COMPETING FOR HEGEMONY DURING ADOLESCENCE:
A LINK BETWEEN AGGRESSION AND SOCIAL STATUS

by

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Abstract

Peer relations researchers have documented extensively the link between aggression and social status, with aggressive children being more rejected by peers. This finding is so pervasive that few question it, despite evidence that no more than 50% of aggressive children are rejected and some aggressive children are sociometrically accepted, socially powerful, and/or perceived as popular. Such inconsistencies raise questions regarding what differentiates aggressive individuals who vary in status. Using more qualitative methods of inquiry, ethnographic studies by anthropologists and sociologists have begun to shed light on this question, demonstrating that students consider other, non-behavioral characteristics when evaluating peers and afford them status. The purpose of the present study was to empirically evaluate in quantitative analyses the relations among social status, aggression and peer-valued characteristics (PVC; e.g., attractiveness, athletic ability, stylish clothes). The central hypotheses were that higher social status would be associated with possession of PVCs, and that the relation between status and aggression would be moderated by the presence/absence of such characteristics. Accordingly, 585 students (287 females) in grades six- to ten completed a peer assessment tool designed to measure three types of social status (peer perceived popularity, power and social preference), two types of aggression (physical, relational), and various PVCs.

Findings revealed that perceived popularity and power were strongly linked and both, in turn, were modestly associated with social preference, the traditional, sociometric index of status. In addition, both perceived popularity and power were positively associated with controversial nomination status, as well as to physical and relational aggression. Moreover, all three indices of status were significantly correlated with the possession of PVCs. In other words, students who were perceived as powerful and as popular were also perceived as attractive, athletic, stylish, etc. Results of regression analyses supported the hypothesis that PVCs moderate the relation between social status and aggression, although the pattern of relations observed differed for boys and girls. Specifically, for boys, the positive relation between aggression and perceived power and popularity increased as the level of peer-valued characteristics increased while the negative relation between aggression and social preference
decreased as the level of peer-valued characteristics increased. The process for girls was different in that PVCs did not moderate the relationship between relational aggression and perceived popularity and social preference. Taken together, these findings suggest that researchers must look beyond behavior to understand the factors contributing to status. Expressly, the assumption that peers reject most adolescents who engage in aggressive behaviors must be reassessed in light of the present findings. That is, those adolescents who engage in aggressive behavior who also possess (non-behavioral) characteristics that are valued within the peer group are likely to enjoy a high degree of status and power. Finally, the implications of these findings for intervention must be considered, as aggressive behavior may be difficult to eliminate if it is viewed as a source or privilege of high status.
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Introduction

"It wasn't as if Will had been a nerdy kid with the wrong trainers; on the contrary, he had worn the right trousers and the right shirts, and he had gone to the right hairdresser for the right haircut. That was the point of fashion, as far as Will was concerned; it meant that you were with the cool and the powerful, and against the alienated and the weak, just where Will wanted to be, and he'd successfully avoided being bullied by bullying furiously and enthusiastically" (Nick Hornby, 1998; About a Boy).

On February 2nd, 1996 in Moses Lake Washington, 14-year-old Barry Loukaitis killed one teacher and two students and wounded one other student. Supposedly, the motive for these violent attacks was revenge (Cloud, 1999). Apparently, Barry had been teased often by the popular "jocks" and this disenfranchised student had had enough. On April 20th, 1999 in Littleton, Colorado, 17 year-old Dylan Klebold and 18 year-old Eric Harris murdered 12 of their classmates, one teacher, and wounded 23 other students before taking their own lives. Apparently, the motive for this horrific slaughter was also revenge. Like Barry, Dylan and Eric had been continuously harassed and teased by the popular "jocks" who were described by one of their Columbine High School peers as "the social elite" (Gibbs, 1999).

Not to downplay the seriousness of these senseless murders, but what is interesting about these two terrible incidents is the idea that popular adolescents (i.e., the "jocks") had engaged in behavior that is typically associated with rejected individuals (e.g., Bierman & Wargo, 1995; Dodge, Coie, Pettit, & Price, 1990; Little & Garber, 1995; Panak & Garber, 1992; see Coie & Dodge, 1998 for a review). That is, in the literature on children's peer relations, popular children and adolescents are ordinarily described...
as prosocial and not as aggressive (e.g., Coie, Dodge, & Copotelli, 1982; Dodge, Coie & Brakke, 1982; Newcomb & Bukowski, 1983; see also Rubin, Bukowski & Parker, 1998 for a review). Nevertheless, it seems from the accounts mentioned above that some adolescents may hold a different opinion about the nature of high status peers. The popular "jocks" who supposedly victimized Barry, Dylan and Eric seem to have been engaging in behavior that is cruel, if not openly aggressive. Perhaps the reason for this apparent dichotomy in perspectives is that social scientists and adolescents are in fact talking about different social phenomena. As will be demonstrated in the review of literature that follows, social scientists, in describing popular children and adolescents, are talking about individuals who are highly liked by their peers, while adolescents are describing individuals who are highly visible and influential, but not necessarily well liked.

Inasmuch as there may indeed be a difference between being liked and being visible and influential, it is perhaps time to take a closer look at popular adolescents and, in doing so, call attention to the following questions: (1) Is aggressive behavior always associated with peer rejection, or can aggressive adolescents be popular? (2) If this combination of aggression and popularity does exist, what makes some aggressive students popular and others rejected within the peer group? That is, what factors moderate (or perhaps mediate) the relationship between aggression and social status or popularity? (3) What does being popular really mean? Does being popular mean that an individual is highly liked, or does being popular mean that an individual is highly visible and influential and not necessarily liked?
The purpose of the present study was to explore these questions and to provide support for a theory regarding the relationship between aggression and popularity. In accomplishing this objective, this thesis is organized in the following way: First, the literature on peer relations concerning definitions of peer rejection and popularity (i.e., peer liking) is considered. Second, the association between peer acceptance/rejection and aggression is documented in order to evaluate the possibility that the common conclusion drawn (i.e., that most aggressive children and adolescents are rejected by their peers) is not as accurate as previously thought. Third, in light of the empirical work reviewed, the link between popularity and aggression is explored with specific attention paid to the question of “What is popularity?” Fourth, a theoretical model regarding the relations between aggression and popularity is developed. Fifth, the present study’s methodology is described and the results presented. Finally, a discussion of the study’s findings is offered.

**Conceptualizing and Measuring Peer Social Status**

Status within the school peer group has been conceptualized and operationalized in a number of different ways across studies and literature. Much of the literature on peer relations in childhood and adolescence has relied on sociometric measures of interpersonal attraction to assess one’s status within a specified group. Within the sociometric tradition, peer rejection is conceptualized as the experience of being disliked by member of one’s peer reference group, whereas peer acceptance, sometimes referred to as popularity, is the experience of being well liked by one’s peers. Both peer rejection and acceptance are overall constructs that represent the perspective of the group in comparison with the individual (Bukowski & Hoza, 1989).
In terms of measuring or operationalizing peer rejection and acceptance, several approaches have been developed (see Bukowski, Hoza, & Newcomb, 1994; Hymel & Rubin, 1985; Hymel, Vaillancourt, McDougall, & Renshaw, in press; Inderbizen, 1994; Landau & Milich, 1990; Newcomb, Bukowski, & Pattee, 1993; Rubin et al., 1998; Terry & Coie, 1991, for reviews). Most commonly, rejection and acceptance or popularity have been assessed on the basis of peer nominations or ratings. With the peer nomination approach, individuals are asked to identify people within the group with respect to some positive and/or negative criteria such as liking and disliking (e.g., name three classmates you like most; name three classmates you like least).

Traditionally, positive and negative nominations are summed to compute two distinct indices of social status: acceptance (sum of positive nominations) and rejection (sum of negative nominations). Individuals who received few or no positive and many negative nominations are viewed as rejected by peers, whereas those who received many positive and few (if any) negative nominations are viewed by peers as accepted or popular (see Hymel et al., in press for a review). More recently, the combination of liked most (LM) and liked least (LL) scores have been used to compute indexes of social preference (LM minus LL) and social impact (LM plus LL) which, in turn, are used to create five distinct status groups: popular, rejected, neglected, controversial and average children and/or adolescent groups (see Asher & Dodge, 1986; Bukowski & Newcomb, 1984; Coie & Dodge, 1983; Coie et al., 1982).

With the peer rating technique (see Asher & Dodge, 1986; Asher, Singleton, Tinsley & Hymel 1979; see also Hymel et al., in press for a review), a single index of acceptance/rejection or popularity is created by asking individuals to rate each member
of their peer group in terms of how much they like them or want to be with them. The individual ratings received from peers are averaged, sometimes from all peers and sometimes from just same-sex and/or cross-sex peers, to provide a single sociometric composite. Higher average ratings reflect greater peer liking, acceptance or popularity, and lower average scores reflect greater peer disliking or rejection.

Despite sophistication in the way rejection and acceptance/popularity are measured, sociometric techniques only provide information regarding whether the individual is liked (i.e., accepted or popular) or disliked (i.e., rejected). Information regarding why the peer group holds these views is not available. In consideration of this limitation, social scientists have looked to behavioral data in order to broaden their understanding of rejection and acceptance/popularity (Asher & Hymel, 1981; Bower, 1969; Masten, Morison, & Pellegrini, 1985). Examining links between sociometric indices of attraction or liking and peer assessments of behavior has become common in the peer literature. This amalgamation of methodological techniques has afforded researchers, clinicians, and educators the ability to better differentiate popular and rejected children (see Newcomb, Bukowski, & Pattee, 1993; Rubin et al., 1998 for reviews). Indeed, examination of the links between sociometric measures and peer behavioral assessments has also led to growing distinctions among rejected students. Specifically, two distinct developmental pathways to rejection have been identified: aggression and social-withdrawal (see Rubin et al., 1998 for a review). Although children who are socially withdrawn are at risk for peer rejection, the strongest correlate of peer rejection within the peer relations' literature is aggression (e.g., see McDougall, Hymel, Vaillancourt, & Mercer, 2000; Parker & Asher, 1987; Rubin et al, 1998 for...
reviews). This association is so ubiquitous that it is seldom questioned. However, a closer examination of the available data suggests that the link between aggression and rejection may not be as strong as often assumed, an idea that is explored in the following section.

Peer Social Status and Aggression

One of the most common findings in the peer sociometric literature is the relation between aggression and rejection (e.g., Bukowski & Newcomb, 1984; Coie, Dodge, & Kupersmidt, 1990; Coie et al., 1982; Coie & Kupersmidt, 1983; Dodge, 1983; Hymel, Rubin, Rowden, & LeMare, 1990; Kupersmidt & Coie 1990; Little & Garber, 1995; Newcomb et al., 1993; Parker & Asher, 1987; Sandstrom & Coie, 1999; Vitaro, Tremblay & Boivin, 1992; see also Coie & Dodge, 1998 for a review). The link between aggression and rejection is so well established that few question the association, despite the fact that data actually show that no more than 50% of aggressive children and adolescents are rejected by their peer group (see Coie & Dodge, 1998 for review; Cillessen, Van Ijzendoorn, van Lieshout, & Hartup, 1992; Coie & Koepple, 1990; French, 1990; Kupersmidt & Coie; 1990), and only about 40 to 50% of rejected children and adolescents are aggressive (e.g., Bierman, 1986; Bierman, Smott & Aumiller, 1993; French, 1988).

While peer rejection is characterized as the experience of being disliked by many, if not most, of the members of one’s peer reference group, friendship is antithetically defined as a specific, dyadic relationship that represents a particular kind of experience that occurs between two people (Bukowski & Hoza, 1989). The distinction between peer acceptance/rejection or popularity and friendship at a dyadic
level is an important one, especially in understanding the link between popularity and aggression. Cairns, Cairns, Neckerman, Gest, and Gariepy (1988) demonstrated that aggressive children may be “disliked by some classmates for legitimate reasons (bullying, ridiculing, or victimizing). But dislike by certain peers is not equivalent to social rejection or isolation from the entire social structure” (p. 822). Indeed, several researchers have begun to take note of the fact that aggressive children and adolescents do have friends although they are also rejected or unpopular at the group level (Boivin & Vitaro, 1995; Bukowski & Hoza, 1989; Cairns et al., 1988; Parker & Asher, 1993; Rys & Bear, 1997; Vandell & Hembree, 1994). For instance, Vandell and Hembree (1994) found that 45% of rejected children had at least one mutual friend and Parker and Asher (1989) reported that 54% of rejected children had a reciprocated best-friend. What’s more, several researchers have found that that highly aggressive children and adolescents enjoy a network of friends (i.e., children they hang around with a lot) and that these aggressive peers were usually solid members of their social clique (Bagwell, Coie, Terry, & Lochman, 2000; Cairns et al., 1988; Farmer & Farmer, 1996; Farmer & Hollowell, 1994; Farmer & Rodkin, 1996; Hongling, Cairns, & Cairns, 1999). Thus, although aggressive children and adolescents are generally disliked, rejected or unpopular within the larger social group, many do enjoy dyadic relationships and some even enjoy a broader network of interpersonal relationships. Further, it has been recognized that, despite the consistently documented relation between peer rejection and aggressive behavior, some aggressive children and adolescents are not rejected at the group level, but actually enjoy fairly high social status within the group. For example, Dodge et al. (1990) found that sociometrically popular first grade boys
engaged in more bullying than average and rejected status boys. In a study of third to fifth grade students, Hess and Atkins (1998) found that 39% of male bullies and 27% of female bullies were not socially rejected, but rather were highly popular and were seen as leaders by their peers. In a study of ninth grade inner-city adolescents, Luthar and McMahon (1996) describe a group of students with a reputation for being both aggressive and popular. Also, in a study of ninth-grade Finnish students, Salmivalli, Kaukiainen, and Lagerspetz (2000) found that indirect aggression (i.e., “socially manipulative aggression”) contributed to elevated peer acceptance, particularly among boys (p. 41). There is also evidence that indicates that children who defend themselves in an aggressive manner tend to be well liked by their peers (Lancelotta & Vaughn, 1989; Olweus, 1977; Savin-Williams, 1980). These data certainly suggest a more complex picture of the relation between aggression and peer acceptance/rejection. Of interest to the present study was why some, perhaps many, aggressive adolescents are rejected or unpopular among their peers whereas other aggressive adolescents actually enjoy a rather high degree of status, popularity or acceptance within the peer group.

Coie and Dodge (1998) suggest two reasons why all aggressive children and adolescents are not rejected by their peers. First, “social context plays a significant role in factors leading to peer rejection” (p. 829), meaning that there are different norms associated with different social milieus. For instance, in certain subcultures, aggression is valued. One of the most obvious examples of this phenomenon is the case for gender-differentiated subcultures, with physical aggression being more characteristic of male than female individuals across the life span (see Hyde, 1984, for a meta-analysis). Although physical aggression is generally more likely in boys and men, there are some
female sub-groups that serve as counter examples to this general tendency. Specifically, Sibylle Artz's (1998) ethnographic study chronicles the lives of six adolescent females who not only valued physical aggression, but also encouraged it (see also Cook, 1992). Artz's findings are interesting in that there is a general societal expectation of not engaging in physical aggression, especially when enacted by girls and women (Guerra, Huesmann, & Hanish, 1995). In fact, according to Lagerspeertz, Bjorkqvist, and Peltonen (1988), it is precisely because of these social sanctions placed against the use of physical aggression, mainly for girls and women that gender differences have emerged regarding the type of aggression used.

Perhaps in response to societal expectations not to be physically aggressive, girls have adopted a more indirect way of aggressing, such as the use of relational aggression. Relational aggression is defined by Crick (1995) as harming others through purposeful manipulation and damage of their peer relationships by spreading invidious remarks in order to get even with someone, telling others to stop liking someone, trying to control or dominate a person through social exclusion as a form of retaliation, threatening to withdraw friendship in order to get one's way, or giving someone the silent treatment. Researchers in both the United States and Scandinavia have found relational aggression to be more common among girls than boys (Bjorkqvist, Lagerspetz, & Kaukiainen, 1992; Crick, 1995; Crick, Casa, & Mosher, 1997; Crick & Grotpeter, 1995; Galen & Underwood, 1997; Lagerspetz & Bjorkqvist, 1994; Lagerspetz et al., 1988; Mc-Neilly-Choque, Hart, Robinson, Nelson, & Olsen, 1996; Osterman, Bjorkqvist, Lagerspetz, Kaukiainen, Laudau, Fraczek, & Caprara, 1998; Rys & Bear, 1997).
Crick and Grotpeter (1995) also suggest that "others", specifically peers, influence the emergence of relational aggression in girls and physical aggression in boys, albeit in a slightly different manner than that suggested by Lagerspetz et al. (1988). These authors submit that children and adolescents aggress in ways that are most salient to their respective gender peer groups. That is, children and adolescents aggress in ways that are most valued or accepted by their peers. For boys, dominance and submission are important themes in their social lives, whereas for girls, inclusion and exclusion are important (see Block, 1983 for review; Gilligan, 1988). Thus, boys use physical aggression, while girls rely on relational aggression to harm their peers. It would appear that aggression is a social construct that is highly influenced by cultural standards and normative beliefs (see Crabb & Rosnow, 1988; Huesmann & Guerra, 1997; Huesmann et al., 1992).

The second reason suggested by Coie and Dodge (1998) regarding why all aggressive children and adolescents are not rejected has to do with the considerable variation in other aspects of social behavior that "either set the context for aggressive acts or compensates for them" (p. 829). Said differently, there is considerable heterogeneity in the ways aggressive children and adolescents behave, as well as considerable variation in the ways rejected children and adolescents behave. That is to say, aggressive and rejected children and adolescents do not share the exact same repertoire of behaviors, and it is this variance in behavior that may set rejected aggressive individuals apart from non-rejected aggressive individuals.

Results of a few studies to date support these arguments. For example, Bierman et al. (1993) investigated the social and aggressive behaviors of boys in
grades one to six and found that boys who were both aggressive and rejected were described by peers as more argumentative than non-rejected aggressive boys. Although both groups of boys were aggressive, what differentiated the two groups (i.e., rejected versus non-rejected) was their level of argumentativeness. Rejected and non-rejected aggressive boys have also been found to differ in terms of their effectiveness in peer conflict situations (Perry, Kusel, & Perry, 1988; Perry, Perry, & Kennedy, 1992). In these studies, effective aggressors were those who were able to get what they wanted from their social interactions and these individuals tended not to be rejected. In contrast, the ineffective aggressors in these studies tended to emerge from conflict situations as losers, and also were more likely to be rejected. One purpose of the present study was to identify those characteristics, in addition to argumentativeness and effectiveness in conflict, which distinguish between aggressive-rejected and aggressive non-rejected children and adolescents.

In considering the link between aggression and peer status, it is also important to differentiate between various types of aggression. In other words, it may be that not all forms of aggressive behavior are related to peer rejection. For example, Price and Dodge (1989) investigated the relation between two types of aggressive behavior—reactive and proactive aggression—among 70 boys, aged five to six. Reactive aggression was conceptualized as a defensive reaction to a perceived threat that occurs with some visible form of anger (i.e., name calling). Proactive aggression, was defined as an “unprovoked aversive means of influencing or coercing another person and is more goal directed than reactive aggression” (Price & Dodge, 1989, p. 456). In making this distinction between proactive and reactive aggression (see Dodge, 1991;
Dodge & Coie, 1987 for reviews), Price and Dodge found that reactive aggression was associated with peer rejection, whereas proactive aggression was associated with elevated peer status and leadership (see also Pellegrini, Bartini, & Brooks, 1999).

Lancelotta and Vaughn (1989) also found differences in the level of rejection as a function of the type of aggression employed. Specifically, in a study of 90 third-grade students, aggression was subdivided into five distinct categories: provoked physical aggression, outburst aggression, unprovoked physical aggression, verbal aggression, and indirect aggression. These authors found that indirect aggression (i.e., “tattling”, “stealing” or “breaking others’ property”) correlated most negatively with peer acceptance ($r = -.59$) while provoked physical aggression correlated least negatively with peer acceptance ($r = -.31$).

In looking more closely at sub-types of aggression, researchers have recently identified yet another form of aggression that has a unique association with rejection. Particularly, relational aggression has been linked not only to peer rejection (Crick & Grotpeter, 1995; Tomada & Schneider, 1997), but also to the sociometric status category termed controversial (Crick & Grotpeter, 1995; Tomada & Schneider, 1997). Controversial status individuals are both liked and disliked within the peer group. Further, these individuals have high impact sociometric scores, meaning that they are highly noticed by their peers (Cairns et al., 1988; Coie et al., 1982). Interestingly, findings from Crick and Grotpeter’s and Tomada and Schneider’s studies indicated that controversial children were more aggressive (both relationally and overtly) than the rejected children, a finding also reported by Cairns et al. (1988), Coie & Dodge (1988),
Coie et al. (1982) and Roberts and Newcomb (1999), although in these studies, relational aggression was not examined.

In addition to being highly aggressive, controversial children and adolescents have been also described as highly sociable (Coie & Dodge, 1988; Coie et al., 1982; Newcomb et al., 1993). For instance, in a study of high school students, Franzoi, Davis, and Vasquez-Suson (1994) found that controversial status adolescents (and popular adolescents) had more close friends, were more socially active and self-disclosed more information than rejected and neglected sociometric status adolescents. Controversial adolescents also experienced more conflict (e.g., name calling) in their friendships. Thus, controversial children and adolescents appear to be somewhat of a paradox in that their behavior is both anti-social and prosocial.

Unfortunately, few studies have investigated the connection between aggression and controversial nomination status (see Rubin et al., 1998 for review), owing primarily to the relatively small number of controversial children that can be identified without large initial samples. Moreover, as previously mentioned, the trend in the peer literature continues to be the investigation of aggression in association with peer rejection. This tendency continues in spite of the fact that (a) the most aggressive children and adolescents tend to fall within the sociometric category termed controversial (Cairns et al., 1988; Coie & Dodge, 1988; Coie et al., 1982; Crick & Grotpeter, 1995; Roberts & Newcomb, 1999; Tomada & Schneider, 1997), (b) no more than half of aggressive children and adolescents are rejected by peers (see Coie & Dodge, 1998 for review; Cillessen et al., 1992; Coie & Koepple, 1990; French, 1990; Kupersmidt & Coie; 1990), and (c) in some cases aggressive children and adolescents are popular (i.e., liked by
their peers; Dodge et al. 1990, Hess & Atkins, 1998; Luthar McMahon, 1996; Salmivalli et al., 2000).

One of the goals of the present study was to directly examine the link between aggression, both overt/physical aggression and relational aggression, and one's sociometric status within the school peer group, with particular interest in considering links to both rejected and controversial sociometric status. It was hypothesized that the relation between aggression and rejection may not be as strong as previously shown (e.g., see Coie & Dodge, 1998; Rubin et al. 1998, for reviews), and that links between aggression and controversial status may be more extensive than previously assumed. In understanding the association between aggression and one's social standing, it becomes important also to consider connections between aggression and one's peer acceptance or popularity as well as one's peer rejection or controversial status. In doing so, however, it is crucial to critically evaluate just how “popularity” is defined and operationalized, as discussed in the next section.

Peer Social Status and Popularity within the Peer Group

Within the sociometric literature, popularity has typically been defined in terms of social preference (relative degree of liking over disliking within the group), or peer acceptance (liking). Said differently, the popular children and adolescents cited in all the aforementioned studies have been generally liked by their peers, according to sociometric indices of acceptance. However, Parkhurst and Hopmeyer (1998) have recently questioned this traditional definition of popularity. These authors differentiated between sociometric popularity (i.e., being liked or accepted by peers) and peer perceived popularity (i.e., students who were viewed by peers as most influential and
visible within their peer context). Parkhurst and Hopmeyer asked 727 seventh and eighth grade students to indicate on a questionnaire the three students they liked best and liked least (sociometric popularity or acceptance vs. rejection) as well as “those students who are popular at school” (peer perceived popularity). The results indicated that 11% of sociometrically rejected adolescents and 48% of controversial adolescents actually scored high on their index of peer perceived popularity. That is, some rejected classmates and nearly half of the controversial status classmates were actually seen as “popular” within the peer group. Furthermore, 36% of sociometrically popular adolescents and 14% of sociometrically average adolescents were high on peer perceived popularity, while only 2% of the sociometrically neglected adolescents were high peer perceived popularity. Thus, sociometrically-defined “popularity”, operationalized in terms of sociometric acceptance/rejection, is not synonymous with student perceptions of “popularity” or status (LaFontana & Cillessen, 1998, 1999, 2000; Rodkin, Farmer, Pearl, & VanAcker, 2000). Research on peer group dynamics must begin to consider this distinction in hopes of understanding how individuals achieve and maintain status within their peer group. Such a distinction was investigated directly in the present study.

Parkhurst and Hopmeyer (1998) also examined links between “popularity” and several different behaviors and characteristics. Specifically, they obtained peer assessments of who is: “easy to push around”, “kind and someone you can trust”, “starts fights”, “stuck-up”, and “can’t take teasing”. They found that students high on peer perceived popularity and low on sociometric popularity were characterized as dominant, aggressive, stuck-up and neither kind nor trustworthy. The opposite pattern
was found for adolescents who were sociometrically popular but not high on peer perceived popularity; these students were described by their peers as kind and trustworthy and not as dominant, aggressive, or stuck-up. Finally, students high on both sociometric popularity and peer perceived popularity were characterized as kind, trustworthy and dominant but not as aggressive or stuck-up. Juvonen, Nishina, Chang, and Ross (1999) reported similar findings in a study of 418 sixth and seventh grade students. In this study, bullies, defined as those students who were often nominated for the items, “Who starts fights or pushes other kids around?” and “Who puts other kids down?”, were rated by peers as sociometrically rejected or disliked, but were perceived to be popular within the group (i.e., peer perceived popular). Lastly, in a study by Rodkin et al. (2000), the heterogeneity of popular boys (popularity defined in term of both peer liking and peer perceived popularity) was investigated in a sample of 452 fourth to sixth grade boys. These authors found that there were two types of popular boys: the Model boys and Tough boys. The Model popular boys were characterized in a similar way to children who are sociometrically popular. That is, these boys were described as cooperative, studious leaders, who were also cool and athletic. The profile for Tough popular boys differed from the traditional sociometric definition of popular but was again consistent with the descriptors used to describe students who are perceived by their peers to be popular (Juvonen, et al., 1999; Parkhurst & Hopmeyer, 1998). Precisely, these boys were described as aggressive, disruptive trouble-makers, who were also cool and athletic.

What is most striking about Parkhurst and Hopmeyer’s (1998) and Juvonen et al.’s (1999) findings is the fact that the students high on peer perceived popularity and
low on sociometric popularity appear similar to the popular athletes described at the onset of this paper. Namely, both groups of adolescents are described in a somewhat contradictory manner: they are aggressive but nevertheless perceived as being popular (i.e., peer perceived status). Importantly, this characterization is also quite similar to the way controversial children and adolescents have been described in the literature (e.g., Coie & Dodge, 1988; Coie et al., 1982; Newcomb et al., 1993). Recall that controversial children and adolescents are both liked and disliked by their peers, highly visible (social impact) and aggressive.

The idea that sociometric popularity and peer perceived popularity are distinct social phenomena is further supported by recent studies within the sociological and anthropological literature. Specifically, several ethnographic studies have been conducted chronicling the lives of “popular” children and adolescents, with popular children and adolescents defined in these studies as those who were most influential in setting group opinions, values, attitudes, and membership (Adler, Kless, & Adler, 1992; see also Adler & Adler, 1995, 1998; Eder, 1985; Eder & Kinney, 1995; Kinney, 1993; Merten, 1997). These “popular” and influential individuals were not necessarily liked, and were often described by peers in seemingly contradictory ways (much like controversial individuals); they were both “popular” and “mean”. For example, Merten (1997) recorded a detailed account of the “dirty dozen” which comprised of a group of early adolescent females who “used meanness instrumentally to gain a competitive advantage in pursuit or protection of popularity” (p.175). These girls’ mean behavior was consistent with those behaviors used to describe relationally aggressive children and adolescents. Expressly, these girls spread rumors and excluded peers from their
group in pursuit of achieving or maintaining hegemony within their peer context. Despite their high level of aggressiveness, these girls were perceived by peers to be highly popular and maintained considerable status and influence within the group despite their negative behaviors. Eder (1985) and Adler and colleagues (1992, 1995, 1998) also described a group of popular (i.e., highly visible and influential) early adolescents who were aggressive, both overtly and relationally. These students reeked havoc on their peers by abusing them physically, emotionally and socially. Despite their cruelty, these individuals were also viewed as “popular”, albeit as a general rule, they were also disliked (i.e., rejected) by their peer group.

These sociological and anthropological studies define popularity differently and depict popular children and adolescents in a dissimilar manner than do the sociometric studies reviewed previously and suggest a somewhat different type of association between social status or popularity and aggressive behavior. Indeed, in the peer relations/sociometric literature, where popularity is defined in terms of peer acceptance/rejection (liking/disliking), the aggressive individual is typically described as rejected, a person devoid of power, influence, and friends, whereas sociometrically defined “popular” individuals have been described as helpful, considerate, prosocial, respectful, etc. (e.g., Bukowski & Hoza, 1989; Coie & Kupersmidt, 1983; Coie, et al, 1990; Dodge, 1983; Rubin et al., 1998), and not as mean or cruel. In contrast, in the sociological/anthropological literature, popularity is defined in terms of social power or dominance, or in terms of who is most influential in setting group opinions, values, attitudes, and group membership (Adler, et al., 1992; see also Adler & Adler, 1995; Eder, 1985; Eder & Kinney, 1995; Kinney, 1993; Merten, 1997). Thus, there appears to
be a difference between sociometric studies and anthropological/sociological studies in terms of how popularity is defined and in terms of how popularity relates to aggression.

Across literatures, it becomes evident that the terms popularity, peer perceived popularity, and social dominance have been used interchangeably, although each actually refers to a somewhat discrete construct (Dong, Weisfeld, Boardway, & Shen, 1996; see also Adler & Adler, 1995, 1998; Adler, et al., 1992; Eder, 1985; Eder & Kinney, 1995; Kinney, 1993; Merten, 1997; Parkhurst & Hopmeyer, 1998; Rodkin et al., 2000), with their distinctiveness especially evident in their behavioral correlates, particularly aggression. Again, sociological and anthropological studies suggest a positive relation between popularity and aggressive behavior, although popularity, in these studies, reflects social dominance, power and perceived influence (e.g., Adler & Adler, 1998; Merten, 1997). Conversely, sociometric studies suggest a negative relation between popularity and aggressive behavior with popularity in these studies reflecting peer liking and prosocial behavior (e.g., see Rubin et al., 1998 for review). Finally, studies that have assessed popularity in terms of peers' perceptions of this construct (i.e., "Who is popular?") have suggested that aggression is a positive correlate of status (e.g., Juvonen et al., 1999; LaFontana & Cillessen, 2000; Parkhurst & Hopmeyer, 1998; Rodkin et al., 2000).

From the present review, popularity may indeed represent three distinct yet related social constructs. Within the sociometric literature, popularity refers to peer liking (i.e., "Who do you like most in your class?"), or peer perceived popularity (i.e., "Who is popular?"), which appears to be related to dominance/power (although the few studies that have studied peer perceived popularity have only really established that it is
associated with aggression; e.g., Juvonen et al., 1999; Parkhurst & Hopmeyer, 1998; Rodkin et al., 2000). Within the anthropological and sociological literature, popularity refers to social dominance. Interestingly, in the dominance literature, it appears that social dominance is the same social construct as that described in the anthropological and sociological studies. For instance, in this literature, social dominance refers to the "manipulation and control of other's behavior" (Pickert & Wall, 1981, p. 75; see also Maccoby & Jacklin, 1974). That is, dominant individuals are highly influential. Moreover, dominant children and adolescents are also highly visible within the peer context (Chance, 1967; Charlesworth & LaFreniere, 1983; Savin-Williams, 1980; Vaughn & Walters, 1981). The apparent commonality between social dominance and popularity as described in the anthropological and sociological literature will be taken up shortly in greater detail.

The current study constituted an initial attempt to empirically evaluate all three of these "popularity" constructs and their associated behavioral and non-behavioral characteristics, with particular interest in links between status and aggressive behavior. Specifically, the present study included peer assessments of both sociometric status or acceptance/rejection, based on peer nominations for liking ("Who are the people you like most in your grade?"), and disliking ("Who are the people you like least in your grade?"), as well as peers' perceptions of popularity ("Who are the most popular people in your grade?"; based on Parkhurst & Hopmeyer, 1998), and perceptions of power (e.g., "Who seems to have a lot of power over others?", "Who is a person other kids will listen to and follow?", and "Who is a leader?"). The latter items, assessing peer perceived power, are derived from constructs described in the ethnographic and
anthropological studies reviewed previously, and have not been, to date, examined in peer assessment studies. It was hypothesized, however, that peer perceptions of power would be more strongly related to peer perceptions of popularity than to peer assessments of liking/disliking ("popularity" as defined by acceptance/rejection). Of primary interest however, was how each of these constructs relates to aggressive behavior, overt/physical and relational aggression, an interest that is addressed in the succeeding section.

Peer Social Status and Aggression Revisited

As described previously, one of the most commonly reported correlates of peer rejection is overt/physical and relational aggression (e.g., Bukowski & Newcomb, 1984; Coie, Dodge, & Kupersmidt, 1990; Coie et al., 1982; Coie & Dodge, 1998; Coie & Kupersmidt, 1983; Crick & Grotpeter, 1995; Dodge, 1983; Hymel et al., 1990; Kupersmidt & Coie 1990; Little & Garber, 1995; Newcomb et al., 1993; Parker & Asher, 1987; Sandstrom & Coie, 1999; Tomada & Schneider, 1997; Vitaro et al., 1992). Although this prevalent finding tends to conjure up an image of a person devoid of positive reciprocated relations, it is important to bear in mind that many aggressive (both physical and relational) children and adolescents are not totally disliked by their peers. Rather, some aggressive individuals are controversial (i.e., both liked and disliked; e.g., Cairns et al., 1988; Coie & Dodge, 1988; Coie et al., 1982; Crick & Grotpeter, 1995; Roberts & Newcomb, 1999; Tomada & Schneider, 1997), while others actually enjoy fairly high social status within the peer group (i.e., sociometrically popular; e.g., Dodge et al., 1990; Hess & Atkins, 1998; Luthar & McMahon, 1996; Salmivalli et al., 2000). Thus, the question that these findings raise is "What
differentiates aggressive individuals who vary in terms of peer acceptance and peer rejection?". The present study sought to answer this question by moving beyond the narrow sociometric definition of social status toward a more detailed and systematic understanding of the nature of social status. To this end, findings from other research disciplines were considered in an effort to understand the complicated nuances of social status and in doing so to realize why it is that some aggressive children and adolescents enjoy relatively high degree of social status, popularity or acceptance within the peer group, while others do not.

In the dominance literature, some clues are provided to the aforementioned question regarding the relation between aggression and social status. Within this area of research, dominance has been closely linked to aggression, although dominance is conceptually different from aggression because there is no intent to harm, and is different from leadership because "the dominating person's actions are not always accepted voluntarily by those being manipulated" (Pickert & Wall, 1981, p. 75). Nevertheless, the two constructs are intimately linked in that dominance is often achieved through aggressive means (Bernstein, 1980; Hinde, 1974; Pickert & Wall, 1981; Strayer, 1984; Tajfel, 1978; Wilson, 1975). For instance, McGrew (1972), Slucklin (1980), and Strayer and Strayer (1976, 1980) have found stable status hierarchies in preschool children that were attained through the use of aggressive strategies. In these studies, the dominant children were defined as those who were responsible for eliciting submission in others by winning physical encounters, using physical attacks, threatening gestures and object/position struggles. Clearly defined social dominance hierarchies have also been found among children (Pickert & Wall,
1981; Weisfeld, Omark, & Cronin, 1980) and adolescents (see Savin-Williams, 1979, 1980; Suttles, 1968; Thrasher, 1927; Whyte, 1943). As in the preschool population, these social hierarchies were typically achieved through both aggressive and assertive means. Interestingly, despite the fact that dominant children and adolescents relied on aggression to influence others not all of them were rejected by their peers (e.g., La Freniere & Charlesworth; 1983; Pettit, Bashi, Dodge, & Coie; 1990; Wright, Zakriski, & Fisher, 1996).

In discussing the reasons why it may be that some aggressive dominant individuals are liked while other are rejected, La Freniere and Charlesworth (1983) suggest that a distinction must be made between two broad types of social power: (1) “power that is expressed explicitly and forcefully and thereby elicits fear, submission, or compliance, and (2) power that is implicit and stems from a recognition of status or competence and thereby depends upon acceptance by subordinates” (p. 66). Regarding explicit power, it seems reasonable to assume that peers would dislike individuals engaging in this type of behavior. After all, this sort of behavior elicits fear, submission and compliance. Conversely, with implicit power, it seems reasonable to assume that these individuals would not be rejected or disliked, because this type of power depends upon the peer groups’ recognition of competency (however competency is defined by the peer group; see also Chance, 1989; Gilbert, 1992; Hawker, 1997; Hawker & Boulton in press; Wright, Gianmarino, & Parad, 1986). Indeed, one of the major hypotheses of the current study was that the “competencies” that elevate (or buffer) aggressive individuals’ peer status may actually moderate the relation between aggression and acceptance or rejection.
In looking more closely at the ethnographic studies that investigated popular or dominant children and adolescents (Adler & Adler, 1995, 1998; Adler et al., 1992; Eder, 1985; Eder & Kinney, 1995; Kinney, 1993; Merten, 1997) other characteristics besides aggressiveness and meanness have been associated with high social status. Specifically, these influential or “popular” students possessed what I term peer-valued characteristics. For example, in a study by Adler et al. (1992), fourth grade boys’ popularity (i.e., peer power) was linked to such factors as being athletic, being tough (i.e., physical prowess), being cool, and being socially sophisticated with both boys and girls, as well as to being cruel and aggressive (e.g., “Craig is sort of mean but he’s really good at sports so he is popular”; p.172). Girls in this study were popular because they were attractive, because they came from affluent families (e.g., “If your mom has a good job, you’re popular, but if your mom has a bad job you’re unpopular”; p.178), and because they, like the popular boys, were socially and interpersonally sophisticated. At the same time, these fourth grade popular girls were described as mean, bossy, exclusionary, and gossipy, characteristics that are strikingly similar to Crick’s (1995) definition of relational aggression. Other studies (e.g., Coleman, 1961; Cusick, 1973) have also found that peer-valued characteristics, such as attractiveness and athletic prowess, are linked to popularity (i.e., peer perceived power) as well as to aggression. Across several qualitative studies then, popular (dominant, influential) girls tend to be described as physically attractive cheerleaders who can be mean and relationally aggressive (Adler & Adler, 1995, 1998; Eder, 1985; Eder & Kinney, 1995; Kinney, 1993; Merten, 1997). Popular (dominant, influential) boys tend to be physically attractive
athletes (Adler et al., 1992; Eder & Kinney, 1995; Kinney, 1993) who can be both aggressive and socially skilled.

In addition to the previously reviewed ethnographic studies, at least two quantitative studies have also demonstrated a relationship between popularity (i.e., peer perceived power), aggression, and peer-valued characteristics. Specifically, Weisfeld, Bloch, and Ivers (1983, 1984) found that, among adolescents girls aged 15 to 18, "social dominance" correlated with being fashionable, attractive and well-groomed, while among adolescent boys aged 15-18, athletic ability and attractiveness were important correlates of social dominance.

Toward a Theory of Aggression and Social Status.

Despite Coie's (1990) suggestion that "social behavior is primarily responsible for rejection by peers" (p.366), it seems that researchers need to look beyond the behavior of the individual in understanding the factors contributing to status, regardless of whether status is defined in terms of sociometric acceptance/rejection, peer perceived popularity, or peer perceived power. Ethnographic studies (e.g., Adler & Adler, 1995, 1998; Adler et al., 1992; Eder, 1985; Eder & Kinney, 1995; Kinney, 1993; Merten, 1997) suggest that children and adolescents take into account other, non-behavioral characteristics when evaluating their peers and affording them status and influence within the peer group. In the present study, it was hypothesized that behavior, especially aggressive behavior, may well be a factor in determining one's acceptance or rejection within the peer group, but that other factors are also important in determining whether an individual is afforded higher levels of acceptance and status, power or dominance within the peer group.
As discussed previously, Coie and Dodge (1998) suggest two main reasons why all aggressive children or adolescents are not rejected – social context and other social behaviors. In the current study, I propose a third factor in determining one’s status within the peer group – the possession of peer-valued characteristics. Specifically, it is my contention that other, non-behavioral factors such as being attractive, or rich, or athletic, etc. (i.e., peer-valued characteristics) moderate (i.e., affects the strength and or direction of) the relation between aggression (both overt/physical and relational) and social status. That is, what differentiates children and adolescents who vary in terms of social status (either peer acceptance/rejection, or peer perceived power or peer perceived popularity) is the presence or absence of peer-valued characteristics. In the absence of peer-valued characteristics, aggressive individuals will be disliked by the peer group, will exhibit little power or influence, and will not be perceived by peers to be popular. In contrast, the presence of peer-valued characteristics in aggressive individuals will be associated with peer perceived popularity and power, and relatively greater peer acceptance. Said differently, the link between aggression and social status depends on the level of peer-valued characteristics, and as such, an individual will only be perceived as powerful, popular and be less disliked if she or he also possesses characteristics that the peer groups find appealing. This model is depicted in Figure 1.
Aggression (overt/physical and relational)

Peer-Valued Characteristics

Social Status
(Peer Perceived Power, Popularity, and Social Preference)

Aggression
X
Peer-Valued Characteristics

Figure 1. Theoretical Model.
Statement of the Problem.

Researchers in the field of peer relations have documented extensively the relation between aggression and peer rejection. This finding is so pervasive that few have questioned it, despite the fact that the data show that only about half of aggressive children and adolescents are rejected from the peer group, and that some aggressive children and adolescents are sociometrically popular, socially powerful/dominant, and/or perceived as popular. These inconsistencies raise the question of what differentiates aggressive individuals who vary in terms of social status. Recent sociometric and ethnographic studies have begun to shed light on this question. Indeed, by using different methods of scientific inquiry (i.e., interview and observational methods) not typically used in sociometric research (i.e., the use of surveys), anthropologists and sociologists have been able to highlight yet another form of social status (i.e., peer perceived power) that is related to aggression and how those who have peer power also possess other non-behavioral characteristics that the peer group deems valuable, characteristics such as being rich, attractive, stylish, etc. (e.g., Adler & Adler, 1995, 1998; Adler et al., 1992; Eder, 1995; Merten, 1997).

Given these findings, it appears that researchers need to look beyond behavior when investigating the relation between aggression and social status. Further, the ethnographic studies of peer status as well as studies of dominance in children's peer groups also suggest that researchers need to attend to the question of "What is popularity?" for it appears that a conceptual distinction exists between being liked and being perceived as popular and having power or influence within the group. An initial purpose of the present study was thus to empirically investigate (a) the relations among
these various social status constructs (acceptance/rejection, peer perceived power and popularity), and (b) the relation between both physical/overt and relational aggression and various operational definitions of social status. A primary focus, however, was to test the hypothesized model regarding the role that peer-valued characteristics play in the relationship between aggression and status. Specifically, this model posits that peer-valued characteristics moderate the relation between aggression (physical/overt and relational) and status (acceptance/rejection, power/dominance, and perceived popularity).

Purpose of the Study and Hypothesized Findings

To reiterate and summarize, the purpose of conducting the present study was threefold: (1) to explore the links between various operational definitions of social status among peers, including sociometric indices of acceptance (liking) and rejection (disliking), peer assessments of perceived popularity within the peer group, and degree of perceived power within the peer group, (2) to examine both behavioral and non-behavioral correlates of social status variously defined, with particular interest in the links between status and different forms of aggression, and (3) to evaluate whether possession of peer-valued characteristics moderates the relation between aggression and social status. Toward this end, the following hypotheses were launched on the basis of existing pieces of literature that, to date, have not been considered simultaneously.
Hypothesis #1: Peer perceptions of power will be more strongly related to peer perceptions of popularity than to peer assessments of liking/disliking (i.e., social preference).

This hypothesis was formulated based on the descriptions provided in the literature concerning peer perceived popularity, peer perceived power (i.e., dominance and influence), and peer assessments of liking/disliking. Specifically, peer perceptions of dominance, power and influence are described in a similar manner to peer perceptions of popularity in that both delineate individuals who are highly influential, powerful, and visible (e.g., Adler & Adler, 1995; 1998; Adler et al., 1992; Eder, 1985; Merten, 1997; Parkhurst & Hopmeyer, 1998), a characterization not used when describing peer assessments of liking/disliking. In fact, in the sociometric literature, liked children and adolescents are typically described as prosocial (e.g., Coie et al., 1982; Dodge et al., 1982; Newcomb & Bukowski, 1983; see also Rubin et al., 1998 for a review), and disliked children and adolescents as aggressive and/or socially withdrawn (e.g., see Rubin et al., 1998 for a review). In other words, liked and disliked individuals have never been described as highly influential and powerful, and in light of these findings, it was expected that sociometric acceptance/rejection would be less strongly related to perceptions of power than peer perceptions of popularity.

Hypothesis #2: Controversial sociometric status will be positively related to peer perceptions of power and peer perceptions of popularity.

This hypothesis was based on two sources of evidence. First dealing with peer perceptions of power, Merten (1997) and Adler and colleagues (1992, 1995, 1998) suggest that powerful/dominant students direct their behavior disproportionately among
peers, with some children and individuals being frequently victimized, and others receiving positive, prosocial attention (see also, Crick & Grotpeter, 1995). Thus, it seems reasonable to assume that those who are victimized by these influential students will mostly likely not like them, while those who are provided with positive attention will report more favorable attitudes. The consequent result is therefore the mixed profile of controversial individuals (i.e., both liked and disliked). Second, with respect to the hypothesized relation between peer perceived popularity and controversial status, this hypothesis was formulated based on Parkhurst and Hopmeyer’s (1998) finding that 48% of controversial adolescents scored high on their index of peer perceived popularity, which in turn, was expected to be more strongly related to peer perceived power (hypothesis #1).

**Hypothesis #3:** Physical/overt aggression and relational aggression will be positively related to peer perceptions of power, peer perceptions of popularity and negatively related to peer perceptions of social preference.

This hypothesis regarding the relationship between aggression (physical/overt and relational), and the three status indicators was based on well-documented links between these social constructs. Studies have shown that physical/overt and relationally aggressive children and adolescents tend to be sociometrically rejected or disliked (e.g., Bukowski & Newcomb, 1984; Coie, Dodge, & Kupersmidt, 1990; Coie et al., 1982; Coie & Dodge, 1998; Coie & Kupersmidt, 1983; Crick & Grotpeter, 1995; Dodge, 1983; Hymel, et al., 1990; Kupersmidt & Coie 1990; Little & Garber, 1995; Newcomb et al., 1993; Parker & Asher, 1987; Sandstrom & Coie, 1999; Tomada & Schneider, 1997; Vitaro et al., 1992). Other studies have demonstrated that peer
perceived popularity (Juvonen et al., 1999; Parkhurst & Hopmeyer, 1998; Rodkin et al., 2000), and peer perceptions of power are also associated with physical/overt aggression and relational aggression (e.g., Adler & Adler, 1995, 1998, Adler et al., 1992; Pettit et al., 1990; Pickert & Wall, 1981; La Freniere & Charlesworth; 1983; Weisfeld et al., 1980; Wright et al., 1996). The present study aimed to replicate these findings within a single adolescent sample.

Hypothesis #4: Peer perceptions of power, peer perceptions of popularity, and peer assessments of social preference will be positively related to the presence of peer-valued characteristics.

Within the anthropological and sociological literature, the relation between the possession of peer-valued characteristics and the presence of peer perceptions of dominance, power and influence has been extensively documented (e.g., Adler & Adler, 1995, 1998; Adler et al., 1992; Eder, 1985; Eder & Kinney, 1995; Kinney, 1993; Merten, 1997), and this relation was also expected in the present study. Although peer-valued characteristics have not been empirically examined to date in relation to peer perceived popularity and power and peer assessments of social preference, it was nevertheless expected that such things as being pretty or handsome, rich, athletic etc. are very salient and attractive characteristics that children and adolescents admire and thus those who possess these types of qualities would most likely be revered and liked.

Hypothesis #5: The possession of peer-valued characteristics moderates the relation between aggression (physical/overt and relational) and peer perceptions of power, peer perceptions of popularity, and peer assessments of social preference. Specifically, in the absence of peer-valued characteristics, aggressive individuals will be
disliked by the peer group, will be perceived as having little power or influence, and will 
not be perceived as popular among peers. In contrast, the presence of peer-valued 
characteristics in aggressive individuals will be associated with peer perceived 
popularity, peer perceived power, and relatively greater peer acceptance.

Even though no study to date has addressed this moderating hypothesis directly, 
there is evidence from more qualitative studies to support the validity of such a claim. 
Specifically, ethnographic studies show that, in addition to being aggressive, all the 
dominant/influential (i.e., “popular”) students possessed non-behavioral characteristics 
(i.e., attractive, athletic, rich, etc.) that the peer group deemed valuable and attractive 
(e.g., Adler & Adler, 1995, 1998; Adler et al., 1992; Coleman, 1961; Cusick, 1973; Eder, 
1985; Eder & Kinney, 1995; Kinney, 1993; Merten, 1997). It seems reasonable to infer 
then that peer-valued characteristics may well be the key factor that determines 
whether one is aggressive and powerful/influential or not. Furthermore, with respect to 
sociometric status, it seems reasonable to assume that children and adolescents would 
be less tolerant of aggressive individuals’ behavior if these individuals had no qualities 
that the peer group perceived to be attractive. As such, children and adolescents would 
most likely dislike aggressive individuals who do not possess peer-valued 
characteristics, whereas they may be more forgiving of negative behavior exhibited by 
peers who possessed qualities that the group valued and admired.
Method

Participants

Participants were 585 predominately White¹ (93%) middle-class² students in grades six to ten. The distribution of participants by grade level, gender and mean age is found on Table 1. The students in grades six and seven were recruited from the five different elementary schools that feed into the one secondary school that housed the participants from grades eight to ten. These five elementary schools and the one high school are located in Western Canada and represent all the public schools within the small Canadian city (population 8, 226)³ from which the participants were recruited. Only students who agreed to partake in the study (Appendix A) and who had written parental consent (Appendix B) participated in the present investigation. The overall participation rate was 97%.

¹ The ethnic/cultural heritage break-down of the remaining 7% of students was as such: 4% First Nations, 1% Asian Canadian, and 2% “Other” (i.e., Indo Canadian, Latin Canadian and non-specified).
² The assessment of “middle-class” is based solely on British Columbia census data (1996; see Appendix C) and hence may not reflect the diversity of the sample.
³ Considering that the present study required that students nominate their school peers, an effort was made to collect the data from a small community in order to ensure that the participants were aware of who their classmates were. Indeed, according to Inderbitzen (1994), one issue with the use of sociometrics with an adolescent population is that the peer reference group is rather large and thus it is difficult for students to know who their classmates are. A detailed profile of the community from which the data were collected is presented in Appendix C.
Table 1. Distribution of Participants by Grade, Gender, and Mean Age.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Number of Girls</th>
<th>Number of Boys</th>
<th>Mean Age</th>
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<tbody>
<tr>
<td>Grade 6</td>
<td>51</td>
<td>60</td>
<td>11.5 years</td>
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<tr>
<td>Grade 7</td>
<td>54</td>
<td>65</td>
<td>12.5 years</td>
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<tr>
<td>Grade 8</td>
<td>65</td>
<td>62</td>
<td>13.5 years</td>
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<tr>
<td>Grade 9</td>
<td>61</td>
<td>56</td>
<td>14.5 years</td>
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<tr>
<td>Grade 10</td>
<td>56</td>
<td>56</td>
<td>15.5 years</td>
</tr>
<tr>
<td>Total</td>
<td>286</td>
<td>299</td>
<td>13.5 years</td>
</tr>
</tbody>
</table>

Procedures

In May of 1998, the female principal investigator (the author) and a female research assistant went to each individual classroom and collected the data. In order to avoid the students discussing the survey with each other, the greater part of the data were collected within a one-week time frame. Specifically, data from students of the same elementary school were collected on the same day within the same week and all the high school data were collected within two consecutive days. For absent students, arrangements were made with the classroom teacher after each testing session to set up an appropriate time when these students could be tested. Data from absent students were collected within two weeks of the initial project start date.

Students participated in a 50-minute group testing session which involved completing several questionnaires that were part of an on-going longitudinal project designed to help better understand adolescents' peer relationships. Specific to the
study here, students completed a socio-demographic questionnaire (Appendix D), a 40-item "Class Play" (Appendix E) and a questionnaire entitled "What does it take to be popular at your school" (Appendix F). Prior to answering any of the questions in the paper and pencil questionnaire package, students were asked to read all the instructions carefully and independently. Additionally, the principal investigator paraphrased the instructions of the Class Play out loud to the students (see Appendix E for Class Play instructions) in order to emphasize key points, such as the need to only nominate students for the Class Play whose name appeared on the alphabetical class (grades six and seven) and grade (grades eight to ten) rosters, the need to write down first and last names of nominated students, and the need to keep their answers private. Students were also informed at the onset of the testing session that they could withdraw from participating in the study at any time. Students who did not participate in this project were supervised by their classroom teacher and continued to work on regular classroom work during the testing period. Finally, once students had completed their questionnaire package, they were instructed to place their answers in the envelope provided, to seal the envelope, and then to continue to work quietly on classroom work.

Measures

**Background Information.** In order to provide a detailed description of the population studied, data regarding students' socio-demographic background (e.g., age, ethnic or cultural heritage) were collected (Appendix D).

**Class Play.** As a way of obtaining peer evaluations of (a) sociometric status, including indices of peer acceptance, rejection and social preference, (b) peer perceived popularity, (c) peer perceived power, (d) peer assessments of both
overt/physical and relational aggression, and (e) a variety of behavioral and non-behavioral characteristics believed to be either valued by the adolescent peer group or an expected correlate of status, students completed the peer assessment instrument by nominating an unlimited number of classmates who best fit the sociometric, behavioral and non-behavioral descriptors provided. Items included in this peer assessment measure were generated from the sociometric literature as well as from the studies of aggression, dominance and ethnographic studies reviewed at the onset of this study and was devised by Vaillancourt and Hymel (1998) with procedures adapted from the Revised Class Play (Masten, Morison & Pellegrini 1985). For a detailed description of where the specific Class Play items were taken from and how new items were generated see Appendix G.

Peer-Valued Characteristics Ranking. In an attempt to verify which particular peer-valued characteristics were most esteemed by students, participants completed the “What does it take to be popular at your school?” questionnaire (designed for the purpose of this study). This questionnaire required students to rank in order the three most and the three least important characteristics needed to be popular at their school (Appendix F).

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4 In a recent study, Terry (2000) has demonstrated that the use of unlimited nominations is superior to the use of limited nomination.
Results

Overview.

Given that class sizes vary, all class play items were first standardized within class (grades 6 and 7) and grade (grades 8, 9 and 10). Subsequently, factor analyses were conducted as a data reduction strategy. Finally, based on factor analytic results, composites were created for overt/physical aggression, relational aggression, peer perceived power, and peer-valued characteristics.

Factor Analysis: Aggression and Peer Perceived Power. A principal components factor analysis with varimax rotation was first conducted on the aggression items (relational and physical/overt) as well as the peer perceived power items. This analysis yielded three clear interpretable factors: relational aggression, overt/physical aggression and peer perceived power. Specifically, the class play items “Who hits others?”, “Who starts fights and arguments with others?”, “Who threatens other people to get their way?”, and “Who is a bully?” grouped together to form the factor overt/physical aggression which accounted for 53.4% of the variance (eigenvalue=5.87). The class play items, “Who spreads mean rumors about someone to get others to stop liking the person?”, “Who tries to control or dominate a person by keeping them out of the group?”, “Who tells others to stop liking a person to get even...

---

5 Factors were rotated to facilitate the interpretation of solutions (Kerlinger, 1986; Tabachnick & Fidell, 1996). Specifically, orthogonal rotation (i.e., varimax) was chosen over oblique rotation (despite Thurstone’s (1947) argument that using such an approach is unrealistic given that factors are often correlated) because the factors derived from the analyses were used as independent and dependent variables in subsequent analyses. According to Tabachnick and Fidell (1996), when such is the case, “orthogonal rotation is best” (p.674).
with them?” and “Who will make someone feel bad or look bad by making a face, or turning away, or rolling their eyes?” grouped together to form the factor relational aggression which accounted for 15.5% of the variance (eigenvalue=1.82). Finally, a third factor entitled peer perceived power, accounting for 13.6% of the variance (eigenvalue=1.50), was identified which consisted of the class play items “Who seems to have a lot of power over others?”, “Who is a person other kids will listen to and follow?” and “Who is a leader?”. See Appendix H for summary of factor loadings.

Based on the magnitude of their primary factor loading (i.e., factor loadings greater than .4), composite indices for relational aggression, overt/physical aggression and peer perceived power were created by summing the respective class play items together for each factor and then dividing these sums by the number of questions in order to control for varying number of items per composite. The reliability for each of the composites was uniformly high with the following Cronbach's (1970) alpha scores obtained: relational aggression α=.91, overt/physical aggression α=.93, and peer perceived power α=.91.

**Composite Creation and Classification Procedures: Social Status and Aggression.**

**Peer Perceived Popularity.** The standardized class play item “Who are the most popular people in your grade?” was used as a continuous measure of peer perceived popularity.

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6 The item “Who intimidates others?” was originally hypothesized to be a peer perceived power item however a factor analysis revealed that this item loaded on overt/physical aggression and relational aggression. Considering that this item did not represent a prototypical example of aggressive behavior, it was not included in the creation of either aggression composites and was dropped from subsequent analyses.
Peer Perceived Power. The mean score obtained from the summation of the standardized class play items “Who seems to have a lot of power over others?”, “Who is a person other kids will listen to and follow?” and “Who is a leader?” was used as a continuous measure of peer perceived power.

Aggressive Behavior. The mean score obtained from the addition of the standardized class play items “Who hits others?”, “Who starts fights and arguments with others?”, “Who threatens other people to get their way?”, and “Who is a bully?” was used as a continuous measure of overt/physical aggression, while the mean score obtained from the addition of the standardized class play items “Who spreads mean rumors about someone to get others to stop liking the person?”, “Who tries to control or dominate a person by keeping them out of the group?”, “Who tells others to stop liking a person to get even with them?”, and “Who will make someone feel bad or look bad by making a face, or turning away, or rolling their eyes?” was used as a continuous measure of relational aggression.

Moreover, for some analyses, students were classified as high, medium or low in terms of aggressive behavior. Specifically, following procedures used by Crick and Grotpeter (1995), adolescents’ relational and overt/physical aggression composite scores were also used to classify students into high, medium and low aggression groups on the basis of a mean ± one-half standard deviation split. In this procedure, adolescents scoring at least one half standard deviation above the sample mean for relational and overt/physical aggression were considered high in that form of aggression; those scoring at least one-half standard deviation below the sample means for relational and overt/physical aggression were considered low in that form of
aggression. Students scoring within one-half standard deviation of the mean were considered average in terms of overt/physical and relational aggression. This method resulted in the classification of 80 (13.7%) students high on overt/physical aggression, 449 (76.8%) students average on overt/physical aggression and 56 (9.6%) students low on overt/physical aggression. Regarding the classification of relationally aggressive students, 85 (14.5%) were found to be high, 385 (65.8%) average, while the remaining 115 (19.7%) were found to be low on relational aggression.

**Sociometric Status.** Peer assessments of liking/disliking were used to create two different indices of social status, reflecting traditional measures utilized in the peer relations literature. First, a continuous measure of social status or liking/disliking was computed as an index of **social preference** which was calculated by subtracting standardized Liked Least class play nominations from standardized Liked Most class play nominations (Coie et al., 1982).

Second, sociometric status was also assessed using categorical procedures that have been utilized extensively in the peer relations’ literature. Specifically, following procedures by Coie et al. (1982), the scores of adolescents’ standardized Liked Most (LM) and Liked Least (LL) were converted into sociometric nomination categories (popular, average, controversial, neglected and rejected) using following classification scheme:

- **Popular** students are those with a social preference score >1.0 and Liked Most (LM) standardized score > 0, and a Liked Least (LL) standardized score <0;
- **Rejected** students are those with a social preference score <-1.0 and LM standardized score < 0, and a LL standardized score >0;
- **Neglected** students are those with a social impact score (i.e., LM plus LL )<-1.0 and LM standardized score < 0, and a LL standardized score <0;
- **Controversial** students are those with a social impact score >1.0 and LM standardized score > 0, and a LL standardized score >0;
- **Average** students are those with a social preference score between .5 and -.5.
Consistent with previous research (e.g., Coie et al., 1982; Terry & Coie, 1991), this classification procedure identified 145 popular students (24.8%), 94 rejected students (16.1%), 53 neglected students (9.1%), 49 controversial students (8.4%), 152 average students (26.3%) and 90 (15.4%) unclassified students (i.e., students whose scores did not fit into any of the five sociometric categories).

**Composite Creation: Peer-Valued Characteristics.**

First, correlational analyses were used to examine the interrelations among the various peer-valued characteristics included in the present study and to verify if these peer-valued characteristics were indeed associated with the three types of social status (social preference, peer perceived popularity and peer perceived power) identified within the present study. As seen in Table 2, the nine peer-valued characteristics were significantly intercorrelated and were significantly related to each of the three indices of social status with few exceptions. Specifically, statistically significant interrelations were observed among peer perceptions of attractiveness, style, athletic competence, toughness, possessions, wealth and talents. Academic competence (doing well in schoolwork) was only significantly related to perceived possessions, wealth and talents.

More importantly, results of these correlational analyses indicated that students who were rated by peers as high in perceived popularity, perceived power and social preference were also rated as more attractive, stylish, athletically competent, having a good sense of humor, being tough, and having various possessions and talents. Being viewed as rich was associated with high peer perceived power and perceived popularity, but was unrelated to social preference. The opposite pattern was observed for academic competence ("Who does well in their schoolwork?"), which was
significantly related to being liked (social preference) but not to being perceived as popular or powerful. In summary, the correlation patterns reported in Table 2 suggest that each peer-valued characteristics was positively associated with at least one or more types of social status.

**Table 2.** Correlations among Social Status and Individual Peer-Valued Characteristics and Inter-Correlations among Individual Peer-Valued Characteristics.

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. attractive</td>
<td>.600**</td>
<td>.795**</td>
<td>.345**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. style</td>
<td>.643**</td>
<td>.816**</td>
<td>.271**</td>
<td>.744**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. sports</td>
<td>.416**</td>
<td>.393**</td>
<td>.253**</td>
<td>.356**</td>
<td>.356**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. humor</td>
<td>.414**</td>
<td>.385**</td>
<td>.281*</td>
<td>.258**</td>
<td>.238**</td>
<td>.349**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. tough</td>
<td>.536**</td>
<td>.405**</td>
<td>.103*</td>
<td>.279**</td>
<td>.254**</td>
<td>.372**</td>
<td>.215**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. possessions</td>
<td>.337**</td>
<td>.370**</td>
<td>.103*</td>
<td>.276**</td>
<td>.408**</td>
<td>.165**</td>
<td>.179**</td>
<td>.123**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. rich</td>
<td>.294**</td>
<td>.434**</td>
<td>.016*</td>
<td>.339**</td>
<td>.498**</td>
<td>.147**</td>
<td>.157**</td>
<td>.068</td>
<td>.733**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. talents</td>
<td>.299**</td>
<td>.284**</td>
<td>.323*</td>
<td>.279**</td>
<td>.261**</td>
<td>.434**</td>
<td>.232**</td>
<td>.117**</td>
<td>.135**</td>
<td>.127*</td>
<td></td>
</tr>
<tr>
<td>9. school work</td>
<td>.054</td>
<td>-.009</td>
<td>.129*</td>
<td>.096</td>
<td>.029</td>
<td>.049</td>
<td>.075</td>
<td>.041</td>
<td>.120**</td>
<td>.106*</td>
<td>.360**</td>
</tr>
</tbody>
</table>

Note. **p < .0001 (1 tailed), *p < .01 (1 tailed).
A = Peer Perceived Power; B = Peer Perceived Popularity; C = Social Preference.

**Factor Analyses of Peer-Valued Characteristics.** Second, as a way of reducing the number of variables, a series of principal components factor analyses with varimax rotation were conducted on the nine items believed to be associated with elevated peer social status. Specifically, separate factor analyses were conducted in accordance to school, age group and gender. The reason for this undertaking was in consideration of the fact that peer-valued characteristics are most likely contextually based, that is, based on cultural norms. Support for this claim comes from a study by Dong et al.
who investigated the correlates of social status among Chinese and American adolescents and found that for female Chinese and American adolescents, cheerfulness and femininity were associated with peer perceived popularity. For males, however, there were cultural differences with respect to what characteristics correlated most strongly with peer perceived popularity. The male Chinese students who were perceived by their peer group to be popular were described as intelligent and attractive, while the male American students who were perceived as popular by peers were described as masculine and athletic. Dong et al. (1996) speculate that this difference may be reflective of the larger culture. That is, in China, intelligence is more highly valued than athletic ability, whereas the opposite is true in America. Hence, it seems that what makes some children and adolescents powerful, popular and/or liked in one social context may not necessarily be the same characteristics that make others powerful, popular and/or liked in another context.

In addition to the possibility that there may be contextual differences associated with what the peer group deems valuable, it is also important to consider that there may be gender and age differences regarding what characteristics are most appreciated by the peer group. Recall that popular (i.e., powerful) girls tend to be characterized as physically attractive (Adler & Adler, 1995, 1998; Eder, 1985; Eder & Kinney, 1995; Kinney, 1993; Merten, 1997), whereas popular boys tend to be characterized as athletic (Adler et al., 1992; Eder & Kinney, 1995; Kinney, 1993). Further, it has been shown that characteristics that are valued in early childhood may not be the same ones valued in adolescence. Indeed, according to Moffit (1993), as children approach and enter adolescence they begin to be attracted to characteristics in their peers that are not
associated with childhood, and as such, characteristics like school achievement and prosocial behavior become de-valued by the peer group while characteristics perceived to be more adult like (i.e., antisocial behavior) are valued (see also Allen, Weissberg, & Hawkins, 1989; Bukowski, Sippola & Newcomb, 2000). It appears then that children and adolescents create their own norms (Glassner, 1976; Harris, 1995, 1998). In fact, according to Sherif and Sherif (1965), the peer group is the “primary source of experience. It is an arbitrator and dispenser of acceptance and rejection. It tells the [child or] adolescent what is done, what is acceptable, and what is not acceptable” (p. 22).

Thus, in attending to the possibility that peer-valued characteristics are most likely dictated by the peer group, separate factor analyses were conducted for context (i.e., school), age, and gender and results from these distinct analyses were remarkably consistent, with only a few minor nuances found7. For example, in some schools “Who is good-looking or attractive?” and “Who dresses well and is in style?” cross-loaded on the first two factors (described below).

Considering then that the factor analyses conducted on peer valued characteristics were consistent across context (class, school), age and gender, only factor analytic results obtained from the entire sample were considered in this study (see Appendix I for summary of factor loadings). Specifically, the items “Who is someone with a lot of great things or possessions?”(possessions), “Who is rich?” (rich)

7 The consistency of the factor analyses across classes, grade levels and gender was probably due to the fact that the data were collected from a small homogeneous community where students from different schools are in frequent contact with one another. Hence, the students in this study are most likely being socialized by analogous agencies that value similar things (see Harris, 1995; 1998).
and “Who dresses well and is in style?” (style)\(^8\) grouped together to form the factor peer-valued characteristics 1 (PVC 1), which accounted for 34.47% of the variance (eigenvalue=3.67). The items “Who is good looking or attractive?” (attractive), “Who does well at sports?” (sports), “Who has a good sense of humor and can make people laugh?” (humor), and “Who is tough?” (tough) grouped together to form the factor peer-valued characteristics 2 (PVC 2), which accounted for 15.97% of the variance (eigenvalue=1.44). Finally, accounting for 14.20% of the variance (eigenvalue=1.28) was the factor entitled peer-valued characteristics 3 (PVC 3), which consisted of the following two items: “Who is someone with special talents or skills?” (talent), “Who does well in their school work?” (schoolwork). The correlation pattern for the three types of peer-valued characteristics were: PVC 1 correlated positively with PVC 2 \((r = .43, p<.01)\) and PVC 3 \((r = .19, p<.01)\) and PVC 2 correlated positively with PVC 3 \((r = .22, p<.01)\).

By using the equivalent procedures to create the composites for relational aggression, physical/overt aggression and peer perceived power, composite indices for PVC 1, PVC 2, and PVC 3 were created by summing the respective class play items together for each factor (i.e., based on factor loadings greater than .4) and then dividing these sums by the number of questions in order to control for varying number of items per composite. Specifically, the PVC 1 composite was calculated as follows: “Who is someone with a lot of great things or possessions?” + “Who is rich?” + “Who dresses well and is in style?” divided by 3 (the number of class play items for this composite).

\(^8\) The item “Who dresses well and is in style?” cross-loaded with the second factor titled PVC 2 but was included in the first factor (PVC 1) because of its higher factor loading.

\(^9\) The item “Who is good looking or attractive?” cross-loaded with the PVC 1 but was included in the second factor (PVC 2) because of its higher factor loading.
PVC 1 was used in subsequent analyses as a continuous measure. Likewise, the mean score obtained from the summation of the standardized class play items "Who is good looking or attractive?", "Who does well at sports?", "Who has a good sense of humor and can make people laugh?", and "Who is tough?" was used as a continuous measure of PVC 2, while the mean score obtained from the addition of the standardized class play Who is someone with special talents or skills?" and "Who does well in their school work?" was used as a continuous measure of PVC 3.

Each of these three PVC composites was found to be internally consistent using Cronbach's alpha (α=.78 for PVC 1, α=.64 for PVC 2, and α=.53 for PVC 3). The somewhat lower coefficient alpha obtained for PVC 3 may reflect the fact that this composite only included two items. According to Cortina (1993), one must be cautious when interpreting alpha, as it is rather sensitive to the number of items a particular composite (measure) possesses (see also Crocker & Algina, 1986). Moreover, a high coefficient alpha can be obtained despite low item intercorrelations (Cortina, 1993). In fact, Cortina argues that an adequate coefficient alpha says little about the validity of the composite and suggests, "some form of construct validity is necessary to establish the meaning of the measure" (p.103). The face validity for PVC 3 renders credibility for its use insofar as the two items relate to academic competence. Specifically, embedded within the question "Who is someone with special talents or skills?" are examples of what is meant by special talents or skills, one of which is "writing talents", an ability that is closely linked to academic competence. Moreover, the statistically significant but modest correlation (r =.36, p<.0001) obtained between special talents and school work provides some support for the use of the two-item composite for

47
Despite these arguments, it is nevertheless important to interpret results involving this composite with caution.

**Verification of Peer-Valued Characteristics.** In an attempt to verify that the nine peer-valued characteristic items were indeed valued by the peer group, students were asked to complete the “What does it take to be popular at your school?” questionnaire. For this questionnaire, the nine peer-valued characteristic items as well as two behavioral filler items (i.e., “Someone who always gets along well with other people” and “Someone who you can trust (for example to keep a secret or keep a promise)” were specified and students were asked to identify, from among these 11 items, the three “most important” characteristics as well as the three “least important” characteristics. In effect, the students’ sorting of the items could be used to assign ratings to each PVC item in terms of perceived importance. Specifically, this “q-sort” procedure was intended to result in a 3-point rating of peer valued characteristics, with high (positive) ratings assigned to items selected as “most important” and low ratings assigned to items selected as “least important”. The remaining (non-selected) items were, by default, considered of moderate importance.

Unfortunately, many students were not able to complete this sorting/ranking procedure and did not appear to understand the nature of the task. Specifically, approximately 5% of the participants responded to this questionnaire by nominating their classmates for each item and thus not providing any ranking. Another 25% of the students responded to the questionnaire by ranking the first three items as the “most important” characteristics and the succeeding three items or last three items as the “least important” characteristics. Given these procedural difficulties, the results from
these student evaluations of the importance of the various peer valued characteristics items could not be used to assess the validity of the PVC composites used in the present study.

Testing the Directional Hypotheses.

Although gender differences were not the focus of the present study, all analyses were initially conducted separately for girls and boys and only when findings differed from the results obtained from the total sample were they reported. The separate analyses were conducted in consideration of the fact that (a) different correlates of peer perceived power and popularity have been reported in accordance to gender (e.g., Adler & Adler, 1995, 1998; Dong et al., 1996; Merten, 1997), and (b) that gender differences have been found with respect to the type of aggression used by girls and boys (e.g., Crick & Grotpeter, 1995; Lagerpetz et al., 1988).

Hypothesis #1: Peer perceptions of power will be more strongly related to peer perceptions of popularity than to peer assessments of social preference.

First, one-tailed Pearson product-moment correlations were computed to examine the associations between the three different indices of status considered in the present study: peer perceptions of power, peer perceptions of popularity and peer assessments of social preference. Results of these correlational analyses are presented in Table 3. As seen in the table, the relationships among all three statuses indicators were all statistically significant but varied in magnitude. Following procedures described by Furlong, Lovelace and Lovelace (2000), differences among the dependent correlation coefficients were examined in order to determine if the magnitude of the correlations differed significantly. The critical ratio (CR), a measure of disparity
between correlations, was found to be statistically significant (CR= 14.46, p<.0001) indicating that hypothesis #1 was indeed supported. That is, peer perceived power was found to be more strongly related to peer perceived popularity than to social preference. What's more, the rather high correlation obtained between peer perceived power and popularity (r = .80) suggests that these two statuses are closely linked to one another while the modest but positive correlation obtained between social preference and peer perceived power (r = .25) and popularity (r = .33) suggests that these statuses are related yet still distinct indices of social status.

**Table 3. Correlations among Peer Perceived Power, Peer Perceived Popularity and Social Preference.**

<table>
<thead>
<tr>
<th>Peer Perceived Power</th>
<th>Peer Perceived Popularity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer Perceived Popularity</td>
<td>.80*</td>
</tr>
<tr>
<td>Social Preference</td>
<td>.25*</td>
</tr>
</tbody>
</table>

*p<.0001 (1-tailed)

**Hypothesis #2:** Controversial nomination status will be positively related to peer perceptions of power and popularity.

Because controversial nomination status is a categorical variable, a series of ANOVAs were conducted with sociometric status classifications (rejected, popular, average, neglected, controversial and unclassified) serving as the independent variable and peer perceptions of power and peer perceptions of popularity as the dependent variables. Statistically significant effects of sociometric status for peer perceived power
(F(5, 579)=24.02, p<.0001) and peer perceived popularity (F(5, 579)=24.84, p<.0001) were obtained. Student-Newman-Keuls post-hoc tests (p<.05) revealed that sociometrically controversial students scored higher on peer perceived power and peer perceived popularity than did sociometrically popular, rejected, neglected, average or unclassified adolescents. As well, sociometrically popular (liked/accepted) students were viewed as more popular and powerful than were rejected, neglected or average students (see Table 4 for means, standard deviations and post-hoc summaries). Thus, among students, it was both controversial and popular students who were viewed as powerful and of high status, with controversial students being afforded the highest levels of perceived power and popularity, even more so than sociometrically popular students. As predicted, it appears that controversial students (as opposed to sociometrically popular or accepted students) were the ones that the peer group saw as having very high status.
Table 4. Means and Standard Deviations of Sociometric Status Groups as a Function of Peer Perceived Power and Popularity.

<table>
<thead>
<tr>
<th>Status Group</th>
<th>N</th>
<th>Peer Perceived Power M (SD)</th>
<th>Peer Perceived Popularity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Controversial</td>
<td>49</td>
<td>1.04 (1.48)¹⁰</td>
<td>1.00 (1.57)</td>
</tr>
<tr>
<td>2. Popular</td>
<td>145</td>
<td>0.25 (1.15)</td>
<td>0.37 (1.16)</td>
</tr>
<tr>
<td>3. Rejected</td>
<td>94</td>
<td>-0.24 (0.38)</td>
<td>-0.37 (0.38)</td>
</tr>
<tr>
<td>4. Neglected</td>
<td>53</td>
<td>-0.38 (0.13)</td>
<td>-0.44 (0.14)</td>
</tr>
<tr>
<td>5. Average</td>
<td>154</td>
<td>-0.19 (0.63)</td>
<td>-0.18 (0.82)</td>
</tr>
<tr>
<td>6. Unclassified</td>
<td>90</td>
<td>-0.16 (0.56)</td>
<td>-0.19 (0.69)</td>
</tr>
</tbody>
</table>

Post-hoc Summary: 1 > 2, 3, 4, 5, 6  
2 > 3, 4, 5, 6

¹⁰ Note that the Class Play data were screened for univariate outliers with univariate outliers revealed by a z score greater than 3.67 (p<.0001; Tabachnick & Fidell, 1996). Less than 1.5% of the sample (i.e., 9 cases) was identified as a univariate outlier, a finding which according to Tabachnick and Fidell (1996), could easily occur by chance in a study with more than 100 participants. Nevertheless, all statistical analyses were conducted with and without these outlier cases and the results of these separate analyses did not differ from one another. As such, results are presented with the univariate outliers retained.
Hypothesis #3: Overt/physical and relational aggression will be positively related
to peer perceptions of power and popularity but negatively related to peer perceptions
of social preference.

This hypothesis was assessed using two different statistical analyses. First,
following procedures by Crick and Grotpeter (1995), a series of analyses of variances
were conducted with level of aggression (high, medium, and low) considered the
independent variable, and peer perceptions of power, peer perceptions of popularity
and peer assessments of social preference as the dependent variables. As
hypothesized, significant effects were observed for level of overt/physical aggression for
peer perceptions of power ($F(2, 582)=41.08$, $p<.0001$), peer perceptions of popularity
($F(2, 582)=17.82$, $p<.0001$) and peer assessments of social preference ($F(5, 582)=
27.50$, $p<.0001$). As well, there were significant effects of level of relational aggression
for peer perceptions of power ($F(2, 582)=38.95$, $p<.0001$), peer perceptions of
popularity ($F(2, 582)=26.44$, $p<.0001$) and peer assessments of social preference ($F(5,
582)=6.65$, $p<.001$). Consistent with predictions, Student-Newman-Keuls post-hoc test
($p<.05$) indicated that students classified as highly aggressive, regardless of whether
overt/physical or relational aggression was considered, were viewed by peers as higher
in terms of perceived power and perceived popularity, relative to less aggressive
students. Further, consistent with previous research (see Coie & Dodge, 1998 for
review), highly aggressive students were not as well liked as their less aggressive
peers. Means and standard deviations by level of aggression are presented in Table 5.

<table>
<thead>
<tr>
<th></th>
<th>Peer Perceived Power</th>
<th>Peer Perceived Popularity</th>
<th>Social Preference</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level of Overt/Physical Aggression</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>M 0.80</td>
<td>0.56</td>
<td>-1.14</td>
</tr>
<tr>
<td>N=80</td>
<td>(SD 1.61)</td>
<td>(0.57)</td>
<td>(2.05)</td>
</tr>
<tr>
<td>Medium</td>
<td>M -0.11</td>
<td>-0.01</td>
<td>0.17</td>
</tr>
<tr>
<td>N=449</td>
<td>(SD 0.69)</td>
<td>(0.87)</td>
<td>(1.38)</td>
</tr>
<tr>
<td>Low</td>
<td>M -0.25</td>
<td>-0.33</td>
<td>0.24</td>
</tr>
<tr>
<td>N=56</td>
<td>(SD 0.34)</td>
<td>(0.57)</td>
<td>(1.35)</td>
</tr>
<tr>
<td><strong>Post-hoc Summary</strong></td>
<td>H &gt; M, L</td>
<td>H &gt; M, L</td>
<td>H &lt; M, L</td>
</tr>
</tbody>
</table>

| **Level of Relational Aggression** |                     |                           |                   |
| High                           | M 0.74              | 0.62                      | -0.55             |
| N=85                           | (SD 1.40)           | (1.32)                    | (1.87)            |
| Medium                         | M -0.01             | 0.00                      | 0.01              |
| N=385                          | (SD 0.81)           | (0.97)                    | (1.54)            |
| Low                            | M -0.27             | -0.35                     | 0.17              |
| N=115                          | (SD 0.37)           | (0.38)                    | (1.21)            |
| **Post-hoc Summary**           | H > M, L           | H > M, L                  | H < M, L          |
|                                | M > L               |                           |                   |
Considering Kerlinger and Pedhuzur's (1973) argument that the partitioning of continuous variables into high or low, or high, medium and low groups reduces power and inflates Type I error rates, one-tailed Pearson product-moment correlational analyses were also computed to assess the validity of hypothesis #3. Specifically, hypothesis #3 was also assessed by correlating the continuous, standardized scores on each of the aggression measures (i.e., relational and overt/physical) with the standardized scores for peer perceptions of power, peer perceptions of popularity, and social preference. Results of the correlational analyses are depicted on Table 6. Again, hypothesis #3 was supported in that significant positive correlations were found between indices of aggression and peer perceptions of power and peer perceptions of popularity, while significant but negative correlations were found between the two types of aggression and peer assessments of social preference. Thus, regardless of whether overt/physical or relational aggression was considered, students who were more aggressive were significantly more likely to be seen by their peers as powerful and popular and significantly less likely to be well liked (social preference). In other words, although highly aggressive students were not as well liked as their less aggressive peers, they nevertheless still enjoy relatively high social status when it was defined in terms of peer perceived power and popularity. It is important to underscore, however, that the magnitude of these relationships was moderate, suggesting that aggression was not the only characteristic that contributes to peer perceptions of status.
Table 6. Correlations among Peer Perceived Power, Peer Perceived Popularity and Social Preference and Type of Aggression.

<table>
<thead>
<tr>
<th></th>
<th>Peer Perceived Power</th>
<th>Peer Perceived Popularity</th>
<th>Social Preference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overt/Physical Aggression</td>
<td>.42*</td>
<td>.27*</td>
<td>-.26*</td>
</tr>
<tr>
<td>Relational Aggression</td>
<td>.39*</td>
<td>.31*</td>
<td>-.23*</td>
</tr>
</tbody>
</table>

*p<.0001 (1-tailed)

Finally, as a point of interest, the relationship between aggression and social preference was further evaluated by analyzing whether aggression (overt/physical and relational) would be positively related to controversial nomination status, a finding that has been documented in previous studies (e.g., Cairns et al., 1988; Coie & Dodge, 1988; Coie et al., 1982; Crick & Grotpeter, 1995; Roberts & Newcomb, 1999; Tomada & Schneider, 1997), although not within an adolescent population.

Again, given that controversial nomination status is a categorical variable, a series of analyses of variance (ANOVAs) were conducted with sociometric status (rejected, popular, average, neglected, controversial, and unclassified) serving as the independent variable and aggression type (overt/physical and relational) serving as the dependent variables. Significant effects of sociometric status for overt/physical ($F(5, 579)=25.58, p<.0001$) and relational aggression ($F(5, 579)=30.91, p<.0001$) were obtained, and Student-Newman-Keuls post-hoc tests ($p<.05$) replicated (within an adolescent population) the finding that sociometrically controversial students are more
overtly/physically and relationally aggressive than sociometrically rejected, popular, average, neglected and unclassified adolescents. Refer to Table 7 for means, standard deviations and summaries of post-hoc results.

<table>
<thead>
<tr>
<th></th>
<th>Overt/Physical Aggression</th>
<th>Relational Aggression</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M (SD)</td>
<td>M (SD)</td>
</tr>
<tr>
<td>1. Controversial</td>
<td>N=49 1.02 (0.12)</td>
<td>1.07 (0.11)</td>
</tr>
<tr>
<td>2. Rejected</td>
<td>N=94 0.42 (0.08)</td>
<td>0.42 (0.08)</td>
</tr>
<tr>
<td>3. Popular</td>
<td>N=145 -0.20 (0.07)</td>
<td>-0.18 (0.06)</td>
</tr>
<tr>
<td>4. Neglected</td>
<td>N=53 -0.21 (0.11)</td>
<td>-0.35 (0.11)</td>
</tr>
<tr>
<td>5. Average</td>
<td>N=154 -0.21 (0.07)</td>
<td>-0.23 (0.06)</td>
</tr>
<tr>
<td>6. Unclassified</td>
<td>N=90 -0.18 (0.09)</td>
<td>-0.13 (0.08)</td>
</tr>
<tr>
<td>Post-hoc Summary</td>
<td>1 &gt; 2, 3, 4, 5, 6</td>
<td>1 &gt; 2, 3, 4, 5, 6</td>
</tr>
<tr>
<td></td>
<td>2 &gt; 3, 4, 5, 6</td>
<td>2 &gt; 3, 4, 5, 6</td>
</tr>
</tbody>
</table>
Hypothesis #4: Peer perceptions of power, popularity, and social preference will be positively related to the presence of peer-valued characteristics.

Pearson product-moment correlations were computed to examine the associations between peer perceptions of power, peer perceptions of popularity, and peer assessments of social preference and each of the three composites of peer-valued characteristics (PVC 1, PVC 2, and PVC 3). Table 8 depicts the results of the correlational analyses. Hypothesis #4 was supported in that statistically significant, positive correlations were found between peer perceptions of power, peer popularity, and social preference and the presence of peer-valued characteristics. Specifically, students who were perceived as powerful and popular were more likely to be perceived by peers as attractive, athletic, funny and tough than academically competent and talented. These students were also perceived by peers to be rich, to possess great material goods and to wear stylish clothes. Socially accepted students (i.e., liked) were also more likely to be perceived by peers as being attractive, athletic, funny and tough than as being academically competent and talented, but this association was less strong than was the association between such characteristics and peer perceived power and popularity. Moreover, although socially accepted students tended to also be perceived by peers to be rich, to possess great material goods and to wear stylish clothes, this association was rather weak. Taken together, these findings suggest that adolescents who possessed characteristics that the peer group valued were powerful, popular and liked. Further, the diverse correlation pattern found suggests that different characteristics may be needed to achieve different types of social status.
Table 8. Correlations among Peer Perceived Power, Peer Perceived Popularity and Social Preference and Peer-valued Characteristics (PVC 1, PVC 2, and PVC 3).

<table>
<thead>
<tr>
<th>Peer Perceived Power</th>
<th>Peer Perceived Popularity</th>
<th>Social Preference</th>
</tr>
</thead>
<tbody>
<tr>
<td>PVC 1 (possession, rich, style)</td>
<td>.51*</td>
<td>.65*</td>
</tr>
<tr>
<td>PVC 2 (attractive, sports, humor, tough)</td>
<td>.71*</td>
<td>.72*</td>
</tr>
<tr>
<td>PVC 3 (schoolwork, talent)</td>
<td>.21*</td>
<td>.17*</td>
</tr>
</tbody>
</table>

*p<.0001

Hypothesis #5: The possession of peer-valued characteristics will moderate the relation between aggression (overt/physical and relational) and peer perceptions of power, popularity, and social preference.

The moderation hypothesis was examined using two different analytical approaches. Following procedures described by Baron and Kenny (1986), the moderating hypothesis was first tested in regression analyses by examining the interaction of the moderator (peer-valued characteristics; PVC 1, PVC 2, and PVC 3) and the initial predictor (aggression; overt/physical and relational). Analytically, moderation was indicated by statistically significant interactions between the moderator and the initial predictor (see also Cohen & Cohen, 1983). Specifically, in these analyses, hierarchical regression analyses were performed in which the peer-valued characteristic composite (i.e., PVC 1, PVC 2, and PVC 3) and the type of aggression (i.e., overt/physical and relational) were entered simultaneously in the first step as the
initial predictors of social status (peer perceived power, popularity and social preference). Next, the interaction term between the peer-valued characteristic composite and the type of aggression was entered in the second step, also as a predictor of social status. At each step $R^2 \Delta$ was calculated with statistically significant increments in explained variance providing evidence for the moderator effect (see Cohen & Cohen, 1983). Finally, hierarchical regression analyses were conducted for the entire sample as well as for boys and girls separately, with different results observed as a function of gender (described in sub-sections below).

Second, statistically significant simple effects were investigated by trichotomizing the moderator (PVC 1, PVC 2, and PVC 3) into low, medium and high levels (i.e., -1, 0, +1 standard deviations$^{11}$), a statistical procedure which, according to Aiken and West (1991), facilitates the interpretation of moderating effects. Specifically, the simple effects of the predictor for different levels of the moderator were measured using appropriate standardized solutions. By comparing betas ($\beta$) across the different levels of peer-valued characteristics one can see how the relation between aggression (overt/physical and relational) and peer perceived power, peer perceived popularity and peer assessments of social preference changes in accordance with varying levels of the moderator (Hodges, Malone, & Perry, 1997). Results of these analyses for each of the three indices of status considered in the present study are described in the sub-sections that follow.

$^{11}$ Following procedure recommended by Aiken and West (1991), data were standardized (i.e., centered) across the entire sample in order to facilitate the interpretation of the multiple regression interactions (see also Hodges, Malone & Perry (1997) for an excellent description of procedures used to interpret interaction effects in regression analyses).
**Peer Perceived Power.** As hypothesized, the presence of peer-valued characteristics moderated the relationship between peer perceived power and overt/physical and relational aggression. Expressly, as seen in Table 9 on page 65 of this paper (summary of results), the product terms concerning overt/physical aggression and relational aggression in relation to peer perceived power were statistically significant, indicating that PVC 1 (possession, rich and style), PVC 2 (attractive, sports, humor and tough) and PVC 3 (schoolwork and talent) did indeed moderate these relationships.

Further, results from separate regression analyses revealed that peer-valued characteristics moderated the relationship between aggression and peer power in a different way for girls and boys. Specifically, for girls, PVC 1, PVC 2 and PVC 3 moderated the relationship between relational aggression and peer perceived power while only PVC 3 moderated the relationship between overt/physical aggression and peer perceived power. For boys, the findings were consistent with those reported for the entire sample. That is, PVC 1, PVC 2 and PVC 3 moderated the relationship between aggression (overt/physical and relational) and peer perceived power. Again, refer to Table 9 for a summary of the results.

Follow-up tests of statistically significant interaction terms showed that, as predicted, the positive relation of aggression (overt/physical and relational) to peer perceived power increased as the level of peer-valued characteristics increased. That is, as hypothesized, the link between aggression and peer perceived power depended on the level of PVC 1, 2, and 3 insofar as aggression was associated with greater peer perceived power when higher levels of PVC 1, 2 and 3 were present. The ßs for high,
medium and low levels of PVC 1, PVC 2 and PVC 3 in relation to overt/physical aggression and relational aggression are summarized in Table 10 on page 66 of this paper.

Peer Perceived Popularity. Again, as hypothesized, the relationship between aggression (relation and overt/physical) and peer perceived popularity was moderated by the presence of peer-valued characteristics (see Table 11 on page 67 for summary of results). PVC 3 (schoolwork and talent) moderated the relationship between aggression (relational and overt/physical) and peer perceived popularity, while PVC 2 (attractive, sports, humor and tough) moderated the relationship between relational aggression and peer perceived popularity. When the data were analyzed separately for girls and boys, a different pattern of findings was revealed. Specifically, for boys, the relationship between overt/physical aggression and peer perceived popularity was moderated by PVC 1 (possession, rich, and style), PVC 2 (attractive, sports, humor, and tough), and PVC 3 (schoolwork and talent), while the relationship between relational aggression and peer perceived popularity was moderated by PVC 2 and PVC 3 (see Table 11 for results). Conversely, for girls, PVC 1 moderated the relationship between overt/physical aggression and peer perceived popularity, while the relationship between relational aggression and peer perceived popularity was not moderated by the presence/absence of peer valued characteristics (see Table 11 for results). Follow-up tests of statistically significant interaction terms indicated that much like the relation between peer perceived power and aggression, the positive relation between aggression (overt/physical and relational) and peer perceived popularity increased as the level of peer-valued characteristics increased. Said differently, as hypothesized, the
link between aggression and peer perceived popularity depended on the level of peer-valued characteristics (PVC 1, 2, and 3) in that aggression was associated with greater peer perceived popularity when higher levels of PVC 2, PVC 3 and/or PVC 1 were present. This pattern of findings was present for boys only. For girls, the level of peer-valued characteristics did not moderate the relationship between relational aggression and peer perceived popularity. What is more, contrary to what was hypothesized, the positive relation of overt/physical aggression to peer perceived popularity for girls decreased as the level of peer-valued characteristics increased. The ßs for high, medium and low levels of PVC 1, PVC 2 and PVC 3 are summarized in Table 12 on page 68 of this paper.

**Social Preference.** The regression analysis involving overt/physical aggression and social preference also yielded statistically significant product terms indicating that social preference was also moderated by the level of peer-valued characteristics (see Table 13 on page 69 for summary of results). Specifically, the relationship between overt/physical aggression and social preference was moderated by PVC 2 (attractive, sports, humor and tough) and PVC 3 (schoolwork and talent). Further, contrary to what was hypothesized, the relationship between relational aggression and social status was not moderated by the level of peer-valued characteristics. Moreover, as was the case with peer perceived power and popularity, a different pattern of results was revealed when the regression analyses were conducted separately for girls and boys. Specifically, for girls, PVC 2 and PVC 3 moderated the relationship between overt/physical aggression and social preference. Further, contrary to what was predicted, the relationship between relational aggression and social preference was not
moderated by the presence/absence of peer valued-characteristics, a finding consistent with the null result obtained for peer perceived popularity (see Table 13 for results). For boys, PVC 2 and PVC 3 moderated the relationship between aggression (overt/physical and relational) and social preference (see Table 13 for results). Follow-up tests of statistically significant product terms demonstrated that the negative relation between overt/physical aggression and social preference decreased as the level of peer-valued characteristics increased. To put it another way, as hypothesized, the link between aggression and social preference depended on the level of peer-valued characteristics insofar as aggression was associated with greater social preference when higher levels of PVC 1 and 2 were present. The ßs for high, medium and low levels of PVC 2 and PVC 3 are summarized in Table 14 on page 70 of this paper.
<table>
<thead>
<tr>
<th>PVC</th>
<th>(possessions, rich, style)</th>
<th>Total Sample</th>
<th>Girls</th>
<th>Boys</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>R^2</td>
<td>R^2_Δ</td>
<td>Sig.F</td>
<td>R^2</td>
</tr>
<tr>
<td>PVC1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 1</td>
<td>PVC 1</td>
<td>Overt Aggression</td>
<td>.37</td>
<td>p&lt;.0001</td>
</tr>
<tr>
<td>Step 2</td>
<td>PVC 1 X Overt Aggression</td>
<td>.39</td>
<td>.02</td>
<td>p&lt;.0001</td>
</tr>
<tr>
<td>Step 1</td>
<td>PVC 1</td>
<td>Relational Aggression</td>
<td>.33</td>
<td>p&lt;.0001</td>
</tr>
<tr>
<td>Step 2</td>
<td>PVC 1 X Relational Aggression</td>
<td>.35</td>
<td>.02</td>
<td>p&lt;.0001</td>
</tr>
<tr>
<td>PVC2</td>
<td>(attractive, sports, humor, tough)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 1</td>
<td>PVC 2</td>
<td>Overt Aggression</td>
<td>.54</td>
<td>p&lt;.0001</td>
</tr>
<tr>
<td>Step 2</td>
<td>PVC 2 X Overt Aggression</td>
<td>.56</td>
<td>.03</td>
<td>p&lt;.0001</td>
</tr>
<tr>
<td>Step 1</td>
<td>PVC 2</td>
<td>Relational Aggression</td>
<td>.57</td>
<td>p&lt;.0001</td>
</tr>
<tr>
<td>Step 2</td>
<td>PVC 2 X Relational Aggression</td>
<td>.61</td>
<td>.06</td>
<td>p&lt;.0001</td>
</tr>
<tr>
<td>PVC3</td>
<td>(schoolwork, talent)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 1</td>
<td>PVC 3</td>
<td>Overt Aggression</td>
<td>.25</td>
<td>p&lt;.0001</td>
</tr>
<tr>
<td>Step 2</td>
<td>PVC 3 X Overt Aggression</td>
<td>.30</td>
<td>.05</td>
<td>p&lt;.0001</td>
</tr>
<tr>
<td>Step 1</td>
<td>PVC 3</td>
<td>Relational Aggression</td>
<td>.20</td>
<td>p&lt;.0001</td>
</tr>
<tr>
<td>Step 2</td>
<td>PVC 3 X Relational Aggression</td>
<td>.23</td>
<td>.03</td>
<td>p&lt;.0001</td>
</tr>
</tbody>
</table>
Table 10. Statistically Significant Product Terms: Unstandardized Beta Coefficients for High, Medium and Low Levels of PVC 1, PVC 2 and PVC 3 in Relation to Peer Perceived Power and Aggression.

<table>
<thead>
<tr>
<th>Moderator Level</th>
<th>Total Sample $\beta$</th>
<th>Girls $\beta$</th>
<th>Boys $\beta$</th>
</tr>
</thead>
<tbody>
<tr>
<td>PVC 1 (possessions, rich, style)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overt/Physical Aggression</td>
<td>High</td>
<td>.40$^a$</td>
<td>.49$^a$</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>.30$^a$</td>
<td>.30$^a$</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>.20$^a$</td>
<td>.12$^{ns}$</td>
</tr>
<tr>
<td>Relational Aggression</td>
<td>High</td>
<td>.37$^a$</td>
<td>.24$^a$</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>.25$^a$</td>
<td>.15$^a$</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>.13$^a$</td>
<td>.01$^{ns}$</td>
</tr>
<tr>
<td>PVC 2 (attractive, sports, humor, tough)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overt/Physical Aggression</td>
<td>High</td>
<td>.19$^a$</td>
<td>.13$^a$</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>.01$^c$</td>
<td>-.01$^{ns}$</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>-.00$^{ns}$</td>
<td>-.15$^a$</td>
</tr>
<tr>
<td>Relational Aggression</td>
<td>High</td>
<td>.39$^a$</td>
<td>.33$^a$</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>.22$^a$</td>
<td>.23$^a$</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>.22$^a$</td>
<td>.23$^a$</td>
</tr>
<tr>
<td>PVC 3 (schoolwork, talent)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overt/Physical Aggression</td>
<td>High</td>
<td>.99$^a$</td>
<td>1.11$^a$</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>.57$^a$</td>
<td>.70$^a$</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>.16$^b$</td>
<td>.29$^c$</td>
</tr>
<tr>
<td>Relational Aggression</td>
<td>High</td>
<td>.70$^a$</td>
<td>.56$^a$</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>.44$^a$</td>
<td>.35$^a$</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>.18$^b$</td>
<td>.15$^b$</td>
</tr>
</tbody>
</table>

*According to Aiken and West (1991), the interpretation of the moderator effect across different levels is accomplished by analyzing the **unstandardized** beta coefficient ($\beta$).

$^a$ p<.0001; $^b$ p<.001; $^c$ p<.01; $^d$ p<.05; $^{ns}$= non-statistically significant.
Table 11. Peer Perceived Popularity: Regression Analyses of the Moderator Hypothesis.

<table>
<thead>
<tr>
<th></th>
<th>Total Sample</th>
<th></th>
<th>Girls</th>
<th></th>
<th>Boys</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$R^2$</td>
<td>$R^2_A$</td>
<td>Sig.F</td>
<td>$R^2$</td>
<td>$R^2_A$</td>
<td>Sig.F</td>
</tr>
<tr>
<td><strong>PVC1</strong> (possessions, rich, style)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PVC 1 Overt Aggression</td>
<td>.44</td>
<td>p&lt;.0001</td>
<td>.52</td>
<td>p&lt;.0001</td>
<td>.64</td>
<td>p&lt;.0001</td>
</tr>
<tr>
<td>Step 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PVC 1 X Overt Aggression</td>
<td>.44</td>
<td>.00</td>
<td>ns</td>
<td>.53</td>
<td>.01</td>
<td>p&lt;.01</td>
</tr>
<tr>
<td><strong>PVC 1 Relational Aggression</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PVC 1 Relational Aggression</td>
<td>.44</td>
<td>p&lt;.0001</td>
<td>.52</td>
<td>p&lt;.0001</td>
<td>.41</td>
<td>p&lt;.0001</td>
</tr>
<tr>
<td>Step 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PVC 1 X Relational Aggression</td>
<td>.44</td>
<td>.00</td>
<td>ns</td>
<td>.52</td>
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Table 12: Statistically Significant Product Terms: Unstandardized Beta Coefficients for High, Medium and Low Levels of PVC 2 and PVC 3 in Relation to Peer Perceived Popularity and Aggression.

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<td>Low</td>
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<td>.00(^{ns})</td>
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<td>- .00(^{ns})</td>
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<td>.00(^{ns})</td>
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<td></td>
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<td>.20(^{b})</td>
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* Unstandardized beta coefficient (\( \beta \)).

\(^{a}\) p<.0001; \(^{b}\) p<.001; \(^{c}\) p<.01; \(^{d}\) p<.05; \(^{ns}\) = non-statistically significant.
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Table 14: Statistically Significant Product Terms: Unstandardized Beta Coefficients for High, Medium and Low Levels of PVC 2 and PVC 3 in Relation to Social Preference and Aggression.

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<th>Boys β</th>
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<td>PVC 3 (schoolwork, talent)</td>
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*Unstandardized beta coefficient (β).

<sup>a</sup> p<.0001; <sup>b</sup> p<.001; <sup>c</sup> p<.01; <sup>d</sup> p<.05; <sup>ns</sup> = non-statistically significant.
Discussion

The purpose of the present study was to empirically investigate the relationship between social status (peer perceived power, peer perceived popularity and social preference) and aggression (overt/physical and relational), with specific attention paid to the role peer-valued characteristics play in this association. To this end, adolescents were asked to nominate their grade/classmates who best fit a variety of behavioral and non-behavioral characteristics, as well as three different indices of social status (social preference, perceived power and popularity). Student responses to these peer assessments provided evidence that adolescents not only attended to the behavior of their peers when evaluating social status, but also took notice of other non-behavioral characteristics when appraising their peers. These findings replicate and extend the existing peer literature in the following ways.

First, although Parkhurst and Hopmeyer (1998) argue that individuals who are perceived to be popular by their peers are those “who are dominant in the group” (p. 127) they have failed to corroborate this hypothesis directly. Indeed, in Parkhurst and Hopmeyer’s study, “easy to push around” was conceptualized as a “measure of submissiveness”, with students who were not nominated by peers on this behavior descriptor considered to be dominant (p. 131). Certainly, just because a person is not nominated as “easy to push around” does not automatically imply that this individual is dominant. In fact, defining dominance in this manner is somewhat misleading insofar as the term dominant is typically used to describe individuals who are able to actively manipulate and direct others’ behavior (e.g., Maccoby & Jacklin, 1974; Pickert & Wall, 1981). The results of the present research extend beyond this limitation of Parkhurst
and Hopmeyer's study by providing quantitative evidence of the hypothesized link between peer perceived power and peer perceived popularity. Specifically, the highly positive correlation obtained between peer perceived power and peer perceived popularity (i.e., \( r (585) = .80, p < .0001 \)) indicates that these two forms of status are closely linked to one another.

Second, in addition to establishing that peer perceived power is related to peer perceived popularity, the present study also provided support for the recently made argument that peer liking (i.e., sociometric popularity) is related, but not equivalent to peer perceived popularity (e.g., LaFontana & Cillessen, 2000; Parkhurst & Hopmeyer, 1998; Rodkin et al., 2000). Specifically, in the present investigation, peer perceptions of power were more strongly associated with peer perceptions of popularity than with peer assessments of social preference. In effect, the robust positive correlation obtained between peer perceived power and popularity (\( r (585) = .80, p < .0001 \)) suggests that the two types of status are closely connected, while the relatively lower (but significant) positive correlation obtained between perceived popularity and social preference (\( r (585) = .33, p < .0001 \)) suggests that these two types of status are distinct social constructs.

Third, the present findings provide new insight into the meaning of controversial nomination status. To date, little is known about controversial status children in comparison to other sociometric status groups, owing primarily to the relatively small number of students identified as controversial (see Rubin et al., 1998 for a review). The data which does exist suggests that controversial status individuals tend to be more aggressive both physically and relationally than other sociometric status children and
adolescents (e.g., Cairns et al., 1988; Coie & Dodge, 1988; Coie et al., 1982; Crick &
Grotpeter, 1995; Roberts & Newcomb, 1999; Tomada & Schneider, 1997), and that
they tend to be rather sociable (e.g., Coie & Dodge, 1988; Coie et al., 1982; Franzoi et
al., 1994; Newcomb et al., 1993). Given our limited knowledge of this group, the
present study adds to the peer literature by providing an additional piece to the puzzle:
namely, that controversial status adolescents are perceived by their peers to be popular
(cf. Parkhurst & Hopmeyer, 1998) and powerful.

Fourth, the findings from the present study replicate previous findings that
overtly/physically and relationally aggressive adolescents were disliked by their peers
(see Coie & Dodge 1998 for a review), but extend these findings to show that these
adolescents were also perceived by peers to be popular (see Parkhurst & Hopmeyer,
1998; Juvonen et al., 1999; overt/physical aggression only) and powerful. Taken
together, these findings add to the peer literature by establishing that it is possible for
an aggressive individual (overt/physical and relational) to be disliked by the peer
reference group while still enjoying relatively high social status when it is defined in
terms of peer perceptions of power and popularity. Moreover, this finding helps
elucidate a troubling issue within the relational aggression literature: How can an
individual control, dominate and/or influence others when she or he is not unvaryingly
liked by the peer group? Perhaps the answer to this question is that, as demonstrated
in the present study, the peer group can recognize that an individual is popular and
powerful, but this recognition does not necessarily ensure that the aggressive person
will be liked. In fact, according to Salmivalli et al. (2000) average or elevated peer
social status may be a “prerequisite” for the use of (indirect) aggression (p.22).
Fifth, results of the present study also verified, for the first time within an adolescent population, the finding that controversial status students are more overtly/physically and relationally aggressive than adolescents of other sociometric status groups (e.g., Cairns et al., 1988; Coie & Dodge, 1988; Coie et al., 1982; Crick & Grotpeter, 1995; Roberts & Newcomb, 1999; Tomada & Schneider, 1997). It seems likely that controversial status adolescents direct their behavior irregularly among their peers with some receiving positive attention and others receiving negative attention, a hypothesis also put forward by Crick and Grotpeter (1995). Individuals who receive negative attention may be more likely to report disliking the individual (negative nominations), while those exempted from such abuse may be more likely to like the individual (positive nominations). Further research into patterns of victimization is warranted in order to validate this hypothesis.

Sixth, the present study adds to our understanding of the theoretical underpinnings of social status by illustrating that, as hypothesized, peer perceptions of power, peer perceptions of popularity and social preference were positively related to the presence of peer-valued characteristics. Although this finding has been demonstrated in sociological and anthropological studies (e.g., Adler & Adler, 1995, 1998; Adler et al., 1992; Eder, 1985; Eder & Kinney, 1995; Kinney, 1993; Merten, 1997), it has not, until this point, been verified in quantitative analyses. Perhaps this paucity of research is due to the fact that, within the peer literature, the trend has been to study social preference in relation to behavioral correlates without a great deal of attention paid to how other, non-behavioral factors may associate with peer liking and disliking (e.g., see Rubin et al., 1998 for a review). Thus, the present finding
contributes to our existing understanding of social status by establishing that adolescents did indeed attend to other non-behavioral characteristics when evaluating their peer status. Interestingly, this finding is consistent with what has been delineated in the adult literature. That is, according to social dominance theory (e.g., Sidnus & Pratto, 1999), the dominant group is typically characterized by its "possession of a disproportionately large share of positive social values, or all those material and symbolic things for which people strive" (p.31; their italics). Perhaps then, adolescents are simply mirroring what seems to be true to be of the larger social context in which they have been socialized. Certainly, mapping the role "positive social values" or peer-valued characteristics play in the attainment of status across the life span seems like a worthwhile pursuit.

Finally, the present study contributes extensively to our theoretical understanding of the link between aggression (overt/physical and relational) and social status (peer perceived power, peer perceived popularity, and social preference) by providing extensive evidence that this relationship is moderated by the presence/absence of peer-valued characteristics. Specifically, the results of this study showed that, for boys, the positive relationship between overt/physical and relational aggression and perceived popularity and power increased as the level of peer-valued characteristics increased. As well, the negative relationship between overt/physical and relational aggression decreased as the level of peer-valued characteristics increased. Taken together, these findings suggest that adolescent boys who possessed characteristics that the peer groups deems attractive, were perceived to be more powerful, popular and less disliked than adolescent boys without such alluring characteristics.
For girls, the findings of the present investigation are less straightforward. As hypothesized, the relationship between overt/physical and relational aggression and peer perceived power was moderated by the presence/absence of peer-valued characteristics, as was the relationship between overt/physical aggression and social preference. That is, as hypothesized, these findings suggest that adolescent girls who possessed characteristics that the peer groups deemed attractive were perceived to be more powerful and less disliked than adolescent girls without such enthralling characteristics. Nonetheless, the hypothesized moderating effects of peer-valued characteristics were not observed for the relationship between relational aggression and peer perceived popularity nor for the relationships between relational aggression and social preference. Furthermore, follow-up tests of statistically significant product terms revealed that, for girls, the positive relationship between overt/physical aggression and peer perceived popularity decreased as the level of peer-valued characteristics increased.

Why might this be the case? Dealing first with the unanticipated finding that the relationship between relational aggression and peer perceived popularity and social preference was not moderated by the possession of peer-valued characteristics, several possible explanations exist. First, this lack of finding may be due to a statistical issue. Indeed, according to several researchers, the detection of moderator effects in non-experimental research is extremely difficult (McClelland & Judd, 1993; Morris, Sherman, & Mansfiled, 1986; Zedeck, 1971). In fact, according to Evans (1985) the task of discovering moderator effects is so elusive that “even those examining as little as 1% of the total variance should be considered important” (McClelland & Judd, 1993,
p. 377). Considering this fact, it may be that relationally aggressive girls who possess characteristics that the peer group values are indeed more powerful, popular and less disliked than those without such appealing characteristics, but the statistical power needed to detect such as relationship was not obtainable in the present study. As such, it appears worth replicating this hypothesis with another sample.

A second possible reason why the possession of peer-valued characteristics did not moderate the relationship between relational aggression and peer perceived popularity and social preference for girls concerns the fact that when girls are abused by their peers, it typically involves the use of relational aggression rather than overt/physical aggression (e.g., Crick, 1996; Crick & Grotpeter, 1995; Rys & Bear, 1997). As such, it may be that these peer victimized girls are not so forgiving of the mistreatment they are subjected to by their female peers (see Owens, Shute, & Slee, 2000) and hence the disliking is more stable and less influenced by external qualities or characteristics.

Furthermore, it is my contention that there is a re-victimization component to relational aggression that is not necessarily present with respect to overt/physical aggression that again, contributes to the stability of negative feeling directed toward those who use relational aggression. By re-victimization, I mean that a person cannot really address their abuser because the relationally aggressive individual can easily justify their behavior and in doing so make the victim feel even more stupid or paranoid, etc. For instance, if confronted, relationally aggressive individuals can simply tell their victims that they did not have to tell others to stop liking them in order to get even with them because their peers already disliked them to begin with. Further, if confronted
about spreading invidious remarks, relationally aggressive individuals can tell their victims that they were merely telling the truth but were sensitive enough to not tell the person the truth directly to their face (see also Lagerspetz et al., 1988). With overt/physical aggression, it is not as easy to defend hitting a person, as the action is usually so public (i.e., overt) and so clearly inappropriate. Considering that the social sanctions against the use of relational aggression are certainly less pronounced than those of overt/physical aggression (Lagerspetz et al., 1988), the victims of these attacks are perhaps more marginalized, in that they have no redress, which in turn leads to a more stable negative opinion of the abuser which is less influenced by attractive characteristics the perpetrators may possess. This is not to say however, that victimized girls do not recognize that relationally aggressive adolescents have power. Indeed, part of the abuse cycle may stem from the peer group’s recognition of an individual’s high level of power, which incidentally, provides the antagonist with the social status needed to be effective in their use of relational aggression (see also Salmivalli et al., 2000).

A third likely reason why the possession of peer-valued characteristics did not moderate the relationship between relational aggression and peer perceived popularity and social preference for girls is because girls may be more jealous of each other than boys and therefore are less likely to acknowledge when another girl has social status or possesses desirable characteristics. Certainly, judging from some of the students’ responses on the “Class Play” it appears that such may be the case. For instance, on several questionnaires something like the following was written:
Q. "Who are the most popular people in your grade?"
A. "Jane Smith (well at least she thinks so)."
Q. "Who is good looking or attractive?"
A. "Marcy Jones (not really though, she just sleeps around)."

Curiously, such disparaging comments were never written by boys and were never written by girls about boys. Furthermore, it is noteworthy that in a qualitative study investigating relational aggression among adolescent girls, Owens et al. (2000) discovered that one of the reasons that girls use relational aggression is because they were jealous of the person they were abusing. Perhaps, then, peer-valued characteristics do indeed moderate the relationship between relational aggression and peer perceived popularity and social preference but the finding was not present in this study because adolescent girls are less willing than adolescent boys to admit when a peer possesses something that she desires or reveres. Undoubtedly, it is plausible that the negative comments written by some of the girls were reflective of a common phenomenon, that only a minority of girls were bold enough to express on the questionnaire.

Fourth, the lack of support for the moderator hypothesis regarding the link between relational aggression and peer perceived popularity and social preference for girls may be due to the fact that girls are more interpersonally sophisticated than boys (Cillessen & Bellmore, 2000; Hall, 1978; Kurdek & Krile, 1982; LaFontana & Cillessen, 1999, 2000; Lagerspetz et al., 1988). As such, it may be that boys do not pick up on the finer agnostic nuances and subtleties associated with the use relational aggression, while girls are very much aware of what is happening, hence they are less forgiving or less tolerant. This gender difference may help explain why for boys, the relationship
between relational aggression (and overt/physical) and peer perceived power, popularity and social preference was moderated by the presence/absence of peer-valued characteristics whereas for girls such was not the case. Moreover, if girls are indeed more interpersonally sophisticated, they may be less swayed or influenced by the external qualities of their peers than boys are.

Finally, contrary to what was hypothesized, findings from regression analyses revealed that, for girls, the positive relationship between overt/physical aggression and peer perceived popularity decreased as the level of peer-valued characteristics increased. This finding is rather curious to the degree that the more overtly/physically aggressive girls were perceived by their peers to be rich, stylish, and in possession of a lot of material goods, the less they were perceived to be popular. Girls may not want to recognize other girls' popularity if these girls possess qualities that they admire or envy. That is, there may be a jealously component in operation. In fact, Sletta (1992) has argued that the peer group likes a person if the person has characteristics that the peer group finds attractive but this liking is dependent on how much a person possesses. If, for example, a person has too much going for them (i.e., they are perceived to be very attractive, very stylish, very athletic, very intelligent, etc.), then the peer group resents and rejects the individual for her or his heightened level of assets. It seems plausible, then, that there may be a critical level or an optimum level at which the peer group recognizes a person's alluring characteristics yet still perceives the person in question in a positive manner. Certainly, this idea of there being a critical or optimal level of peer-valued characteristics deserves further examination in future studies as it seems
likely that possessing too little esteemed characteristics is just as problematic as possessing too many.

On a final note, it is worth mentioning that not all peer-valued characteristics moderated the relationship between aggression and social status in the same manner. This finding highlights the fact that different characteristics may be needed to achieve different types of status. For instance, the relationship between relational aggression and peer perceived power was moderated, for both girls and boys, by the presence of PVC 1 (possessions, rich, and style) while such was not the case for the relationship between relational aggression and peer perceived popularity and social preference. Interestingly, despite the fact that not all peer-valued characteristics moderated the relations between aggression and social status, it is noteworthy that the moderator hypothesis was consistently supported for PVC3 (schoolwork and talent) across both types of aggression and across all three indices of social status. In other words, it seems that aggressive adolescents who were perceived by their peers to be talented and good students were also perceived as being more powerful, popular and liked than aggressive adolescents who did not possess such traits. Perhaps the reason for this consistent finding is that PVC 3 is functioning as a proxy for intelligence, a feature that is needed in order to maintain high social status and positive regard in light of being aggressive. Said differently, it may be that intelligent adolescents possess the cognitive capabilities needed to be effective in their use of aggression: these adolescents know who to pick on, when to pick on them, and how to pick on them (see Bjorkqvist & Osterman, 2000; Kaukiainen, Bjorkqvist, Lagerspetz, Osterman, Salmivalli, Rothberg, & Ahlbom, 1999; Sutton, Smith, & Swettenham, 1999). All in all, the findings of the
present study suggest that a certain level of intelligence (social and/or cognitive) may be needed in order to achieve or maintain hegemony. It seems likely that intelligence (social and/or cognitive) may play a vital role in the relationship between aggression and social status, and as such, future research addressing this notion seems warranted.

**Limitations**

Although the results of the present study extend our theoretical understanding of the link between aggression and social status, the study was not devoid of limitations. Specifically, there are two design limitations that should be attended to prior to replicating these findings in another population. First, it is essential to consider that the participants of this study did not assess how salient or attractive the peer-valued characteristics used in this study were to them. While attempts were made to validate that the nine pre-defined characteristics were indeed valued by the peer group, the findings from the peer-valued characteristic ranking questionnaire (i.e., “What does it take to be popular at your school?”) proved to be invalid. As such, if replicating this study, perhaps a more eloquent study design would be to establish apriori the characteristics that are valued by the peer group. This could be accomplished by using interview or open-ended questions.

A second design limitation of this study is that the term popularity was never defined for the participants. It could well be then that for some the term popular meant “who has the most friends” or “who is most liked by the peer reference group”. In this study, popularity was conceptualized as a measure of visibility, but this definition was never really conveyed to the participants (c.f., Parkhurst & Hopmeyer, 1998). Given this
issue, future research may benefit from having adolescents define a priori what it means to be popular as a way of validating the researchers' conception of popularity. Again this could be accomplished by using open-ended questions or by interviewing adolescents about what it means to be popular.

Further, when evaluating the merits of this study, it is also important to attend to issues of shared-method variance. Considering that all the variables used in this study were obtained through peer ratings, it is conceivable that the correlations obtained may have occurred simply as a function of shared method variance rather than (or in addition to) there being any underlying relationship between constructs. One way to remedy this problem is to use different types of measures and/or informants (i.e., self-report, teacher, and peer-report), although I caution the use of teacher reports within an adolescent population, as they are likely to be less reliable than peer-reports and self-reports (see Pakaslahti & Keltikangas-Jarvinen, 2000).

Lastly, it is important to take into account the generalizability of the present findings. Specifically, it is important to underscore the fact that peer-valued characteristics are contextually and historically based. As such, what moderates the relationship between aggression and social status may vary from one point in time to another, from context to context, for girls versus boys, and for young children versus older children. For instance, in one school, the peer group may value athletic ability, whereas at another school attractiveness may be revered. Support for this claim comes from studies that have demonstrated how the relationship between aggression and peer preference varies across different social contexts with aggressive children being less rejected in classes where aggression normative and more rejected in classes...
where aggression is rare (Boivin, Dodge, & Coie, 1995; Stormshak, Bierman, Bruschi, Dodge, & Coie, 1999; Wright et al., 1986). Further, it is also important to recognize that aggression itself can also serve as a peer-valued characteristic (e.g., Artz, 1998). For instance, Bukowski et al. (2000) found that adolescents, in comparison to younger children, were attracted to aggressive peers (see also Moffitt, 1993). In consideration of these findings it seems likely that what makes aggressive adolescents popular, powerful and liked in one context does not necessarily translate to a different social milieu.

Implications for School-Based Intervention Programs

Certainly, the findings of the present study have implications for school-based intervention programs that are aimed at reducing adolescent aggression. Precisely, it seems likely that such intervention programs will be met with much resistance from students insofar as it may be the difficult to dissuade the use of aggression if it is seen as a source or privilege of high status. Indeed, this point is especially valid if we consider that (a) for adolescents, being popular and dominant are important social pursuits (Gavin & Furman, 1989; Jarvinen & Nicholls, 1996), and (b) that adolescents admire aggressive peers (Bukowski et al., 2000; Moffitt, 1993). In fact, according to Harris' (1995,1998) group socialization theory “children get their ideas of how to behave by identifying with a group and taking on its attitudes, behaviors, speech, and styles of dress and adornment” (p.169). Clearly then, if the crowd adolescents are emulating is aggressive and perceived to be popular and powerful it seems likely that aggressive behavior will persist. Perhaps then, anti-aggression intervention programs need to redirect their focus away from changing the behavior of aggressive adolescents (i.e.,
person focus) toward changing the attitude of the peer reference group concerning their views of aggression and social status (i.e., group focus). Indeed, as suggested by Coie and Dodge (1998), intervention programs must attempt to "alter adolescent norms", that is, to change the peer culture (p. 840; see also Harris, 1995, 1998). Moreover, in an effort to change adolescents' peer culture, it is important to also evaluate what role adults play in school traditions (Brown, 1990). That is, it is worthy to appraise what values teachers and other school personnel are disseminating either directly or indirectly to adolescents. For example, if athletic aptitude is emphasized more than academic ability in a particular school, it is essential to consider how this may impact adolescents' beliefs concerning the importance of possessing such skill (see Eder, 1995; Steinberg, 1993).

Conclusion

According to Tajfel (1978), people create social groups as a way of defining who they are and in doing so create in-groups and out-groups. This course, in turn, leads to social comparisons that favor the in-group and devalue the out-group (see also Wills, 1981). Staub (1988) also suggests that there is a basic human tendency to differentiate between "us" and "them" and argues that this type of segregation is "a precursor to many forms of group violence" (p.83). Indeed, when forming the in-group or the "us", some aggression directed toward the out-group or the "them" is needed. For example, studies by Adler and colleagues (1992, 1995, 1998) and Merten (1997) have demonstrated how adolescents' peer groups are characterized by exclusivity and hostility toward non-members. These studies are mentioned in order to emphasize that aggression may be linked to peer perceived popularity and power because the
adolescents who occupy the top of the social hierarchy most likely achieved their status by being aggressive (see Hinde, 1974; Omark & Edelman, 1975; Wilson, 1975). Moreover, in competing for or in maintaining hegemony, adolescents sometimes rely on aggressive means to procure their social goal. In other words, one of the primary functions of aggression (overt/physical or relational) may be the achievement or maintenance of peer perceived popularity and/or power, hence the title of this study.
References


Guerra, N.G., Huesmann, L.R., & Hanish, L. (1995). The role of normative beliefs in children's social behavior. In N. Eisenberg (Ed.), *Review of personality and


Appendix C

Community Profile.

Data were collected from a small city (City X) located in British Columbia (population 8,226). The main employment industries for City X are Manufacturing (10.1% of the population) and Retail Trade (12.2% of the population). In 1996, the mean income for City X was $34,132 (mean provincial income=$36,961; most current census data). Data obtained from the British Columbia’s Ministry of Attorney General Police Services Division (1998) indicates that crime rate for City X, defined as the “number of criminal code offenses (excluding traffic offenses) per 1,000 population” was 101 compared to the figure of 121 for the province (p.108). Data from the British Columbia’s Ministry of Education indicated that the secondary school graduation rate (1998/1999) for City X was 69% as compared to 75% for the province.

Sources:


Appendix D

TELLS US ABOUT YOURSELF
We are interested in learning a little about your background.
Please follow the directions carefully, and answer all of the questions.

REMEMBER, YOUR ANSWERS WILL REMAIN PRIVATE
AND WILL BE SEEN ONLY BY THE RESEARCHERS.

1. Are you female or male? (Check one) Female _____ Male _____

2. How old are you? _______ (years)

3. What is your birth date? _______ _______ _______
   month    day    year

4. What GRADE are you in? (Check one)
   ____ 6th
   ____ 7th
   ____ 8th
   ____ 9th
   ____ 10th

5. How would you describe yourself in terms of ethnic or cultural heritage? (Check one)
   ____ White (Anglo, Caucasian, etc.)
   ____ First Nations (Native Canadian)
   ____ Indo Canadian (East Indian)
   ____ Asian (Chinese, Japanese, Korean, etc.)
   ____ Latin (Spanish, Mexican, South American, etc.)
   ____ Black (African, Haitian, Jamaican, etc.)
   ____ Other (please describe) ________________________________
Appendix E
A CLASS PLAY

Instructions:

Imagine that you are the DIRECTOR of a play that will be put on in your grade. As the director, you have many jobs to do, but one thing you must do is to decide who could play each of the characters in your play.

For each of the parts or roles listed on the next few pages, please write down the names of the people in your grade who you feel would best fit each role. You can name as many people as you can think of for each role and people can be named for more than one role.

The yellow sheet of paper is a list of the students in your grade that are part of this project, and you can use this sheet to help remember all the possible actors to choose from. Be sure to put down both first and last names for each one.

For example, suppose that in your play there is one character that is a giant. Who in your grade could perhaps play the part of a giant? Who in your grade is very tall?

Write down the names of classmates who are very tall and could play the part of a giant. Write down more than one name in case someone might be good for more than one part.

Who is very tall?

REMINDER, DO NOT DISCUSS YOUR ANSWERS WITH ANYONE (NOT YOUR FRIENDS, TEACHERS, ETC.).
1. Who always gets along with other people?

2. Who does well in their schoolwork?

3. Who starts fights and arguments with others?

4. Who is shy?

5. Who has a good sense of humor and can make people laugh?

6. Who spreads mean rumors about someone to get others to stop liking the person?

7. Who do people make fun of?

8. Who hits, pushes others?

9. Who seems to be rich?

10. Who often gets left out of things?
11. Who is able to understand other people's point of view?

12. Who tries to control or dominate a person by keeping them out of the group?

13. Who are the people you like the most in your grade?

14. Who are the people you like the least in your grade?

15. Who intimidates others?

16. Who hangs around with people who often get into trouble?

17. Who would rather be alone than be with others?

18. Who is someone that you can trust (for example to keep a secret or a promise)?

19. Who gets hit and pushed by others?

20. Who is someone who has a lot of great things or possessions (for example, video or computer games, CDs, swimming pool etc.)?
21. Who are the most popular people in your grade?

22. Who are the least popular people in your grade?

23. Who is someone with special talents or skills (for example, musical or writing talents, acting or other exceptional qualities)?

24. Who tells others to stop liking a person to get even with them?

25. Who threatens others to get their way?

26. Who gets picked on by others?

27. Who is tough?

28. Who seems to have a lot of power over others?

29. Who is easy to push around?

30. Who is helpful and cooperative?
31. Who is person other kids will listen to and follow?

32. Who is good looking or attractive?

33. Who is a bully?

34. Who is kind and nice to others?

35. Who will make someone feel bad by making a face, or turning away, or rolling their eyes?

36. Who does not like to take part in what others are doing?

37. Who dresses well and is in style?

38. Who does well in sports?

39. Who helps others when they have a problem?

40. Who is a leader?
Appendix F

WHAT DOES IT TAKE TO BE POPULAR AT YOUR SCHOOL?

Here are 10 things that some people think are important for becoming popular. Are these things important at your school?

Look over the list and pick 3 items that are MOST important if you want to be popular at your school. Write down the numbers for each of these 3 items in the first box at the bottom of the page.

Next, pick the 3 items that are LEAST important if you want to be popular at your school. Write the numbers for each of these 3 items in the box on the right at the bottom of the page.

1. Someone who always gets along well with other people.
2. Someone who does well in schoolwork.
3. Someone who you can trust (for example, to keep a secret or a promise).
4. Someone who dresses well and is in style.
5. Someone who has a lot of great things or possessions (for example, video or computer games, CDs, swimming pool, etc.).
6. Someone who is good looking or attractive.
7. Someone who has a great sense of humor and can make people laugh.
8. Someone who seems rich.
9. Someone who does well in sports.
10. Someone with special talents or skills (for example, musical or writing talent, acting or other exceptional qualities).

<table>
<thead>
<tr>
<th>MOST IMPORTANT FOR BEING POPULAR (select 3 items)</th>
<th>LEAST IMPORTANT FOR BEING POPULAR (select 3 items)</th>
</tr>
</thead>
<tbody>
<tr>
<td>#___________</td>
<td>#___________</td>
</tr>
<tr>
<td>#___________</td>
<td>#___________</td>
</tr>
<tr>
<td>#___________</td>
<td>#___________</td>
</tr>
</tbody>
</table>

Did we miss anything? Is there something else it takes to be popular at your school? (Describe below).
Appendix G

Summary of Class Play Development.

Peer-Valued Characteristics

2. Who does well in their schoolwork?
9. Who seems to be rich?
20. Who is someone who has a lot of great things or possessions (for example, video or computer games, CDs, swimming pool, etc.)?
23. Who is someone with special talents or skills (for example, musical or writing talents, acting or other exceptional qualities)?
27. Who is tough?
32. Who is good looking or attractive?
37. Who dresses well and is in style?
38. Who does well in sports?

These questions were generated from studies by Adler and Adler (1995) and Adler et al., (1992) who describe how these specific qualities are related to "popularity". These particular questions have never been empirically examined.

Sociometric Status

13. Who are the people you like the most in your grade?
14. Who are the people you like the least in your grade?

These two questions were taken from Coie et al. (1982) and re-worded to reflect that students were grouped by grade and not class.

Peer Perceived Popularity

21. Who are the most popular people in your grade?

This question was generated from Parkhurst and Hopmeyer (1998) and the wording of the question has been changed slightly to be in keeping with the wording of the sociometric status questions and in keeping with the fact that students were grouped by grade and not class.

Peer Perceived Power

28. Who seems to have a lot of power over others?
31. Who is a person other kids will listen to and follow?
39. Who is a leader?

These particular questions were also generated from Adler and Adler (1995) and Adler et al., (1992), as well as Merten's (1997) description of powerful/influential students. Moreover, these questions are also in keeping with the dominance literature description of influential children and adolescents (e.g., Pickert & Wall, 1981; La Freniere & Charlesworth; 1983; Weisfeld et al., 1980; Wright & Zakriski, 1996). These particular questions have never been empirically examined.
Overt Aggression

3. Who starts fights and arguments with others?
8. Who hits, pushes others?
24. Who threatens other people to get their way?
33. Who is a bully?

These questions were drawn from those used in previous research (e.g., Coie & Dodge, 1983; Crick & Grotpeter, 1995) with the exception of “Who is a bully?” which was created for the purpose of this study.

Relational Aggression

6. Who spreads mean rumors about someone to get others to stop liking the person?
12. Who tries to control or dominate a person by excluding them from their peer group?
24. Who tells others to stop liking a person to get even with them?
35. Who will make someone feel bad or look bad by making a face, turning away, or rolling their eyes?

Questions 6, 12, and 24 were taken directly from Crick and Grotpeter (1995) and question number 35 was generated from Galen and Underwood (1997).

Note. The remaining items (see Appendix E) were included in the class play because of their relevance to a larger on-going longitudinal projected conducted by Dr. Shelley Hymel, Dr. Patti McDougall and the author (Tracy Vaillancourt). For the purpose of the present study, these questions were considered as fillers.
Appendix H

Factor Loadings for Overt/Physical Aggression, Relational Aggression, and Peer Perceived Power.

<table>
<thead>
<tr>
<th>Item</th>
<th>Overt/Physical Aggression</th>
<th>Relational Aggression</th>
<th>Peer Perceived Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who hits others?</td>
<td>.924</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>Who is a bully?</td>
<td>.902</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>Who starts fights and arguments with others?</td>
<td>.806</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>Who threatens other people to get their way?</td>
<td>.787</td>
<td>(.400)</td>
<td>...</td>
</tr>
<tr>
<td>Who tells others to stop liking a person to get even with them?</td>
<td>...</td>
<td>.909</td>
<td>...</td>
</tr>
<tr>
<td>Who spreads mean rumors about someone to get others to stop liking the person?</td>
<td>...</td>
<td>.889</td>
<td>...</td>
</tr>
<tr>
<td>Who will make someone feel bad or look bad by making a face, or turning away, or rolling their eyes?</td>
<td>...</td>
<td>.796</td>
<td>...</td>
</tr>
<tr>
<td>Who tries to control or dominate a person by keeping them out of the group?</td>
<td>...</td>
<td>.711</td>
<td>...</td>
</tr>
<tr>
<td>Who is a person other kids will listen to and follow?</td>
<td>...</td>
<td>...</td>
<td>.924</td>
</tr>
<tr>
<td>Who is a leader?</td>
<td>...</td>
<td>...</td>
<td>.918</td>
</tr>
<tr>
<td>Who seems to have a lot of power over others?</td>
<td>...</td>
<td>...</td>
<td>.808</td>
</tr>
</tbody>
</table>

Note. All other factor loadings were less than .400. Cross-loadings greater than .400 are shown in parentheses.
Factor Loadings for Peer Valued Characteristics (PVC 1, PVC 2 and PVC 3).

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who is rich?</td>
<td>.899</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>Who is someone with a lot of great things or possessions?</td>
<td>.848</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>Who dresses well and is in style?</td>
<td>.677</td>
<td>(.476)</td>
<td>...</td>
</tr>
<tr>
<td>Who does well at sports?</td>
<td>...</td>
<td>.737</td>
<td>...</td>
</tr>
<tr>
<td>Who is tough?</td>
<td>...</td>
<td>.665</td>
<td>...</td>
</tr>
<tr>
<td>Who has a good sense of humor and can make people laugh?</td>
<td>...</td>
<td>.610</td>
<td>...</td>
</tr>
<tr>
<td>Who is good looking or attractive?</td>
<td>(.505)</td>
<td>.597</td>
<td>...</td>
</tr>
<tr>
<td>Who does well in their schoolwork?</td>
<td>...</td>
<td>...</td>
<td>.850</td>
</tr>
<tr>
<td>Who is someone with special talents or skills?</td>
<td>...</td>
<td>...</td>
<td>.754</td>
</tr>
</tbody>
</table>

Note. All other factor loadings were less than .400. Cross-loadings greater than .400 are shown in parentheses.