed that all dependent variables differed significantly across subtypes (see Table 3 for significance tests and Table 4 for means). Again, no main effect for gender emerged nor significant gender by resource control group interactions for these variables.

As shown in Table 4, prosocial controllers ($M=0.59$) were rated as most skilled by the teachers while coercive controllers were rated as the least ($M=-0.40$). Of all groups, teachers consider bistrategic controllers to be the most socially prominent ($M=0.45$). Though positive peer regard evinced only a trend across resource control groups (i.e., $p=0.10$), prosocial controllers were the most positively regarded by peers ($M=0.37$) followed by bistrategic controllers ($M=24$), while coercive and non-controllers were the least positively regarded ($M_{\text{coercive contollers}}=-0.18$, $M_{\text{non-controllers}}=-0.16$).

Variable-centered analyses: Predicting physical attractiveness, social prominence, and positive peer regard

Regressions for boys and girls predicting teacher-rated physical attractiveness, social prominence, and positive peer regard can be found in Table 5. In boys, physical attractiveness ratings were in large part related to social prominence ($\beta=0.32$, $p<0.01$) and aggression ($\beta=-37$, $p<0.01$). In girls, social dominance ($\beta=0.44$, $p<0.05$) and positive social skills ($\beta=0.45$, $p<0.01$) carried the bulk of the predictive power. Social prominence in boys is primarily related to teacher-rated physical attractiveness ($\beta=0.33$, $p<0.01$) and social dominance ($\beta=0.62$, $p<0.001$), whereas in girls it is, like physical attractiveness, associated primarily with social dominance ($\beta=0.48$, $p<0.05$) and positive social skills ($\beta=0.37$, $p<0.01$). Finally, positive peer regard in boys is predicted

Table 5
Regressions for boys and girls predicting teacher-rated physical attractiveness, social prominence, and positive peer regard

	Boys		Girls	
Teacher Rated	*t*-value	Standardized β	*t*-value	Standardized β
Physical Attractiveness				
Physical Attractiveness Rater	1.88	0.18	1.05	0.11
Social Dominance	0.92	0.16	2.16*	0.44
Social Prominence	2.8**	0.32	−0.96	−0.11
Positive Peer Regard	1.62	0.11	−0.38	−0.05
Aggression	−2.8**	−0.37	−0.98	−0.16
Assertion	0.91	0.14	−0.71	−0.11
Positive Social Skills	1.34	0.14	3.22**	0.45
	$F(7, 66)=7.34$, $p<0.0001$; $R^2=0.44$		$F(7, 71)=4.58$, $p<0.001$; $R^2=0.31$	
Social Prominence				
Physical Attractiveness Teacher	2.88**	0.33	−1.0	−0.12
Physical Attractiveness Rater	−0.40	−0.04	−0.68	−0.07
Social Dominance	3.92***	0.62	2.4*	0.48
Aggression	−0.14	−0.02	0.71	0.11
Assertion	−1.49	−0.22	−0.73	−0.12
Positive Social Skills	−0.16	−0.02	2.89**	0.37
	$F(6, 67)=8.37$, $p<0.0001$; $R^2=0.43$		$F(6, 72)=4.97$, $p<0.001$; $R^2=0.29$	
Positive Peer Regard				
Physical Attractiveness Teacher	1.21	0.16	−0.44	−0.05
Physical Attractiveness Rater	0.25	0.03	1.86	0.19
Social Dominance	2.31*	0.43	0.68	0.13
Aggression	−0.01	00	−0.67	−0.10
Assertion	−1.78	−0.31	0.01	0.00
Positive Social Skills	1.12	0.14	4.27***	0.53
	$F(6, 67)=2.77$, $p<0.01$; $R^2=0.20$		$F(6, 72)=6.42$, $p<0.0001$; $R^2=0.35$	

Note: *$p<0.05$; **$p<0.01$; ***$p<0.001$.

solely by social dominance ($\beta=0.43$, $p<0.05$), and positive social skills in girls ($\beta=0.53$, $p<0.001$).

Discussion

We opened this paper citing the literature that has clearly conveyed that physical attractiveness is a social asset that bolsters ones ability to attract and wield power over others. Our results certainly speak to these issues. Before discussing the role of physical attractiveness, however, it is useful to first explore the ways the present work replicates and adds to the literature on social status and aggression as one of the strategies to attain it. Then, the profiles of the resource control types can better be explored in light of these findings and integrated with the work of others.

First, for example, the exploratory factor analyses gave rise to distinct yet related dimensions of aggressive self-expression; namely, aggression and assertion. The differences in these dimensions across the groups that are successful at resource control (i.e., socially

dominant) are instructive: Bistrategic controllers and coercive controllers were seen by teachers as both aggressive and assertive, while prosocial controllers were primarily assertive. Resource control can thus be achieved in the absence of direct coercive strategies. These person-centered findings suggest that even in very early childhood, power can be attained/sustained via aggressive and non-aggressive means.

Second, power and various measures of status appear to be linked in complex ways as revealed by our person-centered approach. Social prominence and positive peer regard emerged as separate yet related dimensions as they do at other developmental epochs (e.g., Cillessen & Mayeux, 2004). Again, the resource control groups differed across them in important ways: Bistrategic controllers were dominant (high on resource control), prominent, and preferred by peers. Prosocial controllers were more dominant and preferred than prominent, and coercive controllers were dominant only. Non-controllers enjoyed none of these qualities. These results match closely those documented by Lease and her colleagues (Lease, Kennedy, & Axelrod, 2002; Lease, Musgrove, & Axelrod, 2002) who used cluster analysis to explore the relationships among measures of peer status in 4th through 6th graders. These researchers, for example, identified a sizeable group (12.7% of their sample) of likeable, prominent, dominant children, another group of likeable dominant children (18.1%), an unlikable dominant group (7.6%), and a group of children who were neither dominant, prominent, nor liked (10.9%). Like Lease and colleagues, we too found this likeable, prominent, dominant group (here, bistrategic controllers) to be aggressive (see also sociometrically controversial children; Nelson et al., 2005).

Given the growing body of work suggesting that aggressive children and adolescents come in skilled and unskilled varieties and that these varieties attract differential attention (e.g., Bost et al., 1998; Cairns et al., 1998; Hawley, 2003a,b; Lease, Musgrove, & Axelrod, 2002; Newcomb, Bukowki, & Pattee, 1993; Ostrov et al., 2004; Rodkin et al., 2000), it would be surprising if teachers could not discriminate them in the preschool years. Yet, children under the age of six can discriminate these groups as well as evident in their peer preference patterns; children gravitate *toward* bistrategic controllers (as they do the highly competent prosocial controllers) and are repelled by coercive controllers. Thus, peers find aggressive bistrategic controllers (interpersonally) attractive. Do teachers find them attractive as well?

Physical attractiveness and measures of peer status

It appears as though teachers do indeed find some instantiations of power attractive. By exploring relations among variables, we found that teachers' ratings of physical attractiveness were correlated with their perceptions of constructs related to power and status, including social dominance, social prominence, positive peer regard (as well as positive social skills; see Table 1). Though one might expect negative behavior to elicit negative attention from adults, our person-centered analyses demonstrated that teachers found bistrategic controllers and the non-aggressive prosocial controllers to be equally physically attractive. Conversely, they found coercive controllers to be the least attractive of the groups by far (Table 4).

Blinded by beauty?

Is the aggression of bistrategic controllers disregarded by adults in part because they are physically attractive? This interpretation makes a good deal of sense in light of the literature

that has shown that, compared to unattractive children, attractive children are perceived to be less antisocial by both adults and children (e.g., Dion & Berscheid, 1974), are seen as friendlier and warmer (Dion et al., 1972) and accordingly are more popular (Dion & Berscheid, 1974). Unattractive children are additionally seen as more aggressive and 'scary' and judged more negatively when they transgress (Dion, 1972; Dion & Berscheid, 1974). However, if attractiveness perceptions were clouding social judgments, we would have expected the bistrategic controllers to be rated as less aggressive than they were, or more skilled in positive ways. Teachers in fact find them among the most aggressive, yet only average on positive traits (see Table 4; see also Hawley, 2003a). Thus, it does not appear that attractiveness perceptions are overly influencing adult social judgments.

Moreover, the patterns evinced by the teachers were not replicated by unbiased observers. These independent raters who neither knew the children nor observed them with peers rated bistrategic and prosocial controllers to be no more attractive than coercive controllers, and found physical attractiveness to be unrelated to social prominence and positive peer regard. However, independent raters' judgments of attractiveness were modestly related to teachers' ratings of social dominance.

Power and status are beautiful to adults

It appears as though children's behavior impacts teachers' attractiveness ratings, though not wholly in ways anticipated by traditional theoretical perspectives. The regression analyses (Table 5) suggest that the factors influencing attractiveness ratings differ somewhat for boys and girls. For boys, teacher rated physical attractiveness was predicted by social prominence (positively), and aggression (negatively, as would be expected from traditional perspectives). For girls, social dominance and positive social skills positively predicted physical attractiveness ratings, while aggression was unrelated. Thus, it appears as though dimensions related to power (social dominance) and status (social prominence) are perceived as attractive by adult observers (mitigated by aggression in boys).

Do peers grant status to beauty?

Peers appear not to be unduly influenced by physical attractiveness at this age (at least in this sample). Though social prominence in boys was strongly predicted by teachers' physical attractiveness ratings (and social dominance), this relationship appears to be due to the teachers' familiarity with the children in the social context. The independent raters evinced no such relationship. For girls, social prominence was predicted by positive social skills and social dominance, and was unrelated to physical attractiveness ratings from both sources. Additionally, positive peer regard was unrelated to physical attractiveness by either rater.

These null findings regarding physical attractiveness and status in the girls are somewhat puzzling since the path to females' social prominence is thought to be through her appearance (e.g., Eder, 1995; see also Leese, Kennedy, & Axelrod, 2002; Sebanc, 2003; Weisfield, Bloch, & Ivers, 1984; Vaughn & Langlois, 1983). Why would teachers find only socially prominent boys attractive? Evolutionary perspectives suggest that females find behavior associated with power and status attractive in males (Buss, 1998; Pellegrini & Long, 2003). Female attractiveness, in contrast, is not influenced by dominance behavior (e.g., Sadalla, Kenrick, & Versure, 1987). Though highly speculative, perhaps the relationship between power and

attractiveness holds in males, even if they are well-below reproductive age. All but one of our teachers were women.

Is beauty power, a smile its sword?

To some degree, yes. Both teachers' and independent raters' appear to agree that social dominance in girls is associated with their physical appearance to some degree (see also Adler & Adler, 1998; Lease, Musgrove, & Axelrod, 2002). Perhaps instead teachers are influenced by the evident competencies exhibited by prosocial and bistrategic controllers. These data did not support the view that suggests teachers would perceive aggression overall as unattractive. If they did, then aggression would have been correlated to attractiveness ratings and they would have rated bistrategic controllers to be nearly as unattractive as coercive controllers. Instead, it appears as though teachers found the aggressive behavior of coercive controllers (unbalanced by prosociality) off-putting. Consequently, teachers found coercive controllers unattractive.

Why are power and status attractive?

Why would teachers find power, even if aggressively wielded, attractive? Perhaps those with power and status (i.e., the socially dominant and prominent) express more positive affect than others. Positive affect, often seen as a facilitator of approach related goals, is a concomitant of power (Keltner et al., 2003) and as such is more often experienced and freely expressed in high status individuals (as are other positive emotion states). For example, those of high power exhibit natural Duchenne smiles at a higher rate than low power individuals (Keltner, Young, Heerey, Oemig, & Monarch, 1998). Positive emotions invite approach (e.g., Keltner & Kring, 1998), strengthen bonds (Fredrickson, 1998), and relate to ratings of likeability and intelligence (Borkenau & Liebler, 1992; Frank, Ekman, & Friesen, 1993). Additionally, positive affect has been found to be positively related to aggression in five-year-olds (Strayer & Roberts, 2004). Thus, positive affect expressed by prosocial controllers and bistrategic controllers may not only have influenced perceived attractiveness ratings, but may also mitigate negative social repercussions generally consequent to aggression. On the other hand, smiling has been found to be negatively correlated with social rank and dominance, especially in males (Deutsch, 1990; Keating et al., 1981; Mueller & Mazur, 1996). In any case, this study did not study affect or affective expression, thus these comments are merely speculative. Clearly these issues warrant further study.

Limitations of current study

In addition to standard limitations to drawing causal conclusions from cross-sectional data, the present study is limited by the methods employed, especially perhaps for physical attractiveness. Namely, the photographs were taken for the sociometric procedure and thus were not standardized for postures or affect. The quality of the photos is a potential confound also. Though the independent raters' assessments of the children's physical attractiveness were respectably inter-correlated, we have no way of assessing what physiognomic cues were used to derive such assessments, or whether affect expression played a role. Additionally, though we concluded positive peer regard was unrelated to physical attractiveness, we did not ask the children to rate their peers on physical attractiveness. Finally, there are limitations to

drawing ratings of aggression, for example, solely from teachers since they, like most observers, are vulnerable to the influence of stereotypes (e.g., the expectation that girls will engage in relational aggression), though women tend to be more accurate than men (Ostrov, Crick, & Keating, 2005), and all of our teachers save one were women.

Implications for intervention

Traditional variable-centered views on childhood aggression suggest that aggressive children are maladjusted and accordingly in need of intervention. However, in light of the current findings and previous work from the perspective of resource control theory, the general classification of children as aggressive has been shown to take different forms when considered in tandem with prosocial resource control strategies. These findings not only demonstrate the utility of buttressing variable-centered approaches with person-centered, but they also have implications for the types of children likely to be targeted for intervention.

Some of the characteristics of coercive controllers are precisely those that bring aggressive children to the attention of school personnel. Coercive controllers, unlike bistrategic controllers, have poor social skills and low peer acceptance, both common deficits among children referred for interventions (Burke, Loeber, & Birmaher, 2002). Teachers furthermore rated these children as the least physically attractive, probably resulting from dealing with these deficits on a daily basis. Traditional interventions aimed at emotional regulation, perspective-taking and problem-solving skills, and behavioral alternatives to aggression would help integrate these children into the group (e.g., Lochman, Barry, & Pardini, 2003; Lochman, Whidby, & Fitzgerald, 2000).

The implications for bistrategic controllers are less clear since they appear to be well-received by both peers and teachers (as evidenced by physical attractiveness ratings) despite their aggression. Teachers have been found to respond differentially to children's positive behavior depending on the level of aggression they display (McComas, Johnson, & Symons, 2005), and are differentially responsive to aggressive acts depending on the "goodness" or "badness" of the child and his or her level of popularity (Nesdale & Pickering, 2006). If teachers respond differentially to children based on characteristics beyond the acts of aggression, then there may be implications for maintaining negative behavior (McComas et al., 2005); namely, the aggressive bistrategic may be socially reinforced, even by the teachers themselves.

Though this latter point may be disquieting to teachers and school personnel, they may find the fact that their attractiveness ratings appear to be largely about behavior reassuring. Of all the characteristics we asked teachers to rate, they were most reluctant to rate physical appearance, presumably because they resisted labeling a child on a dimension 'known' to influence outcomes. There is some comfort to be found in the fact that beauty is at least partially found in the way one acts rather than solely in the way one looks.

Though not the primary topic of the present paper, we are additionally concerned with the potential maladjustment of children who fall in the non-controller group. Given that they are very low power and status, it would not be surprising if non-controllers suffer from loneliness, social anxiety, or other internalizing symptoms. Similar to other types of

children prone to internalizing difficulties (e.g., non-aggressive victims of aggression; Dill, Vernberg, Fonagy, Twemlow, & Gamm, 2004; Hawker & Boulton, 2000), it seems that the potential suffering of non-controllers may go unnoticed because of the known difficulties of accurately detecting internalizing problems among children (Achenbach, McConaughy, & Howell, 1987). Nonetheless, the current results suggest that these children should be identified and may benefit from therapeutic interventions aiming to build self-efficacy and assertiveness skills.

Conclusions

This study, though not definitive, suggests that it is not necessarily beauty that wins power unidirectionally, but also it is the wielding of power (i.e., via effective resource control) together with prosociality (in a unique combination) that is socially appealing and therefore deemed as physically attractive. In many ways, bistrategic controllers (and prosocial controllers) have qualities of good leaders in that they are extraverted, confident, and socially central (e.g., Stogdill, 1974). The highly socially dominant and socially prominent bistrategic preschoolers, though as aggressive as coercive controller, already win positive peer regard. The evident skills and social savvy of these children challenge us to readdress the theoretical models (and concomitant methods) on which we rely for intervention purposes and fostering well-being in children.

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Appendix A. Factor patterns representing Social Prominence and Positive Peer Regard

Variable	Comm. Est.	Factor I Social Prominence	Factor II Positive Peer Regard
T_Peer Leader	0.44	0.62	−0.11
T_Peers' View Leader	0.52	0.76	−0.13
T_Liked Most/Popular	0.61	0.76	0.05
C_Like Most	0.46	−0.01	0.68
C_Popular	0.22	0.02	0.46
C_ Like Least (rvsd)	0.27	−0.02	0.52

Inter-Factor Correlations

	Factor I	Factor II
Factor I	1	00
Factor II	0.36	1.00

Note: "T_" denotes teacher rating. "C_" denotes child sociometric rating. "Comm. Est." denotes final communality estimates. Child rating of Like Least has been reverse scored. Inter-factor correlations will differ somewhat from those in Table 1 because the latter consists of correlations among unit-weighted factor scores rather than full factors.

Appendix B. Factor patterns representing Aggressive Self Expression (Aggression and Assertion) and Positive Social Skills

Variable	Comm. Est.	Factor I Aggression	Factor II Assertion	Factor III Positive Skills
Quarrels with others	0.61	**0.88**	−0.11	0.11
Bullies others	0.46	**0.69**	−0.02	0.02
Aggression	0.72	**0.59**	.31	−.11
Emotion manipulation, neg	0.36	**0.58**	−0.06	0.11
Extraversion	0.84	−0.06	**0.94**	−0.07
Neuroticism (rvsd)	0.78	−0.03	**0.88**	−0.21
Surgency	0.59	0.10	**0.70**	0.14
Openness to experience	0.56	0.10	**0.62**	0.35
Emotion manipulation, pos	0.57	−0.08	0.40	**0.64**
Hyperactivity (rvsd)	0.53	0.18	−0.39	**0.72**
Agreeableness	0.66	−0.52	0.02	**0.49**
Conscientiousness	0.74	0.09	−0.18	**0.88**
Attention to social cues	0.58	−0.10	0.19	**0.71**

Inter-factor correlations

	Factor I	Factor II	Factor III
Factor I	1	0.00	
Factor II	0.58	1	0.00
Factor III	−0.32	−0.01	1.00

Note: “Comm. Est.” denotes final communality estimates. Neuroticism and Hyperactivity have been reverse scored. Inter-factor correlations will differ somewhat from those in Table 1 because the latter consists of correlations among unit-weighted factor scores rather than full factors.

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