
The Impact of Clique Membership on Children's Social Behavior and Status Nominations

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Abstract

The impact of children's clique membership on their peer nominations for social behaviors and status was examined in a sample of 455 third- through fifth-grade children. Social identity theory (SIT) and children's peer group affiliation and context served as primary conceptual frameworks for this investigation. As suggested by SIT, results indicated that children displayed favorable views toward their own cliquemates, nominating cliquemates more often for positive characteristics (e.g., prosocial, cool) and high status indicators (like-most, most-popular) than for negative characteristics (e.g., aggression) and low status indicators (like-least, least-popular). At the same time, children's views toward their cliquemates were commensurate with the clique's normative reputations as determined by the broader peer group (i.e., grade). This suggests that children's perceptions toward their cliquemates, albeit favorable, are also regulated by the overall clique context. Meaningful gender and grade effects on children's cliquemat nomination patterns were found. Findings also were discussed regarding the impact of clique size on a peer-based assessment of social reputations and status.

Keywords: clique; behavior nominations; peer perceptions; social identity theory

Introduction

Since the development of the sociometric method by Moreno in the 1930s, peers have been perceived as valuable sources of information regarding children's behavioral and social functioning (Schneider, 2000). Specifically, the peer nomination procedure in which children nominate peers for various traits, such as sociability, aggression, social withdrawal, and social status (i.e., likeability, popularity), has been widely used to gather descriptive information about children's social reputation (Masten, Morison, & Pellegrini, 1985) and status (Coie, Dodge, & Coppotelli, 1982). Children's behavioral reputations and their social status among peers are further related to their social and

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emotional adjustment, including long-term adjustment outcomes (e.g., Deater-Deckard, 2001; Morison & Masten, 1991). Whereas the peer nomination procedure involves both nominators and nominees, the typical use of this method focuses on nominees, or how a child is perceived by his or her peers. That is, the total number of nominations a child receives from peers is used as an indicator of the child's social and behavioral reputation and social status. In contrast, less focus has been on the nominator, resulting in little understanding of the manner in which children distribute their nominations as well as factors that contribute to their nomination choices.

According to the sociocultural perspective of human development (Vygotsky, 1978), an individual's interpersonal perceptions are affected by the social context in which he or she is embedded. Gender, for example, has been suggested as a relevant social context for children. Specifically, gender-specific peer affiliations become prevalent among children in middle childhood (Maccoby, 1998). Thus, children in this developmental stage might have more interest in knowledge of same-gender peers, which, in turn, might affect children's peer perceptions and nominations. In fact, Card, Hodges, Little, and Hawley (2005) showed that children tend to nominate same-gender peers more often than cross-gender peers for a number of peer nomination items, including relational aggression, reactive aggression, and various social status indicators (e.g., victimization, peer influence, perceived popularity, and social preference).

In this study, we examined children's cliques as a meaningful social context that contributes to children's peer perceptions. Specifically, cliques are subgroups of children who selectively and frequently affiliate with one another (Cairns, Leung, & Cairns, 1995; Crockett, Losoff, & Petersen, 1984; Hallinan, 1980). Involvement in a clique affects an individual's functioning in many areas, including social, academic, and behavioral functioning (Cairns, Cairns, Neckerman, Gest, & Gariépy, 1988; Ennett & Bauman, 1994; Haynie, 2001; Kindermann, 1993; Kwon & Lease, 2007; Ryan, 2001). However, little is known regarding the degree to which children's clique membership impacts their peer perceptions as revealed through peer nomination patterns. Below, we provide some theoretical and conceptual background to understand the effect of children's cliques on their peer perceptions and nominations.

Firstly, social identity theory (SIT; Tajfel, 1978) appears to provide useful insight as to why children's clique memberships might affect their peer perceptions and nominations. One of the fundamental assumptions underlying SIT is that individuals are internally motivated to enhance their self-esteem by evaluating their own group(s) to be superior to others (Hogg & Abrams, 1990). As a result, when individuals identify themselves as a member of a group, they tend to show favoritism toward their in-group members and regard those in-group members to be similar to themselves. SIT has been widely explored among adult populations to examine in-group favoritism and out-group discrimination with regard to experimentally contrived groups and large-scale social categories (e.g., nation, ethnicity, social class; Tajfel, Billig, Bundy, & Flament, 1971). In contrast, SIT-related group processes remain understudied among children in naturally occurring, relation-based groups. Nonetheless, it is suggested that social comparison processes are a universal motivation (Nesdale & Flessner, 2001); thus, the group processes predicted by SIT may be applied to broader age groups as well as to naturally occurring groups, such as children's cliques. In fact, some developmental studies of inter-group attitudes have documented in-group favoritism among preschool and elementary school children. For example, in experimental settings in which study participants were randomly assigned to experimental groups (e.g., 'blue' vs. 'yellow' groups), children displayed positive biases toward their own group members (Bigler,

Jones, & Lobliner, 1997; Yee & Brown, 1992). Similarly, children's involvement in cliques might engender social categorization and comparison processes, leading them to display favorable perceptions toward their own clique members.

Secondly, relationship features among cliquemates might affect children's perceptions toward their cliquemates. According to a meta-analytic review by Newcomb and Bagwell (1995), children engage in more positive social interactions (e.g., cooperation, talking, positive affect) with their friends than with their non-friends. Given children form cliques based on attraction, children's positive interactions with and emotional bonding to their cliquemates might lead children to perceive their cliquemates favorably, regardless of the general perceptions of the larger peer group toward their cliquemates. However, a child's relationships with and perceptions toward his or her friends and cliquemates might not always be positive. For example, children are involved in aversive interactions with their friends, such as conflict, jealousy, and betrayal (Bukowski, Newcomb, & Hartup, 1996). Children also use relational aggression toward their friends with whom they report engaging in highly intimate and exclusive relationships (Grotperter & Crick, 1996), and, for girls in particular, bullies and victims often belong to the same social clusters (Salmivalli, Huttunen, & Lagerpetz, 1997). Thus, it seems possible that children nominate their cliquemates for unfavorable social and behavioral characteristics to the extent that they are involved in negative interactions with their cliquemates.

Finally, the process of children's clique affiliation as well as the context of the clique to which children belong appears important to consider in understanding children's perceptions toward their cliquemates. Children's cliques are not groups to which children are randomly assigned but are naturally occurring groups in which children, more or less, choose to participate. Specifically, children tend to affiliate with peers who are similar to themselves in demographic, social, and behavioral characteristics (Kandel, 1978; Poulin et al., 1997). Thus, it is likely that children's peer perceptions of similarities drive their clique affiliations. Once their clique membership is determined, children's peer perceptions might be affected by the overall characteristics of the clique to which they belong. For example, Rodkin, Farmer, Pearl, and Van Acker (2006) examined *from whom* high-status children received reputational support. Specifically, the authors used the item '*who's cool*' as an indicator of high status; being *cool* has been found to be related to popularity as well as aggression (Lease, Kennedy, & Axelrod, 2002; Rodkin, Farmer, Pearl, & Van Acker, 2000). Findings of the study indicated that over 60 percent of *cool* nominations were given to children's own clique members, indicating a positive perception toward one's own clique members. Also, the pattern of *cool* nominations was closely related to the overall level of aggression of the group to which the nominator belonged: Popular-aggressive (*tough*) children were nominated as *cool* by those in aggressive groups whereas popular-non-aggressive (*model*) children were nominated as *cool* by those in non-aggressive groups. More interestingly, a non-aggressive child who belonged to an aggressive clique was more likely to nominate an aggressive peer than a non-aggressive one as *cool*. The results suggest nominators' peer perceptions are influenced not only by their own unique perspective as individuals but also by the overall characteristics of the clique to which they belong.

Current Study

Peer nominations are widely used to assess (1) children's behavioral characteristics or reputations (Masten et al., 1985), and (2) social status (Coie et al., 1982; Parkhurst &

Hopmeyer, 1998). However, the peer nomination procedure often is used without much consideration of the impact of children's peer network patterns on nomination choices. Given this, many researchers have suggested that more research is needed to examine the impact of the peer group network on peer nomination assessments of social reputation and social status (e.g., Johnson, Ironsmith, & Poteat, 1994; Rodkin et al., 2006). Rodkin et al. (2006, p. 197) for example, argued that 'when group identification is absent from sociometric assessment or when groups are simply the sum or average of all children in a peer ecology, only a single voice comes through'. The results of this study will add to the literature by providing empirical evidence regarding the impact of children's clique membership on their peer nominations.

Firstly, we examined children's peer nomination patterns in terms of the proportion of cliquemates nominated for (1) social and behavioral characteristics (i.e., *prosocial behavior, social influence, being cool, overt aggression, and relational aggression*), and (2) social status indicators (i.e., *like-most, like-least, most-popular, and least-popular*). The proportion of cliquemates nominated for an item was calculated for each child by dividing the number of his or her cliquemates nominated for the characteristic by the total number of nominations he or she made for that item. As suggested by SIT, we hypothesized that children would demonstrate favorable views toward their cliquemates such that the proportion of cliquemat nominations would be higher for positive attributes and high status indicators (e.g., *prosocial, cool, like-most, most-popular*) than for negative attributes and low status indicators (e.g., *aggression, like-least, least-popular*).

Secondly, we examined the effect of overall clique characteristics on children's cliquemat nominations given the significance of the clique context on children's peer perceptions (e.g., Rodkin et al., 2006). In other words, although children are generally expected to demonstrate favorable views toward their cliquemates, they might do so in ways consistent with their overall clique characteristics. For example, children whose cliques have a reputation for being aggressive might nominate more cliquemates for an aggression item than do those whose clique is not characterized by such a characteristic. Similarly, children whose clique is elevated in the status hierarchy might nominate more clique members for a high social status indicator than might those whose clique has a low social status. Thus, it was hypothesized that the proportion of cliquemat nominations for a given characteristic would be positively associated with the corresponding clique-level characteristic.

Thirdly, we examined the effect of gender in children's cliquemat nominations. The effect of gender was of particular interest with regard to aggression and prosocial nominations. Physical or overt aggression is more frequently observed among boys whereas relational aggression is more prevalent among girls (e.g., Björkqvist, Lagerstetz, & Kaukiainen, 1992; Crick & Grotpeter, 1995). Therefore, girls were expected to nominate their cliquemates more frequently for relational aggression than were boys whereas the opposite pattern was expected for overt/physical types of aggression. Also, given that girls tend to be more relationship-oriented than boys (Berndt, 1982), it was hypothesized that girls would nominate their cliquemates more frequently for prosocial characteristics than would boys.

Finally, we examined grade effects on children's cliquemat nominations. In a previous study that examined children's interpersonal perceptions toward classmates, Malloy, Sugarman, Montvilo, and Ben-Zeev (1995) found that, with an increase in age, the magnitude of target (nominee) effects increased whereas the magnitude of perceiver (nominator) effects decreased. Specifically, young children's perceptions were

characterized by idiosyncrasy and subjectivity, indicating a high perceiver effect; however, with development, children tended to display increasing agreement with one another regarding perceptions of peers. It is possible that as children grow older, they increasingly perceive their cliquemates more 'objectively' and, in turn, display a less favorable or more realistic view toward their own cliquemates. Similarly, younger children might display more favorable views toward their cliquemates than do older children, which might lead to a higher rate of cliquematte nominations for positive characteristics than expected by chance alone. Consequently, we hypothesized that the proportion of children's cliquematte nominations for positive attributes would be greater for lower grade (i.e., third grade) than for upper grade (i.e., fifth grade) children.

Method

Participants

The participants were 455 (237 girls, 218 boys) students from four rural, public elementary schools in the Southeastern USA. Students were enrolled in the third, fourth, and fifth grades, and the average ages associated with each grade level were 9.31, 10.28, and 11.32 years, respectively. Twenty-two percent of the participants were in grade 3; 34 percent were in grade 4, and 44 percent were in grade 5. Overall, the sample was, according to school records, 77 percent White, 13 percent Black, and 9 percent for other ethnicities.

Procedure

Both active parental consent and child assent were required for participation in this study. School personnel indicated that students in the participating schools had considerable cross-classroom interactions with those in the same grade (two to three classrooms in each grade). Thus, all measures that involve peer nominations were grade-based instead of classroom-based, and the consent rate was calculated for each grade-level unit. For example, a grade-level unit might consist of all of the fourth-grade classrooms at one elementary school. Parental consent and child assent were obtained for 81 percent of all possible participants, but a minimum of 75 percent consent rate was required for any grade-level unit to participate in this study. The grade-level unit consent rate ranged from 75 percent to 86 percent for participating grade units. Due to different sizes and numbers of classrooms across the grade levels and schools, the number of participating children in a given grade-level unit and school ranged from 37 to 63. Overall, participants consisted of 102 third-grade, 154 fourth-grade, and 199 fifth-grade students.

The questionnaires used in this study were group administered in two one-hour sessions as part of a larger study on children's peer relations. Instructions for each measure were read aloud in the classroom by one of the researchers, and a second research team member circulated in the classroom to provide individual assistance. Confidentiality was discussed with participants before the administration of the survey, and they were provided with an index card to cover their answers. Following the university's Institutional Review Board guidelines, we included only the names of students whose parents gave consent on the peer nomination rosters. Across all peer report and nomination measures, children could only nominate participating peers in

the grade-level unit, and they were not allowed to nominate non-participants on any of the measures. Children were allowed time to review the roster for participating peers, and they were asked to write the number identifier linked with a nominated participant rather than the child's name. During data collection, non-participating students were asked to read or draw quietly at their desks.

Measures

Social Cognitive Maps (SCM). In order to identify children's discrete cliques, the SCM procedure was used (Cairns, Perrin, & Cairns, 1985). Specifically, with a paper-and-pencil method, children were prompted to think about 'the groups of kids who play, work, or hang out together a lot in your grade'. Children were asked to list as many groups as they could think of, and they were also told that they could report peer groups of any size, including groups of two. Children were allowed to list peers as belonging to more than one group.

Participants' reports on peer affiliation patterns in their grade were analyzed with the SCM 4.0 computer program (1998, Center for Developmental Science of the University of North Carolina at Chapel Hill). According to the procedure in the program, children's report of group affiliation patterns are summarized with a co-occurrence matrix, which consists of the frequency with which a child is nominated to be in the same group as every other child. Children's affiliation profiles are correlated with others' profiles, and groups are determined based on similarity of children's affiliation patterns. Because we examined clique-level effects via a multilevel modeling strategy, it was necessary to identify non-overlapping groups as much as possible so that the total variance could be cleanly partitioned into between-group and within-group variances. A previous study established good test-retest reliabilities for the SCM procedure, ranging from .74 to .84 (Cairns, Leung, Buchanan, & Cairns, 1995). Regarding validity evidence of the SCM procedure, children not only interact more frequently with their own group members than with non-group members (Cairns et al., 1985; Gest, Farmer, Cairns, & Xie, 2003), but they also interact differently with group members and non-members (Sage & Kindermann, 1999).

Social and Behavioral Characteristics. We followed the revised class play procedure, in which children nominate their peers who suit various roles in an imaginary play (Masten et al., 1985). Specifically, as part of a larger study, children were asked to nominate participating peers who fit various behavioral and social characteristics. Five variables were considered for the purpose of the current study: *prosocial* (this person is friendly and kind to others and shares with others), *social influence* (this person has a lot of influence or a big effect on how other kids act), *being cool* (this person is really cool), *overt aggression* (this person says mean things to people or hits and shoves others), and *relational aggression* (this person spreads rumors about others and tells friends not to play with them). Following the procedure used by Card et al. (2005), children were provided with 10 spaces for each social and behavioral characteristic. Children were allowed to nominate same- and cross-gender peers, and they were also allowed to nominate a person for more than one characteristic. In general, children nominated between two and four peers across items. The means (with standard deviations in parentheses) of the number of nominations children made for each item are as follows: (1) *prosocial*: 3.99 (2.64), (2) *social influence*: 2.37 (2.30), (3) *cool*: 2.74 (2.20), (4) *overt aggression*: 3.71 (2.68), and (5) *relational aggression*: 2.60 (2.38).

Social Status Indicators. Two aspects of social status (i.e., sociometric popularity, perceived popularity) were assessed with four items. Sociometric popularity (i.e., likeability) was assessed with *like-most* and *like-least* nominations (Coie et al., 1982) whereby participants were asked to nominate peers they ‘like to play with the most’ and ‘like to play with the least’. Perceived popularity was assessed by asking children to nominate peers who are ‘the *most popular* at school’ and who are ‘the *least popular* at school’ (Lease et al., 2002; Parkhurst & Hopmeyer, 1998). Research that involved upper elementary school children suggests that, albeit related, sociometric popularity and perceived popularity are associated with meaningfully distinct behavioral characteristics. For example, likeability, not perceived popularity, is related to prosocial behaviors whereas perceived popularity, not likeability, is related to social dominance and aggressive behaviors (Lease et al., 2002; Sandstrom & Cillessen, 2006). The correlation between *like-most* and *most-popular* and that between *like-least* and *least-popular* in the current sample were .59 ($p < .01$) and .49 ($p < .01$), respectively.

Consistent with the nominations for social and behavioral characteristics, children were provided with 10 spaces for each social status item. The means (with standard deviations in parentheses) of the number of nominations children made were: (1) *like-most*: 3.76 (2.26), (2) *like-least*: 3.45 (2.63), (3) *most popular*: 4.03 (2.80), and (4) *least popular*: 3.66 (2.71).

Clique-level Behavioral Characteristics and Social Status. Clique-level characteristics were determined for each of the social/behavioral characteristics and status indicators. Firstly, the number of nominations a child received from his or her peers was summed and standardized, within grade level and gender, to a mean of 0 and a standard deviation of 1. Scores were standardized by gender, given that children tend to nominate same-gender peers more frequently than opposite-gender peers (Card et al., 2005). Standardization by grade-level unit also takes into account unit size differences across grade units. Secondly, for each item and clique, the mean score for a given indicator that was obtained by the members of the clique was calculated; this mean score was used as an index of the clique-level characteristic for that particular behavior or status indicator.

Analysis Plan

Multi-variate regression analyses were conducted via a three-level multilevel modeling technique to account for (1) the correlated nature of the dependent variables (i.e., the proportion of cliquemate nominations) and (2) the nested structure of the data. When the dependent variables are correlated, the power to detect a significant fixed effect for a given dependent variable is greater within a multi-variate model than within a uni-variate model. A multilevel modeling technique accommodates the hierarchical structure of the data: in the current study, the dependent variables (i.e., proportion of cliquemate nominations) are at level 1. The dependent variables are nested within children (level 2) who are, in turn, nested within cliques (level 3).

Two models were estimated separately for social/behavioral characteristics and social status indicators. The modeling equation for social/behavioral characteristics is illustrated in the Appendix as an example. In each model, dummy variables were created at level 1 to estimate the proportion of cliquemate nominations for each characteristic. Individual characteristics (i.e., gender, grade) were added as level 2 predictors, and clique characteristics (i.e., clique size, mean clique social/behavioral

characteristics) were added as level 3 predictors. For each model, the clique's mean score for the social/behavioral characteristic corresponded to the target dependent variable under examination (e.g., clique mean *cool* as a predictor for the proportion of cliquemate nominations for *cool*). Given that the chance of nominating their own cliquemates is higher if children belong to a bigger clique than to a smaller clique, clique size was used as a control variable in the model estimation.

Results

We first report descriptive characteristics of children's cliques identified based on grade level. Secondly, we present and compare the proportion of nominations given to cliquemates across social and behavioral characteristics and social status indicators. Next, we examine the effect of gender, grade, and clique characteristics on the proportion of cliquemate nominations for the study variables.

Description of Cliques

A total of 62 discrete cliques were identified with 422 children. The average clique size was 8.8, ranging from 2 to 17; 74 percent of the total 62 cliques had between three and 10 members. A total of 59 cliques (95 percent) consisted of three or more members, and three cliques consisted of two members. The majority of cliques were homogeneous in gender: Out of the total of 62 cliques, 27 consisted of boys and 28 consisted of girls. Seven cliques were heterogeneous in gender; however, five of those seven included only one opposite-sex member. Clique size did not differ significantly by gender, $t(320) = -1.25, p = .21$; the average size for male cliques was 8.5 and for female cliques it was 9.0. Whereas the majority of children had a single clique membership, 26 (5.7 percent) children belonged to more than one clique. There were seven children (1.5 percent) who were not identified as belonging to any clique. Children who had multiple clique memberships or who did not belong to any clique were not assigned a clique identification number; thus, they were not included in the following analyses, which reduced the sample size from 455 to 422. The resultant sample size by gender and grade is presented in Table 1.

Proportion of Cliquemate Nominations for Social and Behavioral Characteristics (Level 1)

We examined whether the proportion of cliquemate nominations differed across the five social and behavioral characteristics. For each nomination item, the number of a child's cliquemates was counted from the total number of nominations he or she made for that item. The proportion of cliquemates nominated for each item was determined by the number of cliquemates nominated for the item divided by the total number of nominations. For example, if a child nominated six peers for an item, and three of them were his or her cliquemates, the proportion of cliquemate nominations for that item is $3/6 = .5$. The means and standard deviations of the proportion of cliquemates nominated for the five social and behavioral characteristics are presented in Table 1 by gender, grade, and overall sample.

The proportion scores of cliquemate nominations across the five social/behavioral characteristics were compared using multi-variate regression analyses via three-level multilevel modeling. An empty model was first estimated where no predictors were

Table 1. Means and (Standard Deviations) for Proportion of Cliquemate Nominations for Social and Behavioral Characteristics by Gender, Grade, and Overall Sample

Behavioral/social characteristics	Cliquemate proportions by gender and grade					
	Gender		Grade			
	Male (N = 192)	Female (N = 230)	3 (N = 98)	4 (N = 140)	5 (N = 184)	Overall (N = 422)
Prosocial	.51 (.39)	.53 (.33)	.54 (.37)	.55 (.38)	.48 (.34)	.52 (.36) ^a
Social influence	.37 (.42)	.36 (.40)	.37 (.43)	.30 (.39)	.41 (.40)	.36 (.41) ^b
Cool	.63 (.36)	.53 (.35)	.53 (.41)	.63 (.37)	.55 (.32)	.57 (.36) ^a
Overt aggression	.21 (.32)	.12 (.22)	.14 (.27)	.12 (.22)	.20 (.31)	.16 (.27) ^d
Relational aggression	.21 (.35)	.32 (.39)	.28 (.39)	.24 (.36)	.30 (.37)	.28 (.37) ^c

Note: The overall means with the same subscript do not differ significantly based on the Bonferroni corrected significance level of .005.

added (level 1). Intra-class correlations were calculated to determine the proportion of variance in the dependent variables accounted for by between-clique differences. Small to large intra-class correlations were indicated: .22 for *prosocial*, .05 for *social influence*, .24 for *cool*, .28 for *overt aggression*, and .15 for *relational aggression*. The magnitude of the intra-class correlation suggests that 5 to 28 percent of the total variance is accounted for by clique-level characteristics; thus, a multilevel modeling approach is preferred to a traditional linear modeling approach. A Bonferroni multiple comparison procedure was used in comparing cliquemate proportion scores to control for Type 1 error. With the significance level for the whole family of tests to be .05, the Bonferroni-corrected significance level for the total of 10 possible comparisons was $p = .005$ (.05/10). As shown in Table 1, after adjusting for the effect of clique size on the proportion of cliquemate nominations, children were found to nominate their cliquemates more often for characteristics with positive valence (e.g., *prosocial*, *cool*) than for characteristics with negative valence (*overt aggression*, *relational aggression*). The proportion of cliquemate nominations for *social influence* was higher than that for *overt aggression* and *relational aggression* but lower than that for *prosocial* and *cool*.

The Effect of Gender, Grade, and Clique Characteristics on the Proportion of Cliquemate Nominations for Social and Behavioral Characteristics

We then examined the effect of gender and grade at level 2, and clique characteristics at level 3, on the proportion of cliquemate nominations for the five social/behavioral characteristics. Clique size was added as a co-variate to control for its effect on cliquemate proportion scores. As seen in Table 2, clique size was positively and significantly associated with all proportion scores examined: Children nominated proportionately more cliquemates as clique size increased.

The Effect of Gender and Grade (Level 2). The effect of gender on the proportion of cliquemate nominations was found for: *overt aggression*, *relational aggression*, and *cool*. The proportion of cliquemate nominations for *overt aggression* and *cool* was higher for boys than for girls whereas the opposite pattern was true for *relational aggression*. There was no significant gender difference in the proportion of cliquemates for *social influence* and *prosocial*. A grade effect was found for *prosocial* and *cool* nominations only. As compared with fifth-grade children, both third- and fourth-grade children scored higher in the proportion of cliquemate nominations for *prosocial*, and fourth grade scored higher for *cool*. The gender and grade effects on the proportion of cliquemate nominations for social/behavioral characteristics are summarized in Table 2.

The Effect of the Clique Mean on the Social/Behavioral Characteristic (Level 3). Next, we examined whether the proportion of cliquemate nominations for a given social/behavioral characteristic was associated with the average level of that particular characteristic within the child's clique. For each of the five cliquemate proportion scores, the corresponding clique-level characteristic was added as a predictor. For example, a child's clique mean score for *overt aggression* was examined as a predictor of the proportion of cliquemate nominations for *overt aggression*. As summarized in Table 2, the effect of clique social/behavioral characteristics on the proportion of nominations given to cliquemates was positive and significant across

Table 2. Fixed Effects of Individual- and Clique-level Predictors on the Proportion of Cliquemate Nominations for Social and Behavioral Characteristics

Outcome variables and predictors	Estimate	Standard error	t-value
Prosocial			
Female	.03	.033	.95
Grade 3	.09	.044	2.12*
Grade 4	.10	.040	2.56*
Clique size	.02	.005	5.48**
Clique mean—prosocial	.21	.034	6.17**
Social influence			
Female	-.03	.044	-.70
Grade 3	.02	.057	.30
Grade 4	-.09	.050	-1.73
Clique size	.02	.006	4.47**
Clique mean—influence	.13	.057	2.35*
Cool			
Female	-.10	.034	-2.77**
Grade 3	.01	.045	.25
Grade 4	.09	.040	2.27*
Clique size	.02	.005	4.71**
Clique mean—cool	.15	.034	4.46**
Overt aggression			
Female	-.10	.025	-3.92**
Grade 3	-.02	.033	-.47
Grade 4	-.05	.029	-1.62
Clique size	.02	.003	7.37**
Clique mean—overt aggression	.16	.025	6.29**
Relational aggression			
Female	.10	.037	2.81**
Grade 3	.05	.049	1.00
Grade 4	-.01	.042	-.18
Clique size	.03	.005	6.58**
Clique mean—relational aggression	.11	.042	2.59*

Notes: Male and grade 5 were reference groups. Female indicates the difference between boys and girls. Grade 3 indicates the difference between grade 3 and grade 5, and Grade 4 indicates the difference between grade 4 and grade 5.

* $p < .05$, ** $p < .01$.

all the dependent variables. In other words, children nominated a proportionately larger number of cliquemates for a given social/behavioral characteristic when their clique also scored high on that characteristic relative to other cliques. For example, a child nominated proportionately more cliquemates for *overt aggression* when he or she belonged to a clique whose average level of *overt aggression* was higher than that of other cliques.

Proportion of Cliquemate Nominations for Social Status Indicators (Level 1)

In this set of analysis, we examined the proportion of cliquemate nominations across social status variables. The means and standard deviations of the proportion of cliquemates nominated for the four social status indicators are presented in Table 3 by gender, grade, and overall sample. Medium to large intra-class correlations were indicated: .23 for *like-most*, .11 for *like-least*, .40 for *most-popular*, and .41 for *least-popular*. With the significance level for the whole family of tests to be .05, the Bonferroni-corrected significance level for the total of six possible comparisons was $p = .008$ (.05/6). As shown in Table 3, after controlling for clique size, the proportion of cliquemate nominations was highest for *like-most* followed by *most-popular*. The proportion of cliquemate nominations was equally lowest for *like-least* and *least-popular*.

The Effect of Gender, Grade, and Clique Characteristics on the Proportion of Cliquemates Nominated for Social Status Indicators

We then examined the effect of gender, grade, and clique-level social status on the proportion of cliquemate nominations for social status indicators. Again, clique size was used as a co-variate to control for its effect on the proportion scores. As presented in Table 4, the effect of clique size on the proportion scores was positive and significant for all dependent variables, suggesting that children who belonged to a bigger clique nominated proportionately more cliquemates for status items.

The Effect of Gender and Grade (Level 2). A gender effect was found only for *most-popular*: The proportion of cliquemate nominations for *most-popular* was higher for girls than for boys. The grade effect was significant for *like-most* and *most-popular*. As compared with fifth-grade children, fourth-grade children nominated proportionately more cliquemates for *like-most*, and both third- and fourth-grade children nominated proportionately more cliquemates for *most-popular*. The gender and grade effects on the cliquemate proportions for social status indicators are summarized in Table 4.

The Effect of Clique Social Status (Level 3). Finally, we examined whether the proportion of cliquemate nominations for a given social status indicator was associated with the average level of the social status of the child's clique. The clique mean of *like-most* score was added as a clique-level predictor for the proportion of cliquemate nominations for *like-most* and *like-least*. The clique mean of *most-popular* score was added as a clique-level predictor for the proportion of cliquemate nominations for *most-popular* and *least-popular*. As seen in Table 4, children nominated proportionately more cliquemates for *like-most* and proportionately fewer cliquemates for *like-least* when they belonged to a clique that had a high level of sociometric popularity (*like-most*) relative to other cliques. Similarly, children nominated proportionately more cliquemates for *most-popular* and proportionately fewer cliquemates for *least-popular* as their clique scored higher on perceived popularity (i.e., *most-popular*) relative to other cliques.

Discussion

The effect of children's clique membership on the way they distribute their nominations across peers is often overlooked in the typical peer nomination method in which

Table 3. Means and Standard Deviations (parentheses) for Social Status Indicators by Gender, Grade, and Overall Sample

Social status	Proportions of cliquemate nominations					
	Gender			Grade		
	Male (N = 192)	Female (N = 230)	3 (N = 98)	4 (N = 140)	5 (N = 184)	Overall (N = 422)
Like-most	.70 (.33)	.67 (.32)	.69 (.34)	.73 (.30)	.64 (.32)	.68 (.32) ^a
Like-least	.21 (.36)	.22 (.34)	.24 (.39)	.21 (.34)	.22 (.34)	.22 (.35) ^c
Most-popular	.41 (.37)	.48 (.38)	.52 (.43)	.47 (.38)	.41 (.35)	.45 (.38) ^b
Least-popular	.21 (.34)	.26 (.35)	.24 (.36)	.21 (.31)	.25 (.36)	.24 (.34) ^c

Note: The overall means with the same subscript do not differ significantly based on the Bonferroni corrected significance level of .008.

Table 4. Fixed Effects of Individual- and Clique-level Predictors on the Proportion of Cliquemate Nominations for Social Status Indicators

Outcome variables and predictors	Estimate	Standard error	t-value
Like-most			
Female	-.02	.032	-.67
Grade 3	.07	.042	1.76
Grade 4	.10	.038	2.70**
Clique size	.02	.005	4.18**
Clique mean—like-most	.15	.036	4.18**
Like-least			
Female	-.01	.037	-.16
Grade 3	.07	.049	1.51
Grade 4	.04	.043	.97
Clique size	.03	.005	5.14**
Clique mean—like-most	-.15	.040	-3.71**
Most-popular			
Female	.09	.035	2.56*
Grade 3	.14	.046	3.06**
Grade 4	.09	.040	2.23*
Clique size	.03	.005	5.94**
Clique mean—most-popular	.28	.032	8.76**
Least-popular			
Female	.03	.035	.81
Grade 3	.03	.047	.60
Grade 4	-.02	.041	-.52
Clique size	.02	.005	3.21**
Clique mean—most-popular	-.23	.032	-7.13**

Notes: Male and grade 5 were reference groups. Female indicates the difference between boys and girls. Grade 3 indicates the difference between grade 3 and grade 5, and Grade 4 indicates the difference between grade 4 and grade 5.

* $p < .05$, ** $p < .01$.

children’s social reputation and status are determined by the sum of nominations received by the overall peer group. Thus, this study aimed to examine the contribution of children’s clique involvement to their peer perceptions as revealed through their nomination patterns.

The findings of this study support that children’s clique membership systematically affects the manner in which they distribute peer nominations. Even after adjusting for the effect of clique size, which could impact the chance of within-clique nominations, nomination patterns revealed that children display favorable views toward their own clique members. Specifically, over 50 percent of children’s nominations were given to cliquemates for *prosocial* and *cool*; 72 percent and 84 percent of their nominations were given to out-of-clique peers for *relational aggression* and *overt aggression*, respectively. Also, 68 percent of children’s *like-most* nominations, and 45 percent of *most-popular* nominations were given to their own clique members. In contrast, about

80 percent of children's *like-least* and *least-popular* nominations were given to out-of-clique peers.

The disproportionately large within-clique nominations for positive characteristics, as compared with negative characteristics, found in this study appear to validate and extend the application of SIT (Tajfel, 1978). SIT suggests that a group membership affects individuals' attitudes, perceptions, and behaviors toward in-group and out-group members, leading individuals to perceive their in-group members as favorable and similar to themselves. Whereas the application of SIT to children's peer groups has been sparse, increasing evidence suggests that social identification processes are also involved in other aspects of children's peer experiences, including bullying (Duffy & Nesdale, 2009; Jones, Manstead, & Livingstone, 2009) and children's intent to conform to peer group norms (Kwon & Lease, 2009). The current results suggest that further application of SIT is warranted to increase our understanding of children's experiences related to involvement in a peer group. For example, the impact of group norms on children's behaviors and attitudes appears to be greater when they have a strong identification with their peer group (Duffy & Nesdale, 2009; Kwon & Lease, 2009). Thus, it could be that the more strongly a child identifies with his or her peer group, the more likely the individual is to demonstrate a positivity bias for those within their clique.

At the same time, children's views toward their cliquemates were commensurate with the clique's normative reputations emanating from the broader peer group (i.e., grade). This suggests that children's perceptions, albeit favorable, might not be simply 'unrealistic'. It could be that the nature of children's interactions with their cliquemates is both positive and negative. More importantly, children's perceptions toward their cliquemates might be regulated by the overall characteristics of the clique to which they belong. The normative reputation of a clique, in fact, appears to be developed through children's peer group selection processes. That is, children are attracted to peers who have similar characteristics as they do (Kandel, 1978), which becomes the basis of children's clique affiliation. Consequently, children's perceptions toward cliquemates might not be simply 'after effects' of the common membership and shared experience of belonging to the same clique. Rather, they might be in effect even before children form cliques such that children's within cliquemate nominations might be, to some extent, a reflection of their selective peer group affiliation process. A more sophisticated study design will be needed to explain whether children's favorable perceptions toward their cliquemates hold after taking into account the selection process.

Some methodological and conceptual implications are worth noting with regard to the use of peer nomination procedure. First of all, the tendency that children's peer nominations are not solely affected by the fact of belonging to the same clique but also by their actual clique characteristics appears to add further validity to our use of the peer nomination procedure to assess children's various traits. Findings also suggest that children's social status as determined by a single indicator (e.g., likeability, popularity) might be affected not only by his or her characteristics but also by the size of the clique to which she or he belongs (Benenson, 1990; Ladd, 1983). As popularity is an affordance of friendship (Bukowski, Pizzamiglio, Newcomb, & Hoza, 1996), involvement in a larger clique might provide children with more opportunity to earn higher status. As suggested in the literature, a two-dimensional assessment of social status, such as social preference (*like-most—like-least*) and social impact (*like-most + like-least*), might minimize the impact of clique size and, thus, capture social

status more accurately than a unidimensional assessment does (Coie & Dodge, 1983). Similarly, standardizing the number of nominations children receive from peers by the unit of nominations (e.g., classroom, gender) controls for the systematic impact of different unit sizes on peer nominations. Conceptually, it appears valuable to examine the source of reputational support (e.g., Rodkin, Farmer, Pearl, & Van Acker, 2006) when a peer nomination procedure is used to assess children's social status. For example, children who receive high social status support from the broader social network might have greater influence on peers than those who receive status support primarily from their own clique members.

Some interesting patterns are worth mentioning in terms of cliquemate nominations for several of the measured social/behavioral characteristics. In terms of the aggression items, the proportion of cliquemate nominations was higher for *relational aggression* than for *overt aggression*. LaFreniere and Charlesworth (1983) have suggested that aggression is often directed at those who are close by in the social network, and this might be particularly true for relational aggression. Also, it might take greater intimate knowledge for children to be relationally aggressive toward their peers (Cohen, Hsueh, Russell, & Ray, 2006) resulting in a higher proportion of cliquemate nominations for *relational aggression* than for *overt aggression*. The *social influence* item was of interest in terms of the degree to which children perceive social influence as emanating from their cliquemates. Overall, about a third of the *social influence* nominations were given to children's own cliquemates, suggesting that cliques might not be a primary source of peer influence. However, it should be noted that the item taps into reputational influence as opposed to personal influence, and *social influence* could have been perceived as either positively or negatively valenced as the item was described in a neutral manner (i.e., this person has a lot of influence or a big effect on how other kids act).

Gender Effects

Gender differences in cliquemate nominations were indicated for some of the social/behavioral characteristics examined. The proportion of cliquemates nominated for *cool* and *overt aggression* was higher for boys than for girls whereas the opposite pattern was found for *relational aggression*. Regarding the types of aggression, research has shown that overt and physical types of aggression are characteristic of the ways in which boys aggress whereas relational aggression is characteristic of girls (Crick & Grotpeter, 1995). However, it should also be noted that this gender dichotomy in aggression has been criticized for oversimplification (Swearer, 2008). Regardless, the gender-specific nomination patterns for different types of aggression, as indicated in the study, are probably due to the fact that children's clique composition is predominantly gender homogeneous, thus increasing the likelihood of nominating cliquemates for gender-congruent aggression items. Also, boys nominated proportionately more number of their own cliquemates for *cool* than did girls. In addition to being associated with high social status, being *cool* is often associated with being aggressive and athletic, and boys are nominated for the latter, at least, more frequently than girls are (Graham & Juvonen, 2002; Lease et al., 2002; Rodkin et al., 2000). It might be that, relative to girls, boys care more about being *cool* and, thus, display more favorable views toward their own clique members. Contrary to our hypothesis, boys and girls were similar regarding the manner in which they nominated their cliquemates for being *prosocial*.

Grade Effects

The hypothesized grade effect on the proportion of cliquemate nominations for positive vs. for negative characteristics was partially supported. In a previous study, Scarlett, Press, and Crockett (1971) found that, among boys in grades 1, 3, and 5, children's perceptions toward their peers become more non-egocentric or objective with increased age. In a similar vein, we hypothesized that children's cliquemate nominations for positive characteristics would be higher for third graders than for fifth graders. However, the grade difference was more prevalent between fourth and fifth graders than between third and fifth graders. As compared with fifth-grade children, fourth-grade children nominated proportionately more cliquemates for *prosocial*, *cool*, *like-most*, and *most-popular*. Third graders nominated proportionately more cliquemates for *prosocial* and *most-popular* than did fifth graders. The results suggest that the impact of clique membership on children's positive perceptions toward their clique members might reach its peak in fourth grade, at least when examined within the developmental frame of third to fifth grade. However, more replication studies are necessary in order to make a generalization of a grade or age effect. Also, developmental differences in peer perceptions might be better revealed with children who are farther apart in age.

Grade-based and Classroom-based Peer Assessment

The unit of clique assessment (i.e., grade vs. classroom) appears to render different results in terms of gender differences in the structural characteristics of cliques, such as clique size. For example, previous studies have shown that girls' cliques are smaller than those of boys (Gest, Davison, Rulison, Moody, & Welsh, 2007; Kwon & Lease, 2007). However, in this study, where peer report was compiled at the grade level, this gender difference in clique size was not observed. Also, as compared with the cliques identified in the classroom level (e.g., Kwon & Lease, 2007), the range of clique size as well as the average clique size was larger when cliques were identified within the grade level unit. This suggests that the structural characteristics of cliques might differ depending on whether cliques are identified within the classroom vs. the grade.

Peer-based assessment of children's social/behavioral characteristics and social status might also vary depending on whether a grade-based or a classroom-based nomination procedure is used. Although classroom composition is often balanced for a number of factors (e.g., gender, learning disability and gifted status, behavioral issues), with a classroom-based nomination procedure, classroom composition might affect peer nominations. In contrast, children likely have a wider selection range in peer nominations with a grade-based nomination procedure. Also, in small rural schools where children are probably together for a long period of time, which was the case in this study, limiting nominations to the classroom level might not capture an accurate picture of children's peer dynamics. Further examination is warranted regarding the impact of the 'unit of nomination' (e.g., classroom vs. grade level) on peer-based assessment.

Conclusion

In conclusion, the current study is believed to make a unique contribution to the literature by demonstrating a systematic impact of children's clique involvement to

their peer perceptions and nominations. It should also be noted that we identified non-overlapping cliques such that children with multiple group membership (N = 26, 6 percent) were not included in the analyses. This could have made clique characteristics more exclusive and homogeneous than they actually are. Finally, given the impact of cliques on children's peer behavior nominations, we suggest that future studies carefully consider the reputational support for various behavioral characteristics and social status, including aggression, bullying, influence, and popularity, which have been found to have significant implications for children's peer experiences.

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Appendix

The equation below illustrates the model for social/behavioral characteristics where *i* indicates the dependent variable, *j* indicates the individual level, and *k* indicates the clique level. All random intercept (μ) variances and co-variances representing clique-to-clique differences and residual (e) variances and co-variances representing child-to-child differences were estimated.

Level 1: $Y_{ijk} = \beta_{1jk}$ Overt aggression indicator $_{ijk} + \beta_{2jk}$ Relational aggression indicator $_{ijk} + \beta_{3jk}$ Social influence indicator $_{ijk} + \beta_{4jk}$ Prosocial indicator $_{ijk} + \beta_{5jk}$ Cool indicator $_{ijk}$

Level 2: $\beta_{1jk} = \gamma_{10k} + \gamma_{11k}$ Gender $_{jk} + \gamma_{12k}$ Grade $_{jk} + e_{1jk}$

$\beta_{2jk} = \gamma_{20k} + \gamma_{21k}$ Gender $_{jk} + \gamma_{22k}$ Grade $_{jk} + e_{2jk}$

$\beta_{3jk} = \gamma_{30k} + \gamma_{31k}$ Gender $_{jk} + \gamma_{32k}$ Grade $_{jk} + e_{3jk}$

$\beta_{4jk} = \gamma_{40k} + \gamma_{41k}$ Gender $_{jk} + \gamma_{42k}$ Grade $_{jk} + e_{4jk}$

$\beta_{5jk} = \gamma_{50k} + \gamma_{51k}$ Gender $_{jk} + \gamma_{52k}$ Grade $_{jk} + e_{5jk}$

Level 3: $\gamma_{10k} = \tau_{100} + \tau_{101}$ Clique size $_k + \tau_{102}$ Clique mean overt aggression $_k + \mu_{10k}$

$\gamma_{20k} = \tau_{200} + \tau_{201}$ Clique size $_k + \tau_{202}$ Clique mean relational aggression $_k + \mu_{20k}$

$\gamma_{30k} = \tau_{300} + \tau_{301}$ Clique size $_k + \tau_{302}$ Clique mean social influence $_k + \mu_{30k}$

$\gamma_{40k} = \tau_{400} + \tau_{401}$ Clique size $_k + \tau_{402}$ Clique mean prosocial $_k + \mu_{40k}$

$\gamma_{50k} = \tau_{500} + \tau_{501}$ Clique size $_k + \tau_{502}$ Clique mean cool $_k + \mu_{50k}$