

EXAMINING THE INFLUENCE STRATEGIES OF POPULAR ELEMENTARY-AGED
SCHOOL CHILDREN IN THE BROAD SOCIAL NETWORK AND AT THE CLIQUE
LEVEL

by

LUCIA CARYN DWYER

(Under the Direction of A. Michele Lease)

ABSTRACT

The primary emphasis of this dissertation was to determine whether high-status students were identified as leaders in the broad social network and to examine the types of strategies high-status children used to exert influence over peers. This study also investigated high-status cliques and examined whether clique mates utilized the same types of influence strategies as high-status peers. Interdisciplinary research has focused on 2 moderately correlated but distinct types of popularity: sociometric popularity and perceived popularity (Parkhurst & Hopmeyer, 1998). The study was conducted using data from a sample of 857 fourth through fifth grade students attending five elementary schools in the southeastern United States. The current findings revealed that high-status students were identified as leaders and that children nominated as both perceived and sociometrically popular had the highest mean scores on the prosocial influence strategies, whereas perceived popular children were nominated by more peers for employing coercive influence strategies. High-status cliques have the most power to influence members with their cliques and the results suggested that the students within the high-status cliques were similar to their high-status peers in terms of influence strategy use or that they

became more similar in behavior through the peer influence from their high-status peers (Kandel, 1978; Kindermann, 1996). Because of the dramatic increase in bullying within our schools via the Internet and via social networking, implementation of bullying prevention programs should make use of this type of information about peer dynamics.

INDEX WORDS: Popularity; Sociometric Popularity; Perceived Popularity; Cliques; Social Cognitive Maps

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WHAT IT MEANS TO BE POPULAR IN ELEMENTARY SCHOOL: WHO IS POPULAR, IN
THE BROAD SOCIAL NETWORK AND AT THE CLIQUE LEVEL, AND WHY?

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CHAPTER ONE

DISSERTATION INTRODUCTION

Historical Context of Peer Relations Research

Developmental and social psychologists have devoted considerable attention to children's peer relations for over three decades (Hartup, 1970). This interest is understandable given that children and adolescents spend considerable amounts of time every day interacting with peers (Asher, 1990; Miller & Gentry, 1995; Rubin, Bukowski, & Laursen, 2009). Within these interactions, children and adolescents develop and begin to acquire specific skills, attitudes, and experiences, which influence their development (Rubin et al., 2009). Interactions provide children with needed social support, companionship, and help to shape and direct behaviors (Ellis & Zarbatany, 2007; Hallinan, 1995). Consequently, children's ability to interact and get along with peers affects their social, emotional, behavioral, and psychological functioning (Asher & Coie, 1990; Hartup, 1970, 1983, 1992; Newcomb & Bagwell, 1996; Rubin, Bukowski, & Parker, 2006). Children's peer relations do not contribute only to childhood happiness and adjustment but also to healthy adult adjustment (Slee & Rigby, 1998). Peers provide learning opportunities and experiences that are unique and cannot be replicated by other socialization agents in a child's life (Hartup, 1992). Adults, but parents in particular, are aware of the importance of these interactions with peers and encourage contact between their children and peers (Hartup, 2009).

The importance of peer relations can also be considered from an ethological perspective. Because scientists have not been able to demonstrate that peers are essential for development,

given that only rarely are children raised in isolation, studies have investigated this theory in the context of animals. Animal studies suggest maternal rearing without contact between peers produces animals that demonstrate disturbances not only in play but also in long-term disturbances in emotional development (Harlow, 1969). There are no parallel studies with humans but a study by Hollos and Cowan (1973) investigated children who had extensive contact with their parents but grew up without peers on isolated farms in Norway. Compared to controls, the isolated children demonstrated impaired role-taking skills but were not impaired in tasks involving nonsocial logical cognitive operations (Hollos & Cowan, 1973). The children who were isolated lacked social skills. Animal researchers realized to be able to understand animal development, it was imperative to understand how animals interact, form and dissolve relationships, and how groups in which animals are members can influence or be influenced by group's members and their interactions and relationships with each other (Rubin et al., 2009). Animal researchers applied these same ideas to the concept of human development. To understand human development, an understanding of how humans interact and how they form and dissolve relationships is critical along with how groups influence or can be influenced by membership and what interactions and relationships take place within groups (Rubin et al., 2009). Human social relationships are an area of study that cannot be ignored, and researchers have continued to study and develop new methods in which to study human social relationships in childhood. To understand the most contemporary methods and research on children's peer relations, one must first understand the historical background.

Within the broad field of children's peer research, four distinct theories have influenced the development of the field and merit discussion. The first and most influential theory is Sociometry, which derives from the work of Jacob L. Moreno (1934) who published well-known

papers and books (*Who Shall Survive?*) on peer context and groups. Sociometry is based on the idea that to understand group membership and an individual's status within a group, one must first understand the "attractions" and "repulsions" between individuals (Rubin et al., 2009). From this idea, Moreno created the sociometric test that is used to measure attraction and repulsion existing between two persons (Hartup, 2009). Moreno's work included data from many participants, mostly adults. Subsequently, child development researchers applied sociometric methods to the study of children and adolescents (Cillessen, 2009). To provide a framework for the theory of Sociometry, it is helpful to understand the foundations of the theory.

The theory of Sociometry is important to the field of peer relations and has established the groundwork for how researchers assess one's "fit" and status within a peer group. The theory guided researchers to examine how behavior was linked to status. Sociometry was based on a number of assumptions posited by Moreno (1934) who asserted that people are social beings and need to be considered within the context of the other individuals who want to be associated with him or her. The theory postulates that individuals cannot be understood in isolation, and the individual's relations within the group must be taken into account (Bukowski & Hoza, 1989). The second assumption was that an individual's adaptation is based on three interrelated yet distinct aspects of social relations: attraction, repulsion, and indifference. This assumption is still widely used today, as children's positive and negative perceptions of their peers are solicited in research (Cillessen, 2009; Gifford-Smith & Brownell, 2003). Some peers are overlooked, or socially withdrawn, and have fewer social interactions with others, which is why indifference is another important aspect of peer relations (Newcomb, Bukowski, & Pattee, 1993). Moreno also believed that sociometric assessment should be based on how the person perceives others and how others perceive the person. The data collected is based on these

perceptions, so researchers ask students to nominate peers on questions related to status (Cillessen, 2009). Sociometric tests can be based on a range of information and quantification can take the form of a sociogram or summary scores of nominations received (Rubin et al., 2009). Sociometry can be thought of as not only a theory but as a technique that has provided researchers with ways of thinking about groups and ways of developing measures of groups (Rubin et al., 2009).

A second influential theory in the peer relations field is Social Learning Theory, which is derived from the work of Albert Bandura (1977). Social Learning Theory has helped researchers understand how children are socialized. Bandura's previous work had followed the behavioral view of learning, focusing on reinforcement and punishment (Woolfolk, 2010). However, Bandura argued that this view was incomplete because it failed to include an important factor, social influence (Woolfolk, 2010). Social Learning Theory focuses on observational learning, in which importance is placed on the pairing of modeling cues and the observer's perception. This, in turn, generates representations of the model's behavior in the observer's memory (Hartup, 2009). Basically, Bandura proposed that an individual must pay attention to the modeled behavior and remember the details of and learn the modeled behavior to reproduce the behavior. The reproduction of these modeling cues depends on certain conditions-the most prominent being the observed consequences of the model's actions (Hartup, 2009). The modeling cues that lead to favorable outcomes are more likely to be reproduced by the observer. Studies have established other conditions that influence whether a child will replicate the actions of that person (Bandura, 1977). A well-known example of this idea comes from one of Bandura's (1965) experimental studies with preschool children. The children watched a film of an adult who used physical action (e.g., punching, hitting, kicking) on a "Bobo" doll. In Bandura's study,

one group of children saw the adult rewarded for their actions; one group saw the model punished; and the third group saw no consequences (Woolfolk, 2010). In line with Bandura's theory, the children who had seen the models positively reinforced for their actions were the most aggressive toward the doll, and the children who observed models' actions punished were less aggressive. In the 1960s, Social Learning Theory principles were applied to studies of children's peer relations to advance understanding of the methods in which peers could shape each other's behavior and act as agents of socialization (Rubin et al., 2009). Researchers demonstrated that peers influenced each other through their experiences in, or observations of, basic forms of social interactions, and the effects could be observed in behaviors, such as cooperation, altruism, and aggression (Rubin et al., 2009).

A third theory has sought to explain the role of interpersonal relationships and social experiences in shaping personality. Sullivan (1953) proposed a theory of personality development suggesting that, at the beginning of middle childhood, children become increasingly concerned about their social status in peer networks and peer groups (Xie, Li, Boucher, Hutchins, & Cairns, 2006; Sullivan, 1953). In the classic work *The Interpersonal Theory of Psychiatry* (Sullivan, 1953), Sullivan proposed that the role of the peer group changes across the juvenile and preadolescent period. The juvenile period begins when children start school, between ages three and five. During the juvenile period, children learn to follow directions from non-family authority figures such as teachers and to adapt to what they notice about peers. More specifically, children compared their own characteristics with those displayed by peers. Children conclude that either their own characteristics are superior or that their peers' characteristics are worth emulating (Howe, 2010). According to Sullivan (1953), the preadolescent period is between eight and a half to ten years of age. During the preadolescent

period, children interact mostly with same-sex peers. These interactions require children to be sensitive to their peers' feelings, a form of interaction Sullivan termed "collaborative" (Howe, 2010; Sullivan, 1953). Moreover, social learning theory (Bandura & Walters, 1963) suggested that the peer social network was important for children because children observed their peers' social behaviors and used those perceptions to guide their own behavior (Xie et al., 2006).

The origin of a fourth, more recent, influential theory in peer relations resides in peer rejection literature. The theory directs researchers' hypotheses about how a child's status and perceptions of self influence behavior. Coie (1990) reasoned that adolescents' self-perceptions of their status might influence their social behavior. Coie (1990) proposed a two-phase model for the development of peer rejection; in the emergent phase, children's characteristics and behaviors provide the foundation for status. In the second phase, the maintenance phase, the child's status eventually becomes a characteristic of the child. However, Coie (1990) argues that whether the child's status becomes stable during the second phase may depend on a variety of reasons, including children's self-perceptions of their status. For example, rejected children who are able to identify their status and the behaviors that they have used to attain such status might change their behaviors to change their status (Mayeux & Cillessen, 2008). If a rejected child is able to stop acting and engaging in behaviors that have offended peers, then the peers' perceptions of the child may change. However, Sandstrom and Coie (1999) suggested the rejected boys with high-self-perceptions of peer liking might have become involved in peer activities, rather than withdrawing from peers, thus having the opportunity to utilize positive behaviors and come to be viewed in a different way by their peers. A child's status, and perceptions of their status, can drive behavior.

Mayeux and Cillessen (2008) suggest that self-perception processes involved in peer rejection might also be applicable in the development and maintenance of high-status, including high social preference, perceived popularity, and the behavior correlates that are associated with both. For example, a child or adolescent possesses a certain characteristic or behavior that places him or her in the emergent phase of popularity (e.g., children nominated as popular by peers). The characteristic or behavior leads to peers regarding the child as powerful and dominant. The child or adolescent who is aware of the perception of their being powerful or dominant, and is enjoying related benefits, might then engage in behaviors that will further increase his or her status, such as overt or relational aggression (Cillessen & Mayeux, 2004). Specifically, it is hypothesized that high-status individuals who are aware of their status may be able to utilize aggressive methods to further their status because they are afforded social protection from suffering negative consequences (Mayeux & Cillessen, 2008). Perceived popular children are selective in choosing which peers they interact with and it is possible they intentionally exert their social power to manipulate these peers (Merten, 1997; Xie, Swift, Cairns, & Cairns, 2002). Moreover, Mayeux and Cillessen (2008) suggest that perceived popularity, which can lead to increased aggression, might be dependent on the individual's perception of their own status (Mayeux & Cillessen, 2008). Thus, the moderator of the peer-perceived popularity and aggression link might be accurate self-perceptions of popularity (Mayeux & Cillessen, 2008).

Overview of Two Types of Popularity

Historically, much of the research that resides in the psychology-based peer relations literature has investigated low-status, rejected children, because of the evidence that these children struggle to fit in with peers and are at risk for concurrent and future psychopathology as well as low academic adjustment (Deater-Deckard, 2001; Kraatz-Keily, Bates, Dodge, & Pettit, 2000; Ollendick, Weist, Borden, & Greene, 1992; Parker & Asher, 1987; Rubin et al., 2006).

However, elevated social status has been established as a good predictor of a number of developmental outcomes, and children who are able to develop and maintain positive peer relationships are likely to develop a positive social identity, positive self-esteem, and exert influence over peers (Hartup, 1970; Lease, Musgrove, & Axelrod, 2002; Parker, Rubin, Price, & DeRosier, 1995). Therefore, researchers have turned their focus as of late to high-status children and the characteristics that define them. Differing disciplinary perspectives on high-status children and adolescents have been investigated (Adler & Adler, 1998; Newcomb et al., 1993; Rodkin, Farmer, Pearl, Van Acker, 2000).

Currently, peer relations research focuses on two dimensions of popularity -- sociometric and perceived popularity -- that are moderately correlated, with discriminable sets of characteristics found to be related to the two constructs (Andreou, 2006; Cillessen & Mayeux, 2004; LaFontana & Cillessen, 1999; Parkhurst & Hopmeyer, 1998; Prinstein & Cillessen, 2003; Rose, Swenson, & Carlson, 2004; Vallaincourt & Hymel, 2006). The meaning of, and characteristics associated with, the term ‘popularity’ are dependent upon the researcher’s background and discipline (Cillessen & Marks, 2011; Lease et al., 2002). Psychologists have tended to adhere to the theory set forth by Moreno (1934) and have assessed popular status based on the assumption that popularity is a measure of the degree to which a child is liked or disliked by their peers (Coie, Dodge, & Copottelli, 1982; Newcomb et al., 1993). The term “popular” became associated in the psychological literature with mostly positive characteristics, such as kind, prosocial, well-liked, accepted, and cooperative with peers and adults (Cairns, Xie, & Leung, 1998; Lease, et al., 2002; Newcomb et al., 1993). In the traditional sociometric literature, the terms “sociometric popularity” and “acceptance” have been nearly interchangeable (Cillessen & Marks, 2011; Lease et al., 2002; Newcomb et al., 1993).

In contrast, the definition of popularity historically used by sociologists (Adler & Adler, 1998; Adler, Kless, & Adler, 1992; Corsaro, 1979; Eder, 1985; Eder, Evans, & Parker, 1995; Merten, 1997) relied on participants' perceptions and social constructions of popularity, and the definitions have identified popular children as prestigious, dominant, and socially prominent (Lease et al., 2002; Parkhurst & Hopmeyer, 1998; Rodkin, Farmer, Pearl, & Van Acker, 2000). Therefore, in sociological research the term "popular" has been associated with being cool, attractive, aggressive, dominant, visible, prestigious, and socially skilled (Adler & Adler, 1998; Cillessen & Marks, 2002; Eder, 1985; Eder et al., 1995; Lease et al., 2002). This type of popularity has been labeled 'perceived popularity' by those trained in the psychological tradition to distinguish it from sociometric popularity (Cillessen & Rose, 2005; Parkhurst & Hopmeyer, 1998; Vaillancourt & Hymel, 2006). To further illustrate the uniqueness of the term "popularity," an in depth review of sociometric popularity and perceived popularity follows.

As noted previously, the origins of sociometric methods as applied in psychology-based peer-relations research are based largely on the work of J. L. Moreno (1934) (Cairns et al., 1998; Cillessen, 2009). Moreno's first sociogram, which included a map of attractions indicated by arrows in a graph, was published in 1934 and was achieved by asking refugee families who were moving into Vienna who they wanted to live next to (Cillessen, 2009). This sociometric procedure allowed for, and prompted, the development of the graphical representation of links among individuals, including individual's positions with regard to one another and the individual's status in the social setting (Cairns et al., 1998). Although Moreno developed the sociometry method, a number of early childhood development researchers adapted and applied this method to the study of the development of children and adolescents (Cillessen, 2009). However, Moreno's method did not allow for statistical analysis because the sociogram was not

a map with geometric properties (Cairns et al., 1998). Moreno's sociogram was a qualitative representation of numerical data (Moreno, 1934). Peery (1979), who followed McCandless and Marshall (1957), argued that the use of sociograms, as originally intended by Moreno, was complex; Peery subsequently utilized the data in the sociogram to derive a quantitative index of the individual's status within the social network (Cairns et al., 1998). In Peery's system, an individual could be classified as popular, rejected, or neglected by calculating the number of peers who nominated the individual as a friend or not a friend. This classification procedure was not as complex as Moreno's sociograms, because the pattern of relationships within the social network, which included clusters of group members was not considered (Cairns et al., 1998). Instead, sociometric status was designed to capture how well individuals within their network were liked or disliked by those within the network rather than the pattern of relationships among all members of the network. Over time, sociometric assessment developed and evolved, and many variations of the assessment procedure were used in research conducted before the 1980s (Cillessen, 2009; Cillessen & Bukowski, 2000). However, researchers eventually agreed that the need for a consensus existed; as a result, the most pivotal procedure in sociometric assessment was developed.

Coie, Dodge, and Coppotelli (1982) argued for the need for a consistent procedure for determining sociometric status to be used across research groups. More specifically, the terms popularity and acceptance among peers were not being operationally defined consistently in the literature before their seminal paper was published. Some researchers defined social status based on the number of peer nominations received for the item "Whom do you like the most?", whereas other researchers combined data from the "like most" question with peer nominations for the question "Whom do you like the least?" to determine sociometric status (Coie et al.,

1982). Therefore, social status distinctions were dependent on whether the researcher determined and defined status through the acceptance score solely or through acceptance (i.e., ‘attraction’ or “like-most”) and rejection (i.e., “repulsion’ or “like-least”) scores together.

Clear social status distinctions, especially between those children who are overlooked or ignored and those who are actively disliked, were difficult to make when researchers did not use negative sociometric nominations (Coie et al., 1982; Cillessen & Marks, 2011). Based on this problem, and research which showed that negative sociometric nominations posed no harm to children, Coie and colleagues (1982) set the standard for utilizing both positive and negative nomination questions in the sociometric assessment procedures (Asher & Hymel, 1981). In their sociometric procedure, children are asked to nominate three classroom peers that they “like the most” (“acceptance”) and three classroom peers that they “like the least” (“rejection”) (Coie et al., 1982). The number of nominations received for each question is summed for each child and standardized within classroom to control for differences in classroom size. Because children tend to give like-most nominations to same-gender peers and tend to give more like-least nominations to opposite-gender peers, scores also are standardized by gender to account for uneven gender distributions across classrooms. Two scores are derived from the standardized like-most and like-least scores: social preference and social impact (Peery, 1979). The difference between the standardized acceptance and standardized rejection scores provided a score for “social preference.” The summing of the standardized acceptance and standardized rejection scores provided a score for “social impact.”

The like-most, like-least, social preference, and social impact scores are then used to determine the sociometric status category to which a child is classified as outlined by Coie, Dodge, and Coppotelli (1982). Historically, children who received high acceptance scores, low

rejection scores, and high social preference scores were labeled “popular”, but children who received high acceptance scores, high rejection scores, and high social impact scores were largely ignored. Subsequent research performed by Roff, Sells, and Golden (1972) indicated that these children were conceptually different from “popular” children; Coie and colleagues then proposed to identify that group of children and label them as “controversial.” Thus, Coie and colleagues’ (1982) resulting procedure classified children into one of five sociometric status categories: Popular children receive a social preference standard score of greater than 1; a like-most standard score of greater than 0; and a like-least standard score of less than 0.

Controversial children receive a social impact score of greater than 1 as well as like-most and like-least standard scores of greater than 0. Rejected children receive a social preference score of less than -1; a like-least standard score of greater than 0; and a like-most standard score of less than 0. Neglected children receive a social impact score of less than -1; a like-most score of 0; and a like-least score of 0. Average children receive a social preference standard score of greater than -.5 and less than .5. This sociometric procedure has been the standard method used in research since the 1980s and is still the most widely used procedure today (Cillessen, 2009; Cillessen & Marks, 2011).

Cillessen (2009) described and distinguished elements of the sociometric procedure including the “reference group, voter population, votee population, quantification method, and classification method.” The “reference group” includes all persons within a group or social network within which status is determined. Therefore, peer status depends upon the reference group in which such status is assessed. Research recommends that the reference group for kindergarten and elementary students be the classroom and for early adolescents in middle school, the grade (Cillessen, 2009). The children or adolescents who participate in a sociometric

procedure and complete a sociometric questionnaire are termed the “voter population.” The children or adolescents who are being evaluated are termed the “votee population.” All members of the reference group should participate as both voters and votees. In the ideal sociometric procedure, no restrictions should be placed on the voter or votee population. However, in practice, this ideal situation is often not possible due to absenteeism on the day of testing as well as lack of permission for participation. Sociometric scores can still be obtained even without all members of the reference group participating; the acceptable participation rate is a minimum of 70% when limited nomination procedures (i.e., nominations for like-most and like-least are limited to three) are used (Crick & Ladd, 1990). If the researchers use an unlimited nomination procedure, however, sociometric scores can be obtained with a 60% participation rate (Cillessen, 2009). Cillessen (2009) noted benefits of using unlimited nominations with older children and adolescents, especially when the entire grade level (versus classroom) is the reference group. Also, research suggests that the sociometric scores that are derived from unlimited nominations are stable and have higher correlations with measures of social behavior than do scores derived from limited nomination procedures (Cillessen & Mayeux, 2004; Jiang & Cillessen, 2005; Terry, 2000).

The next step in the sociometric procedure is the quantification method (Cillessen, 2009). The way scores are usually computed for peer nominations is to count the total number of peer nominations that are received for each sociometric item. A complication that could arise during this process is a positive correlation between the number of votes received and the size of the voter population. To control for this issue, Coie and colleagues (1982) established a standardization method in which raw scores are standardized to z-scores within the votee population, as previously described.

Finally, the last step in the sociometric process is the classification method. Although other methods also exist, the most common method is the one established by Coie et al. (1982), which is a two-dimensional system that uses children's standard scores to classify them as popular, rejected, neglected, controversial, or average (Cillessen, 2009). Because this review focuses on high-status or popular children, the correlates of sociometric status and previous research on sociometrically popular children will be discussed.

When the traditional definition of popularity from the sociometric literature has been utilized, researchers have found sociometric popularity is correlated with prosocial characteristics as well as low levels of aggression and disruptive behavior (Coie, Dodge, & Kupersmidt, 1990; LaFontana & Cillessen, 2002; Lease et al., 2002; Parkhurst & Asher, 1992; Rubin, et al. 2006). In the classic sociometric study of Coie and colleagues (1982), peers nominated sociometrically popular children as leaders and as cooperative and infrequently nominated them for negative characteristics such as “disrupts the group,” “fights,” and “seeks help.” Similarly, sociometrically popular children have been found to be fun, kind, trustworthy, cooperative, less likely to start fights and disrupt the group, and less ‘stuck-up’ than other students (Parkhurst & Hopmeyer, 1998; LaFontana & Cillessen, 1999). Sociometrically popular children also have been found to be socially and academically competent and overall prosocial, well-adapted children (Coie et al., 1990; LaFontana & Cillessen, 1999; Newcomb et al., 1993; Parkhurst & Hopmeyer, 1998; Rubin et al., 2006). In a meta-analysis of peer relations, patterns of behavioral correlates were found to be associated with sociometric popularity (Newcomb et al., 1993). High levels of sociability, high cognitive abilities, low levels of aggression, and low levels of withdrawal were correlated with sociometric popularity. In comparison to average children, sociometrically popular children demonstrated better problem-solving skills, positive

social actions, and positive social traits as well as lower presentations of disruptive behavior and loneliness. Furthermore, sociometrically popular children tend to be regarded as leaders within the group and effective problem solvers (Newcomb et al., 1993; Rubin et al., 1998). Overall, research and reviews (Asher & Coie, 1990; Parkhurst & Hopmeyer, 1998; Rubin et al. 2006) have indicated that sociometrically popular children possess a profile that is indicative of positive adjustment in academics, interpersonal skills, and emotional and behavioral functioning.

Not only have distinct behavioral profiles emerged in cross-sectional research, Ollendick and colleagues found distinct differences between the five sociometric status categories in a five-year longitudinal study (Ollendick, Weist, Borden, & Greene, 1992) as well. The researchers investigated sociometric status as well as academic, behavioral, and psychological adjustment. Initial sociometric assessment occurred in the fourth grade and the follow up academic, behavioral, and psychological adjustment assessment occurred in the ninth grade. Consistent with cross-sectional research, sociometrically popular children were more frequently nominated for likeable behaviors by their peers in comparison to the other sociometric status categories, whereas children who were classified as controversial and rejected were more frequently nominated by their peers for aggressive behavior. Further, controversial and rejected children self-reported more substance abuse and conduct problems and committed a similar number of delinquent offenses. On a teacher rated scale, controversial children showed higher levels of attention problems than popular or neglected children, whereas in the academic domain, controversial children failed at least one grade and were outperformed by their popular and neglected peers on achievement tests, similar to their rejected peers. However, the authors noted that researchers should focus more on controversial as well as rejected children, as some of the

controversial children did not appear to be maladjusted 5 years later but reported good outcomes, including academic honors, leadership roles, and participation in the community.

Comparable to sociometrically popular children, controversial children have been shown to display positive social interactions (Newcomb et al., 1993); to receive high ratings of popularity (Wentzel & Asher, 1995); and to be perceived as leaders (Bagwell, Coie, Terry, & Lochman, 2000). However, similar to rejected children, controversial children have been shown to be aggressive, disruptive; and display multiple antisocial behaviors (Newcomb et al., 1993; Wentzel & Asher, 1995). Controversial children have also been perceived as arrogant or snobbish (Hatzichristou & Hopf, 1996). Research has found that controversial children display a similar profile to both the popular and rejected children in that they are perceived as disruptive, starting fights, seeking help, and being leaders in the peer group (Coie et al., 1982; Newcomb et al., 1993). Controversial children not only have been shown to have elevated levels of aggression in comparison to average children, but their aggression has been significantly greater than that displayed by rejected children. Researchers have asserted that controversial children's profile supports the view of them as "visible, active, and assertive children" (Coie et al., 1982).

Interestingly, a differing perspective on popularity, existing outside of the developmental psychology literature, might provide insight into the "controversial" classification. Specifically, sociological researchers tend to conduct ethnographic studies that include observing patterns of interactions among students and investigate students' perceptions of their interactions to provide meaning to their own and others' popularity (Adler & Adler, 1998; Eder, et al., 1995).

Ethnographic studies have revealed that the term 'popularity' holds different meanings for many students and, possibly, the definition of popularity changes over time (Eder, 1985). 'Popularity' in the sociological tradition is not interchangeable with liking. Instead, the correlates of

popularity in this tradition include visibility, dominance, prestige, athletic ability, family background (which includes parents' socioeconomic status), physical attractiveness, and socially savvy interpersonal skills (Adler & Adler, 1998; Eder, 1985). Thus, liking and sociological popularity are not the same construct: Eder (1985) noted that girls agreed that female popular students were more visible than others but did not agree that all female popular students were well-liked. Moreover, some girls described the popular girls as nice, friendly, and well-liked, but other girls described the popular girls as stuck-up and unfriendly and expressed dislike of them (Eder, 1985). The terms "sociometric popularity" (or likeability, social acceptance) and peer 'perceived popularity' have been adopted to distinguish between someone who is well-liked (i.e., sociometric popularity) from someone who fits the sociological conception of 'popularity'.

In the late 1990s, psychology-based researchers began to investigate the hypothesis that sociometric popularity and peer perceptions of popularity were distinct constructs (Parkhurst & Hopmeyer, 1998). Parkhurst and Hopmeyer's 1998 study was built on the hypotheses of an earlier study (Parkhurst & Asher, 1992) in which students reported on popular students at their school and suggested that the popular students were not the most liked, kind, or trustworthy, that they could not take teasing but did start fights, and that they were not shy. Students reported that the popular students were 'stuck-up' and were 'not easy to push around'. Therefore, in one of the first studies of its kind, Parkhurst and Hopmeyer (1998) hypothesized that students who were identified as sociometrically popular would be distinct from students who were explicitly identified by peers as 'popular', corresponding to the sociological conception of popularity. Results indicated that sociometric popularity was only moderately correlated with perceived popularity; perceived popularity was correlated more highly with the social impact score used in sociometric assessment methods. As such, it would appear that sociometrically controversial

students would be most likely to be classified as perceived popular, and sociometrically neglected students would be least likely to be perceived as popular. Parkhurst and Hopmeyer's results confirmed that, utilizing the sociometric status procedure, students who were classified as controversial and popular constituted the highest proportion of perceived popular students. Students who were classified as high in terms of perceived popularity and were not classified as sociometrically popular were described as aggressive and self-important and not kind nor trustworthy. Interestingly, one study found that 11% of (sociometrically) *rejected* students also ranked high in terms of perceived popularity (Lease et al., 2002).

Subsequent research has replicated Parkhurst and Hopmeyer's (1998) findings that perceived popularity and sociometric popularity are correlated with each other as well as social dominance, yet all three appear to be independent constructs (Lease et al., 2002; Parkhurst & Hopmeyer, 1998). In an elementary-aged sample, Lease, Kennedy, and Axelrod (2002) found perceived popularity and sociometric popularity to be correlated moderately ($r=.62$). In the same sample, social dominance was also found to be correlated moderately with perceived popularity ($r=.62$) and sociometric popularity ($r=.57$). Behavioral characteristics associated with perceived popularity and sociometric popularity were investigated, and the authors found further evidence that perceived and sociometric popularity are differing constructs. Perceived popular boys were characterized as attractive, socially visible, socially aggressive, and not socially withdrawn. Girls who were perceived as popular were characterized as bright, socially visible, and socially aggressive. Participants in the Lease and colleagues' study (2002) indicated that they preferred to have perceived popular children to reign as group leaders, they admired perceived popular children, and they also desired to be like the perceived popular children (Lease et al., 2002). Specific characteristics were found to be associated with boys who were identified both as

perceived popular and well-liked. For example, they were not characterized as above-average in terms of social aggressiveness or attractiveness. Girls who were perceived as popular and also well-liked were not socially aggressive nor were they as socially visible as the perceived popular-only group of girls (Lease et al., 2002).

Perceived popularity is a social construct and the definition may vary across cultures and from population to population given that respondents decide what it means to be 'popular' (Rose, Swenson, & Waller, 2004). However, a number of articles and reviews have identified similar characteristics of perceived popularity. Perceived popularity is associated with being well known, cool, dominant, aggressive, athletic, being a leader, having desirable possessions, and being desirable to the opposite sex (Adler & Adler, 1998; Eder, 1985; LaFontana & Cillessen, 2002; Lease et al., 2002; Parkhurst & Hopmeyer, 1998; Rose et al., 2004). Similar characteristics for children who were perceived as popular were found in a sample drawn from elementary schools in Hong Kong (Schwartz, Tom, Chang, Xu, Duong, & Kelly, 2010). Similar to the construct of sociometric popularity in western culture, well-accepted children in the Hong Kong sample demonstrated high levels of assertiveness and leadership and being well accepted was associated with positive behavioral characteristics. This profile contrasted with the profile of characteristics displayed by children who were perceived as popular, which included both pro-social and aggressive tactics. The authors endorse the hypothesis that popular children may not engage in behaviors that are regarded as positive by their peers. Instead, perceived popular children and adolescents who have adequate social skills may engage in aversive behaviors to maintain their status (Parkhurst & Hopmeyer, 1998). Finally, the authors suggest that perceived popularity reflects a form of social dominance that is distinct from acceptance in both North American and Hong Kong children's peer groups (Schwartz et al., 2009).

Perceived Popularity, Dominance, and Aggression

Theories of social dominance are relevant to the study of peer social status and popularity because the theories suggest that socially dominant individuals are influential and focal group members (Abramovitch & Grusec, 1978; Hawley, 1999). Similar to assertions for high-status children, it is believed that group members watch the dominant individuals of the group to learn from them and imitate them (Hawley, 1999). Bandura's social learning theory would suggest that as individuals observe dominant individuals being reinforced or punished for particular behaviors, individuals become more likely to exhibit socially promoted actions and less likely to demonstrate punished behaviors. This pattern has been documented in young children and indicates that social dominance is associated with a certain amount of prestige (Hawley, 1999), similar to perceived popularity. Dominant toddlers and preschoolers not only play an important role in the social group but they also have the ability to succeed in disputes, and acquire and control the object they desire by utilizing agonistic and coercive strategies (Russon & Waite, 1991; Strayer & Trudel, 1984). Like older children, dominant toddlers and preschoolers are watched, imitated, and liked given the socially central status they have acquired (Abramovitch & Grusec, 1978; Jones, 1984; Strayer & Trudel, 1984).

Social dominance theories emphasize the adaptive role of aggression and propose that children and adolescents use aggression to control the social resources in the group (e.g., social attention) and, subsequently, to increase their social standing among peers and to increase peers' admiration of them (Neal, 2010). According to social dominance theories, dominance is a social reward of aggression (Hartup, 1974). For individuals within a group hierarchy, research has found that aggressive behavior and dominance are positively related (Weisfeld, Omark, & Cronin, 1980). According to social dominance research, the peer group is hierarchically

organized by children's ability to control material and social resources within the peer group (Hawley, 1999). The children at the top of the hierarchy, the most dominant children, are influential in the peer group, are the most central members of the peer group, have high self-esteem and interpersonal skills, and are tend to be popular, attractive, tough, and athletic (Paikoff & Savin-Williams, 1983; Savin-Williams, 1979). However, Hawley (1999; 2002; 2003) has shown that some children use prosocial methods while others use coercive methods to assert dominance. According to Hawley, prosocial and coercive dominance strategies are similar in that the goal of both approaches is resource control (Hawley, 2007).

Resource control theory is similar to the social dominance theory that was posited by Pellegrini and colleagues (Pellegrini & Bartini, 2001; Pellegrini & Long, 2002), who proposed that individuals within a social hierarchy utilize dominance to gain access to resources. Resource control theory, which is an ethological theory, was developed by Hawley (1994) and integrated animal-based research into social hierarchy research for elementary school-aged children (Hawley, 1994). Resource control theory differs from other animal based theories in that the focus of the theory is not on the structure of behavior but rather the function (i.e., resource control) (Hawley, 1994; Hawley, 2007). Further, the way in which resource control is achieved and maintained varies across species (Hawley, 2007). Hawley applied a person-centered approach to this theory and found that individuals can utilize prosocial strategies or coercive strategies, neither strategy, or both prosocial and coercive strategies (Hawley, 2007). Children and adolescents pursue specific individual goals in the context of their social worlds, and some children and adolescents are more effective at achieving those goals (Hawley, 2007). Children and adolescents utilize different strategies and combinations of strategies to achieve social goals; given the relevance to perceived popular children and their reported use of aggressive tactics, a

brief description of prosocial controllers, coercive controllers, and bi-strategic controllers, identified in Hawley's work, follows.

Prosocial controllers are characterized as socially skilled, agreeable, conscientious, having friendships, and as above average on resource control and, therefore, higher than those with average social dominance status (Hawley, 2003; Hawley, 2007). In contrast, coercive controllers utilize aggression and hostile tactics and, although they are higher than average on resource control, they are considered less socially skilled in comparison to prosocial and bi-strategic controllers (Hawley, 2003; Hawley, 2007). Coercive controllers have been shown to be motivated by power and popularity in establishing friendships; their behavior and personality characteristics have been compared to socially rejected aggressors (Hawley, 2003; Hawley, 2007). Bi-strategic controllers have overlapping traits with prosocial and coercive controllers: As a whole, research has shown that bi-strategic controllers are socially skilled, they attract peers, are extroverted, are physically attractive, they desire recognition for accomplishments, they tend to cheat, and they score the highest on measures of both overt and relational aggression (Hawley, 2003, 2007). Research has found that bi-strategic controllers, based on their own opinions and the opinions of their peers, are effective resource controllers in that they are socially dominant and yet are able to achieve and maintain high-status (e.g., perceived popularity or sociometric popularity) (Cillessen & Rose, 2005; Hawley, 2007). Bi-strategic controllers use both prosocial and coercive strategies in ways that make them extremely effective at goal attainment, earn them a reputation for both overt and relational aggression, and reveal they are at the same time highly socially skilled (Hawley, 2003; Hawley, Little, & Pasupathi, 2002).

Peer research on the relation between popularity and aggression suggests that coercive controllers and bi-strategic controllers are more likely to use some types of aggression over

others. Different forms of aggression exist, and two forms are positively related to perceived popularity (Card, Stucky, Sawalani, & Little, 2008; Cillessen & Mayeux, 2004; LaFontana & Cillessen, 2002; Vaillancourt & Hymel, 2006; Walcott, Upton, Bolen, & Brown, 2008). The more recently identified form of aggression, broadly referred to here as ‘relational aggression’, has a history of varied terminology and operational definitions (Walcott et al., 2008; Card et al., 2008). First termed indirect aggression by N. D. Feshbach (1969), indirect aggression was characterized by indirect means such as social exclusion and rejection. Feshbach (1969) operationally defined indirect aggression as ignoring, avoiding, refusing, and excluding. In 1988, Lagerspetz, Bjorkqvist, and Peltonen extended the use of the term ‘indirect aggression’ to include socially manipulative behaviors, such as gossiping and exclusion, as well as behaviors that avoid confrontation. Social aggression was the term later used by Cairns and colleagues (1989) to describe shunning or attacks on character, which was described by children as manipulations of group acceptance (Cairns, Cairns, Neckerman, Ferguson, & Gariepy, 1989). The term ‘social aggression’ was also used by Galen and Underwood (1997) to describe behaviors, such as exclusion, negative nonverbal expression, rumor spreading, or social exclusion with the goal of damaging a person’s self-esteem or social status. The term ‘relational aggression’ (Crick & Grotpeter, 1995) was used to refer to threatening to end friendships or excluding others from the group, basically harming others through manipulation of peer relationships. Although the previous research applies and operationally defines each term in a different manner, a similar set of behaviors is described (Archer & Coyne, 2005; Card et al., 2008): *Relational aggression* is a form of aggression that includes indirect actions of hurt used against a peer or group, such as spreading rumors, excluding others, or public humiliation (Card et al., 2008; Neal, 2010; Vaillancourt & Hymel, 2006; Walcott et al., 2008).

In addition to relational aggression, high-status, dominant children have been shown to use overt types of aggression as well (Card et al., 2008; Vaillancourt & Hymel, 2006). *Overt aggression* describes behavior such as hitting, kicking, punching, or verbally attacking a peer (Card et al., 2008; Vaillancourt & Hymel, 2006; Walcott et al., 2008). Recently, a plethora of studies have investigated the use of both overt and relational forms of aggression by high-status, popular children and adolescents (Cillessen & Mayeux, 2004; Hoff, Reese-Weber, Schneider, & Stagg, 2009; LaFontana & Cillessen, 2002; Prinstein & Cillessen, 2003; Vaillancourt & Hymel, 2006). Research has shown that relational aggression and overt aggression are negatively associated with sociometric status but are positively associated with perceived popularity (Cillessen & Mayeux, 2004; LaFontana & Cillessen, 2002; Vaillancourt & Hymel, 2006). In a study of adolescents in grades 6-10, relationally and overt aggressive adolescents were disliked by peers but many were perceived as popular and dominant (Vaillancourt & Hymel, 2006). Specifically, for the overall sample of adolescents ages 11 – 17 years, 63% and 64% of the variance in perceived popularity was predicted by overt and relational aggression (Vaillancourt & Hymel, 2006).

Perceived Popularity and Bullying

Research has supported the hypothesis that bullies form a heterogeneous category, and research has found that some bullies can be perceived as popular by their peers. Specifically, bullying is typically defined as a subtype of aggressive behavior, in which an individual or a group of individuals repeatedly attacks, humiliates, and/or excludes a relatively powerless person (Garandeau & Cillessen, 2006; Olweus, 1994; Pellegrini & Long, 2002; Salmivalli, 2010). Vaillancourt, Hymel, and McDougall (2003) found differences among aggressive children in a study with 6th-to-10th graders. The researchers distinguished socially rejected, psychologically

troubled bullies from bullies with leadership qualities and high levels of peer-perceived popularity (Vaillancourt, Hymel, & McDougall, 2003). Aggressive children, including bullies, can be perceived as cool, powerful, and popular, in the social context (Caravita, DiBlasio, & Salmivalli, 2009; Juvonen, Graham, & Schuster, 2003; Rodkin, Farmer, Pearl, & Van Acker, 2006; Vaillancourt, et al., 2003). Bullies typically enjoy one aspect of social status (e.g., power) and actively participate in social relationships (Olweus, 2001). Aggressive bullies can be high in status and power, and bullying can be helpful in gaining prestige (Garandeau & Cillessen, 2006; Salmivalli, 2010). This concept implies that bullies have much impact and influence on the rest of the peer group (Garandeau & Cillessen, 2006). Recent research has illustrated that bullies, as a whole, do not necessarily lack social skills or emotional regulation because some are able to skillfully bully to achieve their goals (Garandeau & Cillessen, 2006; Sutton, 2003; Sutton, Smith, & Swettenham, 1999).

Recently, researchers have investigated whether perceived popular children skillfully bully. A study conducted in the Netherlands with a sample of 13-to-14 year old adolescents examined the role of peer acceptance and perceived popularity in bullying and victimization in adolescent peer groups (de Bruyn, Cillessen, & Wissink, 2010). Acceptance and perceived popularity correlated negatively with victimization, and acceptance correlated negatively with bullying. However, perceived popularity correlated positively with bullying. Results also found that adolescents who are high in perceived popularity and low in peer acceptance bullied more than adolescents who are perceived popular and accepted (de Bruyn et al., 2010). The positive association between bullying and perceived popularity was stronger at higher levels of perceived popularity and the negative associations between bullying and acceptance were stronger at higher levels of acceptance (de Bruyn et al., 2010).

High perceived popularity, often gained by means of bullying, has been found to motivate children to bully (Caravita, Gini, & Pozzoli, 2012). A recent study investigated the “status as a motivator” hypothesis (Caravita & Cillessen, 2012), which stated that having high-status among peers, either as sociometrically popular or perceived popular, promoted the kinds of behavior likely to maintain the influential position within the peer-group and the associated rewards. In support of the status as a motivator hypothesis, a study found that among early adolescents, perceived popularity mediated the positive association between motivation to be prominent among peers and bullying, but sociometric popularity mediated the negative associations between motivation to be well-liked and bullying (Caravita & Cillessen, 2012). In a similar study that supports the status as a motivator hypothesis, high perceived popularity and low social preference were associated with bullying others for children ages 9 to 11 and adolescents ages 12 to 15 (Caravita et al., 2012). The researchers suggested that perceived popular children and adolescents may be more likely to bully others because bullying was rewarded with maintaining high perceived popularity status (Caravita et al., 2012; Cillessen & Mayeux, 2004).

Cliques

Given the frequency of interaction between members of a clique, and because cliques have been shown to powerfully impact children within them (Adler & Adler, 1995), the high-status child’s role within the clique is an important area of study. As children become older, middle childhood and beyond, they choose the peers with whom they want to have the most interactions. These exclusive interaction-based groups are defined as cliques. Cliques are small social groups of peers who regularly associate; share a common environment; have a set of norms; and selectively and frequently affiliate with one another (Cairns, Leung, & Cairns, 1995).

The behavior of high-status peers may be especially influential within their cliques because of children's increased attention to social status during middle childhood and adolescence (Xie et al., 2006). Research indicates that interactions with peers play a significant role in the acquisition, maintenance, and reorganization of social behaviors and cognitions (Cairns, 1979). For example, children within the same peer cliques tend to share similarities with regard to multiple aspects of adjustment, such as aggression, grades, academic competence, rates of school drop out, popularity, cooperation, leadership, internalizing problems, and family background (Cairns et al., 1988; Henrich, Kuperminc, Sack, Blatt, & Leadbeater, 2000; Hogue & Steinberg, 1995; Kindermann, 1993; Xie, Cairns, & Cairns, 2001).

Children within cliques exhibit more similar cognitive and behavioral patterns over time (Kindermann, 1996). Group homophily describes the tendency of individuals to form groups with others who are more similar to each other than to non-group members (Farmer & Xie, 2007; Kandel, 1978; Lazarsfeld & Merton, 1954). Two processes lead to group homophily: selection and socialization. Selection leads to homophily as a result of children's selection of others who are similar to themselves in terms of key social characteristics (Kandel, 1978). Behavioral similarity in cliques occurs because peers become more similar in behavior through peer influence, which is known as socialization (Kandel, 1978; Kindermann, 1996). Students who are already similar with regard to certain salient personal characteristics when they establish a clique become more similar over time (Hallinan & Smith, 1989). Salient behavior characteristics of clique members might form the basis of a clique's reputation (Kwon & Lease, 2007). Possibly, a clique's behavioral characteristics could be salient in comparison to an individual clique member's characteristics to the point that the clique could overshadow the way in which the individual is perceived and treated by non-clique peers (Kwon & Lease, 2007).

Because popular children appear to exert undue influence in cliques, investigation of cliques is needed as cliques provide an intensive context for socialization. As noted previously, children and adolescents tend to associate with peers who are similar to them in terms of key social characteristics. Behavioral similarities have been found between friends and clique members, including similarities in aggression levels (Cairns et al., 1988); fighting and bullying behaviors (Espelage, Holt, & Henkel, 2003; Salmivalli, Huttunen, & Lagerspetz, 1997); rates of school dropout and early parenthood among adolescents (Xie, Cairns, & Cairns, 2001); as well as school grades and externalizing problems and discipline referrals (Henrich, et al., 2000). Evidence of behavioral similarities among clique members has been supported by social network research. One study found that popular aggressive boys tended to associate with each other and with non-aggressive peers who were similar to them in terms of key social characteristics, such as popularity, athletic ability, and leadership (Farmer, Leung, Pearl, Rodkin, Cadwallader, & Van Acker, 2002). Similar to boys, girls associated with peers who were similar to them in terms of socially significant characteristics (Farmer et al., 2002). However, cliques tend to operate differently, based on their composition. For example, research has indicated that cliques which include children who are perceived as popular within the broader social network operate differently than other cliques. Because these cliques tend to be exclusive, not all peers who desire membership are inducted; also, perceived popular cliques are hierarchical and have leaders who wield power at the top of the clique hierarchy (Adler & Adler, 1998).

Three ethnographic studies conducted by sociologists (Adler & Adler, 1998; Eder, Evans, & Parker, 1995; Merten, 1997) have provided evidence on how the network is divided into cliques and, further, have been instructive for describing how cliques function differently. Cliques have been shown to have somewhat unique dynamics based on their composition, most

notably whether or not they include perceived popular and/or sociometrically popular children. Specifically, in ethnographic research, as noted previously, the definition of popularity refers to being powerful and well known, such as in Merten's 1997-study that referred to popularity as being widely known or recognized by classmates and also being sought after as a friend. Popular cliques, in turn, share commonalities in that these cliques have been shown to consist of members who are highly visible within their grade and whose members had the most active social lives, the largest number of friends, and commanded the most attention in their grade (Eder et al., 1995; Adler & Adler, 1998) Popular cliques are reportedly exclusive and only accept peers as members if they are deemed worthy (Adler & Adler, 1996). Comparable to the idea of exclusivity Adler and Adler (1998) discuss, Merten (1997) noted that the clique's popularity created appeal, and many girls sought to associate with the members of the clique, but the clique members only allowed certain girls to do so. With regard to clique dynamics, members of the popular clique moved among a cluster of positions within the popular clique as the popular clique had an internal hierarchy within their role structure (Adler & Adler, 1996). The most powerful role within the popular clique was the leader, who served as the most forceful member and dominated all other members of the clique. The clique leader had the power to set the clique boundaries, include or exclude potential members, raise or lower people in favor, and establish the collective trends and opinions (Adler & Adler, 1996). The popular clique of girls who were investigated in Merten's 1997 study was composed of 10 to 12 members, within which three girls vied to be the leader. Similar to the popular clique leaders, who were described in Adler and Adler (1996), the leaders of the female popular clique had the power to influence other members of the clique to join them in being mad at someone (Merten, 1997). As a result, the leaders

influenced the dynamics of the clique (Merten, 1997). In turn, the members of the popular cliques established the standards for, and influenced the behavior of, the grade.

According to Adler and Adler (1998), the popular clique offered exciting social opportunities, and some students worked to become members of the popular clique. The wannabes were described as the “cool followers” who sought membership with the popular clique but had borderline status since they were not explicitly members of the popular clique. The medium-high-status male and female groups in the Eder study (Eder et al., 1995) could be regarded as ‘wannabes’ as described by Adler and Adler (1998). The wannabes attempted to be included by the popular clique and, in doing so, they imitated the popular cliques clothing and hairstyles; copied the popular clique’s taste in music; and used the same vocabulary as the popular clique. Essentially, the wannabes exhibited extreme behavior to gain recognition with the popular clique. However, these extreme behaviors were regarded as signs of insecurity and weakness by the popular clique, which left the wannabes further outside of the popular clique (Adler & Adler, 1998). The wannabes also served the important function of defining the popular clique’s boundaries.

Leadership and Influence within Peer Cliques

Perceived popular children and adolescents tend to be considered the leaders of their cliques (Farmer, Estell, Bishop, O’Neal, & Cairns, 2003). Furthermore, social network research provides evidence that perceived popular youth are frequently nominated by peers as leaders of the most prominent, central cliques within the broader social network (Farmer et al., 2003). Not only are perceived popular boys and girls more likely to be nuclear members of cliques, they also tend to be perceived by peers as leaders, as cool, and as aggressive (Estell et al., 2008; Farmer et al., 2003; Farmer & Rodkin, 1996; Robertson, Farmer, Fraser, Day, Duncan, Crowther, &

Dadisman, 2010; Rodkin et al., 2000). Perceived popular children differ somewhat from sociometrically popular children in regards to leadership strategies (Mayeux, Houser, & Dyches, 2011).

Hogg and Reid (2006) developed a theory on leadership that might be able to better explain why some leaders use prosocial leaderships strategies whereas other types of leaders rely more on coercion. Hogg and Reid (2006) derived their theory of leadership based on Social Identity Theory (SIT), which has been advanced to explain influence processes of intergroup behavior (Tajfel & Turner, 1979). Social Identity Theory suggests that an individual's social self-concept derives largely from social group membership (Tajfel & Turner, 1979).

Specifically, social identity is self-evaluative and derives its value from the evaluative properties of the in-group; therefore, social comparisons between groups will motivate children to behave in ways to maintain, protect, or achieve a positive group identity (Ellis, Dumas, Mahdy, & Wolfe, 2012; Hogg, 2001). Belonging to a high-status central group (e.g., a group that occupies a central role in the larger social network) offers more rewards to children and adolescents than membership in a low-status peripheral group does (Ellis et al., 2012; Gest, Graham-Bermann, & Hartup, 2001). Children and adolescents who belong to high-status central groups enjoy greater access to social recognition, relationships, and general resources (Eder, 1985; Hawley, 1999).

Given the benefits associated with belonging to a high-status clique, children might be more compelled to conform within their high-status cliques in order to reap these benefits and to avoid being expelled from the clique. As previously mentioned, Resource Control Theory (Hawley, 1999) illustrated that the benefits and power that are associated with the most prestigious positions within the peer hierarchy are the result of control of limited resources (Ellis et al., 2012). In support of the above-mentioned theories, Ellis and Zarbatany (2007) found that the

strongest clique-based socialization effects were for individuals in high-status peer groups; those cliques had the strongest influence in shaping early adolescents' prosocial, deviant, and aggressive behavior (Ellis et al., 2012).

Not all members of a clique are equally influential, and researchers recently have made use of Social Identity Theory to explain why that might be the case. Social Identity Theory proposes that people cognitively represent groups, or cliques, in terms of prototypes, and judgments are made about group members based on these representations (Hogg, 1996). The most high-status (central) members of cliques, in turn, are likely to adhere most closely to the clique prototype as compared to others within the clique (Ellis et al., 2012). The term prototypicality is used to describe the degree to which a person is similar to, or represents, the norms governing the clique and, concurrently, differs from those outside of the clique (Hogg, Hardie, & Reynolds, 1995). Thus, higher status clique members should most highly exemplify the clique norms, hold the most power, and be most influential within the clique (Ellis & Zarbatany, 2007; Hogg, 2005).

Hogg and Reid (2006) have further suggested that whereas high status members of the clique hold the most influence, based on their adherence to clique norms and prototypes, not all high status members of the clique use the same approaches to influencing and leading their cliquemates. They have compared and contrasted two types of clique-based leaders: prototypical and nonprototypical leaders. The prototypical leader is not typically the person who actively seeks to influence and to lead; instead, the clique member who is most prototypical of clique norms gradually takes on the mantle of leader due to clique dynamics. That is, those within the clique all strive to conform to group norms; as the person who most exemplifies those group norms, others begin to perceive that they are actually seeking to conform to this prototypical

person rather than to group norms per se (see Hogg & Reid, 2006). In contrast, persuasion or manipulation techniques can be used by non-prototypical individuals who aspire to have power in the group and aspire to gain influence over fellow clique members. Hogg and Reid (2001) suggest that in order to gain influence and curry favor with in-group members, non-prototypical individuals may try to act similar to the group in question, thereby representing the groups overarching interests. However, coercive techniques may be used to gain compliance from fellow group members if these individuals intend to change the group interests or norms or are seeking a role of increased power within the group (Hogg & Reid, 2001). Because any ideas that are brought to the group by non-prototypical leaders are often perceived as irrelevant or beyond the interests of the group, coercion becomes a necessary tool in order to gain traction for the idea within the group. Non-prototypical leaders attempt to establish themselves within the group hierarchy by increasingly using verbal manipulation that is directed at either in-group members or out-groups in order to highlight their own favorable status (Hogg & Reid, 2001).

Overall, the characteristics associated with prototypical leaders are similar to the characteristics associated with sociometrically popular children. Prototypical leaders are influential because they embody the prototype of the clique, they are liked by fellow members of the clique, they identify more strongly with the clique, and they are trustworthy (Hogg & Reid, 2006). In contrast, the characteristics associated with non-prototypical leaders are more similar to the characteristics of perceived popular children. Non-prototypical leaders gain power by using coercion and social manipulation (Hogg, 2001). More specifically, non-prototypical leaders may tend to rely on verbal manipulation, such as belittling others in the clique (Hogg, 2001).

Current Study

The current study was guided by two related, overarching goals: (1) One goal was to examine the frequency with which sociometrically popular, perceived popular, and children both perceived/sociometrically popular are identified as leaders in the broad social network, in comparison to average status children, and (2) the other was to examine the types of strategies high-status children used to exert influence over peers, in comparison to each other and average children. Finally, I examined the distribution of the three types of popular children into cliques and, based on type of clique, (i.e., type of popular children), determined if there were differences in the clique's usage of influence strategies

As previously stated, research has found that perceived popular children and sociometrically popular children are identified as leaders by their peers. The current research sought to establish consistency with past studies showing that perceived popular, sociometrically popular or both perceived/sociometrically popular children are identified as leaders by their peers and are more influential in comparison to average status peers. Therefore, the first question guiding this study was, "Are perceived popular, sociometrically popular, or children both perceived/sociometrically popular identified as leaders at higher rates than their average status peers?" Next, I investigated whether perceived popular children are identified as leaders more often than are sociometrically popular children. Similarly, I aimed to investigate if children who are nominated as both perceived/sociometrically popular are identified as leaders more often than are sociometrically popular children. Therefore, I asked the question "Do perceived popular children or both perceived/sociometrically popular children have higher leadership scores than sociometrically popular children?" Based on previous research investigating bi-strategic controllers (Hawley, 2003; Hawley, 2007; Hawley, Little, & Pasupathi, 2002), it was

hypothesized that children who were nominated as both perceived/sociometrically popular would be identified as leaders more often than sociometrically popular children, perceived popular children, and average peers would be.

The second question guiding this study was, “What strategies (e.g., prosocial or coercive) do perceived popular, sociometrically popular, or both perceived/sociometrically popular children use to exert influence over peers, in comparison to average status peers, in the broad social network?” Given that sociometric popularity has been correlated with prosocial characteristics (Coie et al., 1990; LaFontana & Cillessen, 2002; Lease et al., 2002), it was hypothesized that sociometrically popular children would use primarily prosocial strategies. In contrast, because perceived popularity has been found to be associated with socially skilled characteristics as well as dominant and aggressive tendencies (LaFontana & Cillessen, 2002; Lease et al., 2002; Parkhurst & Hopmeyer, 1998), it was hypothesized that perceived popular children would be found to use primarily coercive strategies (Prinstein & Cillessen, 2003; Sandstrom & Cillessen, 2006). Finally, it was hypothesized that children nominated as both perceived/sociometrically popular would use both prosocial and coercive strategies, comparable to previous research on bi-strategic controllers (Hawley, 2003; Hawley, 2007; Hawley, Little, & Pasupathi, 2002; Lease et al., 2002).

The final question, which was exploratory, was, “How are perceived popular, sociometrically popular, and children both perceived/sociometrically popular distributed into cliques? Based on type of clique (i.e., distribution of high-status types within the clique), are there differences in the types of influence strategies utilized?” Cliques could have a myriad of combinations of high-status children (or none at all) within them, with their associated profile of influence strategy use: (a) some who were perceived popular and some who were both perceived

/sociometrically popular; (b) perceived popular only; (c) sociometrically popular only; (d) some who were sociometrically popular and some who were both perceived/sociometrically popular; (e) and some who were only sociometrically popular, some who were only perceived popular, and some who were both, etc. It was possible that the type of popular children within the clique impacts the way influence is exerted within the clique, as a leader's actions and opinions shaped the thoughts and behaviors of clique members (Hogg & Reid, 2006). For example, if the only high-status children within the clique were perceived popular, then was coercion the main type of influence strategy used within the clique?

CHAPTER TWO

METHOD

Participants

The recruitment of participants required the obtaining of consent from all parents of students in participating schools. Three weeks prior to data collection, teachers were asked to give students a cover letter and consent form to take home for their parental signature. By asking parents to indicate their consent (i.e., consent or no consent; whether their child will be able to participate), this allowed the researcher to request a consent form to be returned from every child. Children who failed to return a consent form were given a second consent form to take home to their parents. Consent procedures and all measures and data collection procedures were approved by the institutional review board (IRB) at the University of Georgia.

Data were collected in late spring, at the end of the 2012 school year. Participants for the current study included students and teachers from fourth and fifth grade classrooms at five elementary schools in the same school district in the southeastern United States. The reference group within the current study was the grade level; therefore, peer nominations were grade-based. The reference group within the current study was the grade level, rather than the classroom, because the students in the sample frequently interacted with peers in other classrooms throughout the day, including during lunch, recess, and connections classes (e.g., music, art, P.E.). Participation rates ranged from 62% to 79% across the fourth grade level and 52% to 66% across the fifth grade level. The total sample consisted of 394 children (46%) distributed across 14 fourth grade classrooms and 463 children (54%) from 17 fifth grade

classrooms. Gender was almost evenly divided with 434 (51%) females and 423 (49%) males and regarding race, 74% of the current sample were Caucasian students, 14% were African Americans, 8% were Hispanic, 2% were Asian and 3% were Multiracial students.

Approximately 41% of the students qualified for free or reduced-price lunch. The grade level size for fourth grade ranged from 53 to 102 members and the grade level size for fifth grade ranged from 66 to 114 members. The reference group included the participants who consented. The reference group consisted of 290 (50%) fourth grade students and 286 (50%) fifth grade students. Forty-seven percent of the students were male. The voter population included students within the general education curriculum and participants ranged from 9 through 13 years of age.

Procedures

Data for the present study were collected during one-hour sessions. Participating classroom teachers chose the day and times of these sessions. However, teachers were asked to schedule the data collection sessions at a time when children did not have free time to interact with one another for a period of at least twenty minutes following data collection. This procedure was done to minimize children's discussion of survey items. Student assent was obtained prior to the beginning of each data collection session. Students were assured that their answers would be kept confidential and were asked to protect the confidentiality of their answers by using a blank sheet to cover their responses. Students also were informed that they could stop participating at any time. All children in the participating classrooms were given a small gift to thank them for their time.

During the survey administration, one member of the research team read all questions aloud to participants while a second and third researcher circulated the room to monitor student progress and provide assistance. Teachers completed rating forms for each participant during

these one-hour group administration sessions. For peer nomination procedures, participants (i.e., voters) were provided with 10 spaces to write their nominations, but they were informed that they did not need to fill in every space. Participants were permitted to include more than 10 nominations if they wished (i.e., *unlimited nomination procedure*). For all peer nomination procedures, students were asked to name grade level peers from free recall (Estell, Farmer, & Cairns, 2007; Farmer et al., 2003; Farmer, Hall, Petrin, Hamm, & Dadisman, 2010). Given the nature of free recall, participants could name any student in their grade, even if the student chose not to participate (Cillessen & Marks, 2011). All students within the full sample (N=857) were used to construct social status groups and cliques, regardless of participation, as they comprised the reference group; however, no analyses investigating individual characteristics (e.g., influence strategy use) were conducted using their data, reducing the final sample to N=576.

Measures

Social status. Participants were asked to nominate (a) students in their grade they like the most (“who do you like to play with the most?”) (Coie et al., 1982), (b) students in their grade they like the least (“who do you like to play with the least?”) (Coie et al., 1982), (c) students in their grade whom they perceived to be the most popular (“who are the most popular students?”) (Parkhurst & Hopmeyer, 1998) and (d) students in their grade whom they thought were the least popular (“who are the least popular students?”) (Parkhurst & Hopmeyer, 1998). The number of most liked, least liked, most popular, and least popular nominations received by each student were summed and standardized (to a mean of 0, with a standard deviation of 1) by grade and gender. Through the use of the method employed by Coie et al. (1982), social preference was computed by subtracting the standardized “like least” nomination score from the standardized “like most” nomination score. Students were classified as *sociometrically popular (spop)* if they

had a social preference score greater than 1, a standardized like-most score of greater than 0, and a standardized like-least score of less than 0. Perceived preference was calculated by subtracting standardized least-popular scores from standardized most-popular scores; parallel with the sociometric classification procedure, students were classified as *perceived popular (ppop)* if they had a perceived preference score of greater than 1, a standardized most-popular score of greater than 0, and a standardized least-popular score of less than 0. Students were classified as being *both sociometrically and perceived popular (both)* if they met all of the given criteria for both classifications. Students were classified as *average (ave)* if both their social preference and perceived preference scores were within the average range ($\pm .5$ SD).

Of the 857 students in the total sample, 439 students were categorized into one of four groups; *ppop*, *spop*, *both*, or *ave*. In all, 173 (20%) were classified into one of the high-status groups: Sixty-six (7.8%) students were classified as *ppop*, 80 (9.4%) students were classified as *spop*, and 27 (3.2%) students were categorized as *both*. 266 (31.3%) were classified as *ave*; 412 (48.4%) students did not fall into either a high-status group or the average status group. The final sample, reduced after eliminating nonparticipants, included 51 (9%) *ppop*, 61 (11%) *spop*, 23 (4%) *both*, and 167 (29%) *ave* status participants and 274 (48%) did not fall into either a high-status group or the average status group.

Social cognitive maps (SCM). For the social cognitive mapping procedure, participants were asked to name grade level peers from free recall. The SCM procedure is based on the perspective that students should report on their own cognitive conceptions of all the peer groups in their social system rather than being prompted by a list (Cairns, Leung, Buchanan, & Cairns, 1995; Farmer et al., 2010). For SCM, all 857 participants were used to construct cliques. Beyond using the information to construct SCM cliques, no information about the

nonparticipants from the data collection was used or reported on. Again, all peer nominations were grade-based. Using the SCM method (Cairns et al., 1985) students were asked, *“We want you to think about the kids in your GRADE. Some kids hang out together all the time. They may be working together, playing together or they just do a lot together. Please list the groups of kids who do things or hang out together in your GRADE. Even two people can be in a group together.”* Spaces for eight groups were provided, but participants were instructed that they could list as many groups as they wished.

Based on SCM peer report data, a recall matrix was created. The recall matrix contains all participants' group nomination information (e.g., all information from individual participant's peer groups). Second, a co-occurrence matrix was created that indicates peer group affiliation trends for each participant. Specifically, in the co-occurrence matrix, each cell in the matrix contains a count of how many times each pair of participants was nominated by peers as belonging to the same group. The co-occurrence matrix contains the pairwise relations of students as well as the frequency with which each student is nominated to a peer group (Hoff et al., 2009). Finally, a correlation matrix was created from the co-occurrence matrix. Along the diagonal exists the number of times that a student was nominated as belonging to any group (i.e., total number of nominations across all students). Then, discrete cliques were identified by analyzing the co-occurrence matrix with an SCM analysis program (this study uses SCM 4.0; 1998, Center for Developmental Science of the University of North Carolina at Chapel Hill).

Previous research has found that the SCM method produces valid estimates of peer interaction patterns (Cairns, Perrin, & Cairns, 1985). Previous detailed reviews of the SCM procedures used to identify cliques as well as reliability and validity evidence have been discussed (Cairns et al., 1985; Cairns et al., 1995). Studies have found that across a three-week

and one-year interval, moderate stability exists in social cluster membership (Cairns et al., 1995; Neckerman, 1996). Moreover, validity for the SCM method has been discussed as observational research has found that students interact four times as frequently with their own group members than with non-group members (Cairns, et al., 1985; Gest, Farmer, Cairns, & Xie, 2003).

Peer nomination-Leadership. Participants identified peer leaders as part of a standard, peer nomination procedure (Masten, Morison, & Pellegrini, 1985). Participants nominated peers in their grade for roles using a procedure based on the Revised Class Play (Masten, Morison, & Pellegrini, 1985). Students were instructed, *“Think about the students in your GRADE. Pretend that you are assigning roles in the upcoming class play. We would like for you to nominate kids who fit each role as listed below. You can nominate a person for more than one role.”* For the leadership item students were asked, *“This person is a leader. This person is often in charge.”* The number of nominations received by each participant was summed and standardized (mean of 0, standard deviation of 10) within their grade level unit (grade and school).

Peer nomination-Influence Strategies. As part of the peer nomination procedure, participants nominated influential peers according to the following item: *“Leaders are people who have a lot of influence on how other people act. Think about the leaders in your GRADE and how they influence other kids. Write down the name of a person who fits the description below. Is there anyone else who fits the description? Write down their names.”* Students were asked five peer influence items, each with the same stem. The stem used was, *“This person is a leader; they get people to change how they act or think by...”* The two prosocial strategy items include: *“asking politely, being considerate of others or caring about how others feel; being helpful, sharing, and giving everyone a turn.”* The three coercive strategy items include: *making fun of how others act, what they wear, or the games they play; gossiping about others, spreading*

rumors, or telling their friends not to play with them; pushing, hitting, or threatening to hurt others.” The number of nominations received by each participant was summed and standardized (mean of 0, standard deviation of 10) within their grade level unit (grade and school).

CHAPTER THREE

RESULTS

Overview

The results are presented in four parts. The first section presents descriptive statistics on the classification variables and correlations between study variables. The second section reports on analyses related to the differences between high-status and average children in terms of the leadership variable. The types of influence strategies that high-status children utilize were discussed in the third section. The final section examined the distribution of sociometrically popular (i.e., *spop*), perceived popular (i.e., *ppop*), and children both sociometrically and perceived popular (i.e., *both*) into cliques; similarities and differences between types of cliques (i.e., leadership structure) on influence items were examined.

Table 1.1 contains the means and standard deviations on the classification variables (e.g., like-most, like-least, most-popular, least-popular). Pearson correlation analyses (Table 1.2) showed that the numbers of most-popular and like-most nominations were moderately correlated, consistent with past research (Lease et al., 2002); furthermore, least-popular and like-least nominations also were moderately correlated (see Table 2).

Leadership

The first question guiding this study was, “Are perceived popular, sociometrically popular, or children both perceived/sociometrically popular identified as leaders at higher rates than are their average status peers?” In order to answer the first research question, a univariate ANOVA was utilized to analyze the differences between *ppop*, *spop*, *both*, and *ave* on the

leadership variable. Because the size of the groups and the variances of the groups were not equal, the homogeneity of variance assumption was violated. An adjusted F test was conducted with the Welch statistic, which indicated a significant difference across the four groups ($F[4, 568]=91.03, p < .001$). As shown in Table 1.3, Games-Howell post-hoc comparisons indicated that *ppop* children, *spop* children, and *both* were identified as leaders at significantly higher rates than their average status peers. However, *ppop* children and *both* were not significantly different from one another but were identified as leaders at significantly higher rates than *spop* children. These findings are consistent with previous research that demonstrated that popular and both children received more nominations on leadership items than liked-only children (Lease et al., 2002).

Influence Strategies

The second question that guided this study was, “What strategies (e.g., prosocial or coercive) do perceived popular, sociometrically popular, and both perceived/sociometrically popular children use to exert influence over peers, in comparison to average status peers, in the broad social network?” In the next set of analyses, the types of influence strategies utilized among types of popular children were examined. Univariate ANOVAs were utilized in order to analyze the differences between *ppop*, *spop*, *both*, and *ave* for the two prosocial influence items (“asking politely” and “being helpful”) and the three coercive influence items (“making fun”, “gossiping”, and “pushing”). Because the variances of the groups were not equal, the homogeneity of variance assumption was violated. Thus, an adjusted F test was conducted with the Welch statistic. Due to the violation of the homogeneity of variance assumption, all pairwise comparisons were done utilizing the Games-Howell post-hoc test for this next set of analyses.

Prosocial Influence Strategies

As shown in Table 1.3, analyses for the prosocial influence strategy items indicated a significant difference across the four groups ($F[4, 568]=39.01, p < .001$) on the “asking politely” influence item. Post-hoc comparisons indicated that *spop*, *ppop*, and *both* received nominations from more peers for the “asking politely” influence strategy than did *ave* children. However, *spop*, *ppop*, and *both* children did not differ significantly on this item.

A significant difference was present across the four groups ($F[4, 568]=50.24, p < .001$) on the “being helpful” influence item, with *spop*, *ppop*, and *both* receiving more nominations than average status peers. Results from post-hoc comparisons among the three high-status groups differed somewhat from results for the “asking politely” influence strategy: Nominations for *spop* and *both* high-status groups did not differ, whereas both of those groups received more nominations than did the *ppop* or *ave* group. Surprisingly, the overall results revealed that although *both* children possessed prosocial and aggressive characteristics, they had the highest mean scores for prosocial strategy use.

Coercive Influence Strategies

Analyses for the coercive influence strategy items indicated a significant difference across the four groups ($F[4, 568]=26.14, p < .001$) on the “making fun” influence item. Post-hoc comparisons revealed that *ppop* children received nominations from more peers for the coercive influence strategy “making fun” item than *spop*, *both*, and *ave* children. However, *spop*, *both*, and *ave* children did not differ significantly from one another on this item. *Spop* children had the lowest mean score for this item, albeit not significantly lower. What was slightly unexpected was that *both* children also had a low mean score in comparison to *ppop* children who had the highest mean score.

A significant difference was present across the four groups ($F[4, 568]=22.01, p < .001$) on the “gossiping” influence item, and *ppop* and *both* children received nominations from more peers for the coercive influence strategy of “gossiping” than did *spop* and *ave* children. In contrast to the “making fun” item, *both* children did not differ significantly from *ppop* children on the gossiping item. Comparable to the first coercive item, *spop* children also had the lowest mean score for the “gossiping” influence item. However, the mean was not significantly lower.

Similarly, a significant difference existed across the four groups ($F[4, 568]=6.46, p < .001$) on the “pushing” influence item as *ppop* children received more nominations from peers for the coercive influence strategy of “pushing” than *spop* and *ave* children. *Both* children did not differ significantly from *spop*, *ppop*, or *ave* children on this item. As was expected, *spop* children had the lowest mean score for this item. Overall, the results from the coercive influence strategy items reflect what was expected: *ppop* children were nominated by peers as using all three coercive influence strategies at higher rates than *both*, *spop*, and *ave* peers. *Spop* children had the lowest mean scores on all three coercive items, albeit not significantly lower, which was also expected. However, an unexpected result was that *both* children only differed significantly from *spop* and *ave* children on the gossiping item, even though *both* children possessed negative and positive characteristics.

Cliques

The final question addressed was, “How are perceived popular (*ppop*), sociometrically popular (*spop*), and children who are both perceived/sociometrically popular (*both*) distributed into cliques? Based on type of clique (i.e., leadership structure), are there differences in the types of influence strategies utilized?” As previously discussed, discrete cliques were identified through analysis of the co-occurrence matrix with an SCM analysis program. In order for a

clique to be identified as a high-status clique, it had to include at least one child with high social status. For example, if a clique included unidentified, average, and sociometrically popular students only, it was identified as a “sociometrically popular clique.” Please refer to Table 1.4 for the description and classification of cliques. All students within the full sample (N=857) were used to construct cliques. The SCM analysis program identified 130 discrete cliques. Of the 130 cliques, 55 (42%) did not include a high-status child, whereas 75 (58%) included at least one high-status child. The cliques were identified as follows: Twenty-eight (22%) cliques were identified as having *spop* children only, 19 (15%) cliques were identified as including *ppop* children only, and 2 (2%) cliques were identified as having children who were identified as *both* only. The remaining 26 cliques contained at least two different types of high-status child: 9 (7%) cliques were identified as including *spop* and *ppop* members, 5 (4%) cliques were identified as including *spop* and *both* members, 4 (3%) cliques were identified including *ppop* and *both* members, and 8 (6%) cliques were identified as including *spop*, *ppop*, and *both* members. The cliques identified as *both* and the cliques containing at least two different types of high-status children were collapsed and identified as *mixed* cliques, 28 (22%). After deleting participants who did not consent, the SCM analysis program identified 128 discrete cliques. Of the 128 cliques, 64 (50%) did not include a high-status child, whereas 64 (50%) included at least one high-status child. The cliques were identified as follows: twenty-two (17%) cliques were identified as having *spop* children only, twenty (16%) were identified as having *ppop* children only, and twenty-two cliques were identified as mixed (17%). For the next set of analyses, the following cliques were utilized to compare differences: the *spop* cliques (22), *ppop* cliques (20), *mixed* cliques (22), and *ave* cliques (64).

Next, a mean score on each of the five (2 prosocial, 3 coercive) strategies was computed for the *spop*, *ppop*, *mixed*, and *ave* cliques using the mean scores for the unidentified and average status students within the cliques (i.e., scores for high status members of the clique were not used in computing these means). Clique means for each influence strategy are contained in Table 1.5.

Prosocial Influence Strategies

In the next set of analyses, the types of prosocial influence strategies utilized among types of cliques were examined. To investigate the use of prosocial influence strategies for all but the high status children within clique types, univariate ANOVAs were utilized in order to analyze the differences between *spop*, *ppop*, *mixed*, and *ave* cliques for the two prosocial influence items (“asking politely” and “being helpful”). The Levene’s test for equality of variances was not violated and pairwise comparisons were computed utilizing the Bonferroni post-hoc test for these two analyses. As shown in Table 1.5, analyses for the prosocial influence strategy items indicated a significant difference across the four cliques ($F[3, 127]=6.79$, $p < .001$) on the “asking politely” influence item. Post-hoc comparisons indicated that *mixed* cliques had significantly higher mean scores on this item than *ppop* and *ave* cliques; however, *mixed* and *spop* cliques did not differ on this item. A significant difference was present across the four cliques ($F[3, 127]=13.82$, $p < .001$) on the “being helpful” influence item, with the *spop* and *mixed* cliques having significantly higher mean scores than the *ppop* and *ave* cliques. Overall, these results are commensurate with the results for the differing types of high-status individuals’ utilization of influence strategies within the broad social network.

Coercive Influence Strategies

In the next set of analyses, the coercive influence strategies utilized by all but the high status children in the differing types of cliques were examined. Next, univariate ANOVAs were

utilized in order to analyze the differences between *spop*, *ppop*, *mixed*, and *ave* cliques – with scores for high status children excluded -- for the three coercive influence items (“making fun,” “gossiping,” and “pushing”). The Levene’s test for equality of variances was violated, and there was a significant difference across the four cliques ($F[3, 127]=8.73, p < .001$) on the “making fun” influence item. Games-Howell post-hoc comparisons revealed that *ppop* and *mixed* cliques had significantly higher mean scores than *ave* cliques. *Spop*, *ppop*, and *mixed* cliques did not differ significantly on the “making fun” item. A significant difference was present across the four cliques ($F[3, 127]=6.56, p < .001$) on the “gossiping” influence item, and the Levene’s test for equality of variances was not violated. Bonferroni post-hoc comparisons revealed that *ppop* and *mixed* cliques had significantly higher mean scores on the “gossiping” item than *spop* and *ave* cliques. For the “pushing” item, there was not a significant difference across the four cliques ($F[3, 127]=1.846, p = .16$).

CHAPTER FOUR

DISCUSSION

Interdisciplinary research has focused on two moderately correlated but distinct types of popularity: sociometric popularity and perceived popularity (LaFontana & Cillessen, 2002; Parkhurst & Asher, 1992; Parkhurst & Hopmeyer, 1998). Research has consistently revealed that sociometrically popular children possess prosocial characteristics and do not engage in antisocial behaviors (LaFontana & Cillessen, 2002; Lease et al., 2002; Rubin et al., 2006). In contrast, perceived popular children are complex in that their behavior often includes some prosocial characteristics but also aggressive and disruptive behaviors (Rose & Swenson, 2009). Children who are perceived as popular are the most visible and prominent in the social network; they wield a great deal of power, and others want to be like them (LaFontana & Cillessen, 1999; Lease et al., 2002). Therefore, it is important to investigate perceived popular children and children who are identified as both perceived/sociometrically popular in order to develop a better understanding of their roles and influences within the broad social network and at the clique level.

The three main questions that guided this study included: (1) Consistent with past research, are perceived popular, sociometrically popular, or children who are both perceived/sociometrically popular identified as leaders at higher rates than their average status peers?; (2) What strategies (e.g., prosocial or coercive) do perceived popular, sociometrically popular, or both perceived/sociometrically popular children use to exert influence over peers, in comparison to average status peers, in the broad social network?; and (3) How are perceived

popular, sociometrically popular, and children who are both perceived/sociometrically popular distributed into cliques? Based on type of clique (i.e., leadership structure), do differences exist in the types of influence strategies utilized? In the following paragraphs, the results of the study are discussed as they relate to the three main research questions. Furthermore, limitations of the study and possible implications for future research are identified and explored.

Leadership

This study hypothesized that sociometrically popular children and perceived popular children would be nominated by more peers as leaders than would their average status peers. Sociometrically popular children possess a profile of prosocial characteristics, and previous research and reviews have indicated that sociometrically popular children are regarded as leaders within the social network (Asher & Coie, 1990; Parkhurst & Hopmeyer, 1998; Rubin et al. 2006). Despite perceived popularity being associated with aggression and dominance, perceived popular children also have been identified as being leaders within the social network (Adler & Adler, 1998; Eder, 1985; LaFontana & Cillessen, 2002; Lease et al., 2002; Parkhurst & Hopmeyer, 1998; Rose et al., 2004). However, based on previous research that investigated bi-strategic types of resource controllers (Hawley, 2003; Hawley, 2007; Hawley, Little, & Pasupathi, 2002), it was hypothesized that children who were nominated as both perceived/sociometrically popular would be identified as leaders more often than sociometrically popular children, perceived popular children, and average status peers. However, a direct parallel does not exist between the bi-strategic controller and a particular type of social status (e.g., both perceived/sociometrically popular). Indeed, the current findings revealed that two types of children were nominated as leaders more frequently than sociometrically popular children: both perceived/sociometrically popular children and perceived popular children. This

finding is consistent with previous research which found that popular-only children received more nominations than liked-only children in terms of the leadership variable, whereas popular-only children did not differ from the combined group (popular and well-liked) (Lease et al., 2002). Additional research needs to be conducted to examine more fully the nature of the relation between resource control and social status.

Influence Strategies

Prosocial Influence Strategies

Because sociometric popularity has been shown to be associated with prosocial characteristics (Coie et al., 1990; LaFontana & Cillessen, 2002; Lease et al., 2002), I hypothesized that sociometrically popular children would use primarily prosocial influence strategies. The findings supported this hypothesis, but the most prominent finding was that children *both* perceived and sociometrically popular were nominated by more peers on the prosocial influence strategy items than were sociometrically popular children. Furthermore, while differing from average status children, sociometrically popular children did not differ from perceived popular children in terms of the assertive, prosocial influence strategy use of “asking politely, being considerate of others, or caring about how others feel.” It is likely that the most influential among the sociometrically popular group were ‘siphoned off’ into the *both* group in our study. And surprisingly, children who were nominated as *both* had the highest scores overall on the prosocial influence strategies yet did not differ from perceived popular children on two of the coercive influence items, as discussed in more detail below. The overall pattern suggests that children *both* sociometrically and perceived popular are prosocially assertive, at a minimum, within the broad social network. Past research has indicated that children in the *both* category are socially dominant (Lease, Kennedy et al., 2002). Socially dominant individuals are influential

(Abramovitch & Grusec, 1978; Hawley, 1999), and it is believed that group members observe the dominant individuals of the group to learn from them and imitate them (Hawley, 1999).

Children who were nominated as *both* likely use prosocial influence strategies in ways that make them extremely effective at goal attainment (Hawley, 2003; Hawley, Little, & Pasupathi, 2002).

Coercive Influence Strategies

Perceived popular children have been characterized as using aggression, possibly in a way that hurts others in order to control the peer context (LaFontana & Cillessen, 2002; Prinstein & Cillessen, 2003; Rose et al., 2004). Relational aggression and overt aggression have been found to be negatively associated with sociometric status but positively associated with perceived popularity (Cillessen & Mayeux, 2004; LaFontana & Cillessen, 2002; Vaillancourt & Hymel, 2006). As hypothesized, perceived popular children were nominated by more peers for employing the three coercive influence strategies than were sociometrically popular and average children. The findings demonstrated differences between the three coercive strategies, in that perceived popular children had the highest mean scores on the verbally aggressive and relationally aggressive influence strategy items (e.g., making fun; gossiping) yet a lower mean score on the overt, physical aggression influence strategy. It was expected that children who were nominated as *both* would be nominated as implementing coercive influence strategies similarly to perceived popular children; however, children who were nominated as *both* only differed from average children in terms of the relationally aggressive influence strategy item of ‘gossiping.’ The current findings suggest that children nominated as *both* employ prosocial influence strategies more than they employ coercive influence strategies, yet they engage in relational aggression to influence others on occasion as well. In this broader sense, they seem to have something in common with bi-strategic controllers.

Cliques

Children within the same peer cliques tend to share similarities with regard to multiple aspects of adjustment, such as aggression, popularity, and leadership (Cairns et al., 1988; Kindermann, 1993; Xie, Cairns, & Cairns, 2001). The behavior of high-status peers may be especially influential within their cliques because of children's increased attention to and emulation of high-status peers during middle childhood and adolescence (Xie et al., 2006). Because popular children are potentially even more influential in smaller, more intimate cliques, the final research question examined whether the type of high-status children who belong to a clique might influence clique dynamics, such as the methods others within the clique use to influence peers. Specifically, we examined mean levels of strategy use within high-status cliques – exclusive of the mean levels reported for high status members of the clique -- to determine if the type of influence strategies utilized by high-status peers were also utilized by cliquemates. Overall, the results from the clique data compliment the results for the differing types of high-status individuals' utilization of influence strategies within the broad social network. *Mixed* cliques included sociometrically popular, perceived popular, and both sociometrically and perceived popular children, and the results indicated that *mixed* cliques utilized both prosocial influence and coercive influence strategies. Sociometrically popular cliques utilized prosocial influence strategies whereas perceived popular cliques utilized coercive influence strategies. Children interact with similar peers (homophily) and the results suggest that the students within the cliques were similar to their high-status peers in terms of influence strategy use or that they became more similar in behavior through the peer influence from their high-status peers (Kandel, 1978; Kindermann, 1996).

Practical Implications

Because of the reported increase in bullying within our schools via the Internet and via social networking (Kowalski & Limber, 2007; Jones, Mitchell, & Finkelhor, 2013), implementation of bullying prevention programs should make use of this information on the patterns of influence strategy use among differing high-status, influential peers. The findings of the current study highlight that perceived popular children were nominated by peers as leaders and were nominated by peers as utilizing coercive influence strategies. Therefore, educators might be most effective by targeting bullying intervention programs at perceived popular children, especially those who are not particularly well-liked. Additionally, the results indicated that sociometrically popular and children nominated as *both* sociometrically and perceived popular were leaders are influential within the broad social network, and these students might be helpful to enlist for modeling appropriate responses to peer conflict and provocation in bullying intervention programs. Furthermore, these high status children might model more assertive bystander responses to aid the victim in bullying episodes. A brief description of research-based bullying intervention programs will be given in the following paragraphs.

Some perceived popular children, who have large peer networks, bully (Gommans, 2010; Salmivalli et al., 1996). Perceived popular children are influential within the broad social network and, therefore, the first bullying prevention program discussed is universal, and both systems-oriented and individual-oriented (Limber, 2004). The Olweus Bullying Prevention Program (Limber, 2004; Olwues, 1993; Olwues, Limber, & Mihalic, 1999) is the most researched and widely used. The goals of the Olweus Bullying Prevention Program include: reduce existing bully/victim problems among elementary, middle, and high school students within and outside the schools' setting; prevent the development of new bully/victim problems;

and improve peer relations at school (Olweus et al., 1999). Interventions are delivered at the school-wide level, the classroom level, and the individual level (Olweus, 1993; Olweus et al., 1999). Examples of the school-wide interventions include: formation of a bullying prevention coordinating committee to plan and coordinate the Olweus Bullying Prevention Program and other violence prevention activities; intensive training for members of the bullying prevention coordinating committee; use of appropriate positive and negative consequences for students who follow/don't follow the school rules; formation of staff discussion groups to provide opportunities for school staff members to learn more about bullying; and a school-wide kick-off event to introduce the program to the students. At the classroom level, interventions involve regularly scheduled weekly classroom meetings to discuss bullying and peer relations (Limber, 2004). Finally, at the individual level, staff members meet with children who have been bullied to investigate bullying reports and incidents, develop safety plans, and provide emotional support (Limber, 2004).

Interventions should target the perceived popular bullies; however, targeting the bully exclusively has been shown to be ineffective (Gommans, 2010). A second widely researched anti-bullying program, KiVa, is based on research that suggests bystanders contribute to the emergence and maintenance of bullying by assisting and reinforcing the bully, which in turn provides bullies with the status and power they seek (Salmivalli, 2010; Salmivalli & Peets, 2009; Sijtsema, Veenstra, Lindenberg, & Salmivalli, 2009). The KiVa program includes the following features: professional materials for teachers, students, and parents; activities to be carried out by students via the Internet; and ways to enhance empathy, self-efficacy, and efforts of bystanders to support the victimized peer (Salmivalli, Garandeau, & Veenstra, 2012). At the elementary school level, classroom teachers provide a series of student lessons on bullying, and the students

participate in an anti-bullying computer game. The purpose of the lessons and game is for students to realize the role that bystanders play in the bullying process and to provide students with safe strategies to support the victim instead of encouraging the bully (Salmivalli et al., 2012). In each school, a team of three teachers, or school personnel, along with the classroom teacher, addresses each case of bullying that is brought to their attention. If a case fulfills the criteria of bullying, then the case is handled by the KiVa team, and individual and small-group discussions with the victim(s) and the bully(ies) are held (Salmivalli et al., 2012). Follow-up meetings are held one or two weeks after the first meeting. Additionally, the classroom teacher discusses the bullying event with two to four prosocial and high-status classmates of the victim and encourages the students to support the victim (Salmivalli et al., 2012). Overall, research supports KiVa's success in reducing bullying and victimization substantially (Karna, Voeten, Little, Poskiparta, Kaljonen, & Salmivalli, 2011).

Perceived popular bullies act aggressively, and the task of changing their behavior is difficult because their aggression brings social rewards (Hawley et al., 2007; Rose & Swenson, 2009). One solution may be to focus on children's beliefs regarding social interactions and social status by establishing a basic foundation of respect within the school setting. The final program was developed at the University of Oregon as a bullying prevention program in positive support titled Expect Respect (Stiller, Nese, Tomlanovich, Horner, & Ross, 2013). The Expect Respect program establishes a school-wide expectation for common respect and requires teaching what that means, and requires all students, faculty, and staff members to share in the responsibility of making schools respectful settings. Expect Respect was developed for middle and high schools. Expect Respect was based upon a history of school-wide positive behavioral interventions and supports and is based on intervention procedures that have been documented to

be effective in reducing bullying in elementary schools (Stiller et al., 2013). The lessons and recommendations of Expect Respect recognize five key messages: everyone in the school needs to know what it means to be respectful; bullying is disrespectful and is maintained by attention from recipients, bystanders, and peers; everyone in the school should have a strategy that stops attending to and acknowledging bullying; everyone asked to stop should have a common strategy for moving on without escalation; and every school is different, the core features should be adapted to fit the local context (Stiller et al., 2013).

Limitations and Future Directions

Overall, this study adds to the research base on high-status children by supporting the view that popular children, by successfully employing influence strategies to a higher degree than their average status peers, are viewed by their peers as leaders within the broad social network. Advantages of the current study include a large sample size, grade level nominations, and peer-report data. However, the results of the current study should be interpreted with several limitations in mind. Although the study included a large sample size, the sample was taken from one area in the southeastern United States. Therefore, the results might not generalize to other areas. In looking forward, a question might be whether popular children utilize coercive influence strategies at significantly higher rates in urban areas as research has found overt tactics to be more acceptable among African American children within urban settings (Cillessen & Mayeux, 2004). Furthermore, generalizability is restricted to elementary age-students, but it would be interesting for future research to investigate popularity and influence among adolescents as research has suggested a link between perceived popularity and increased delinquency among high school students (Mayeux et al., 2008). Longitudinal studies would

provide more information regarding perceived popular students usage of influence strategies over time within the broad social network and at the clique level.

Methodologically speaking, an additional limitation of the current study is the small number of items that were used to assess prosocial influence and coercive influence strategies. A broader range of items might be used to flesh out subtle differences in the types of aggressive and prosocial influence strategies used. To further assess coercive influence strategies, additional questions should be asked that target relational and overt aggression, as it appears that perceived popular children will be socially and verbally aggressive but not physically aggressive. Moreover, in order to investigate the relationships between bullying and popularity and bullying and coercive influence strategy use, specific questions should be asked in order to address bullying (e.g., questions from the Bully Scale) (Rigby & Slee, 1993). Additionally, this study relied on peer nomination variables. While these reports are essential to peer relations research, observational data would compliment the data by assessing the underlying behavioral and social processes (Sandstrom & Cillessen, 2006). The use of multiple informants (e.g., teacher report) might have improved the study by providing an additional perspective on who the popular children are and how they influence peers. The use of a combination of measurement strategies would have provided a stronger test for the association between type of popularity and influence (Troop-Gordon et al., 2011).

This study contributes to the research base for high-status children and provides support for the notion that popular children utilize prosocial and coercive influence strategies within the broad social network. However, the results found for children who were nominated as *both* sociometrically popular and perceived popular were surprising. More research is needed to

investigate the characteristics of this group of children and the influence that they have within the broad social network and within cliques.

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Table 1.1

Descriptive Statistics for Classification Variables

Sample	Perceived Popular	Sociometrically Popular	Both	Average
	M SD	M SD	M SD	M SD
	n=51 (8.9%)	n=61 (10.6%)	n=23 (4.0%)	n=167 (29.0%)
Most-Popular	2.43 (1.05)	-.07 (.45)	2.26 (.90)	-.36 (.23)
Least-Popular	-.46 (.20)	-.44 (.23)	-.51 (.11)	-.30 (.27)
Like-Most	.92 (.99)	1.52 (.51)	2.00 (.56)	-.39 (.47)
Like-least	.55 (.92)	-.59 (.24)	-.63 (.24)	-.40 (.37)

Note: Most-popular, least-popular, like-most, and like-least variables are standardized within the reference sample to a mean of 0 and standard deviation of 1.

Table 1.2

Intercorrelations Among Variables

Sample	Most-Popular	Least-Popular	Like-Most	Like-Least
Most-Popular	1	-.26	.51	.07
Least-Popular	-.26	1	-.31	.48
Like-Most	.51	-.31	1	-.22
Like-least	.07	.48	-.22	1

Table 1.3

Descriptive Statistics for Leadership and Influence Strategy Items

	Sociometrically Popular			Perceived Popular			Both			Average		
	M	SD	C.I.	M	SD	C.I.	M	SD	C.I.	M	SD	C.I.
Leadership	.51	(.99)	[-.25, .76] _b	1.68	(1.45)	[1.27, 2.08] _a	1.66	(1.16)	[1.16, 2.16] _a	-.28	(.52)	[-.36, -.20] _c
Prosocial												
“ Asking Politely ”	.83	(1.14)	[-.54, 1.13] _a	.71	(1.26)	[-.36, 1.07] _a	1.87	(1.79)	[1.10-2.65] _a	-.14	(.84)	[-.27, -.01] _b
“ Being Helpful ”	1.18	(1.17)	[-.88, 1.48] _a	.50	(.93)	[-.24, .76] _b	1.85	(1.66)	[1.13, 2.56] _a	-.16	(.82)	[-.29, -.04] _c
Coercive												
“ Making fun ”	-.28	(.51)	[-.41, -.15] _b	1.09	(1.39)	[-.69, 1.48] _a	-.02	(.93)	[-.42, .39] _b	-.26	(.56)	[-.35, -.17] _b
“ Gossiping ”	-.36	(.52)	[-.49, -.23] _{bc}	.93	(1.20)	[-.59, 1.27] _a	.37	(1.05)	[-.09, .82] _{ac}	-.26	(.62)	[-.36, -.17] _c
“ Pushing ”	-.27	(.35)	[-.36, -.18] _b	.28	(1.02)	[-.00, .57] _a	-.06	(.60)	[-.32, .20] _{ab}	-.23	(.48)	[-.30, -.16] _b

Note: Means with different subscripts differ at the $p < .05$ level; Within rows, means with the same subscripts do not differ significantly.

Table 1.4

Clique Identification with Popular Students

<i>Cliques</i>	1	2	3	4	5	6	7	8
<i>Types of Students</i>	n=28 (22%)	n=19 (15%)	n=2 (2%)	n=9 (7%)	n=5 (4%)	n=4 (3%)	n=8 (6%)	n=55 (42%)
SPOP	yes	no	no	yes	yes	no	yes	No
PPop	no	yes	no	yes	no	yes	yes	No
Both	no	no	ye	no	yes	yes	yes	No
Ave	y/n	y/n	y/n	y/n	y/n	y/n	y/n	yes

Note. 1-a clique including sociometrically popular students; 2-a clique including perceived popular students; 3-a clique including students nominated as both; 4-a clique including sociometrically popular and perceived popular students; 5-a clique including sociometrically popular and students nominated as both; 6-a clique including perceived popular and students nominated as both; 7-a clique including sociometrically popular, perceived popular, and students nominated as both

Table 1.5

Descriptive Statistics for Influence Strategy Items Within Cliques

Item	Spop		Ppop		Mixed		Ave	
	M	SD	M	SD	M	SD	M	SD
Prosocial	-.25	(.89) _a	-.61	(.94) _a	-.21	(.99) _a	-.33	(1.06) _a
“ Asking Politely ”	.13	(.47) _{ab}	-.06	(.66) _b	.55	(.75) _a	-.12	(.60) _b
“ Being Helpful ”	.43	(.53) _a	-.15	(.41) _b	.52	(.77) _a	-.22	(.54) _b
Coercive	-.28	(1.34) _a	.24	(1.44) _a	-.11	(1.28) _a	-.52	(1.15) _a
“ Making fun ”	-.11	(.48) _{ab}	.43	(.81) _a	.10	(.47) _a	-.21	(.40) _b
“ Gossiping ”	-.27	(.48) _b	.39	(.81) _a	.26	(.68) _a	-.16	(.58) _b
“ Pushing ”	-.15	(.29) _a	.12	(.67) _a	-.01	(.28) _a	-.15	(.53) _a

Note: Means with different subscripts differ at the $p < .05$ level; Within rows, means with the same subscripts do not differ significantly.