

What Makes a Girl (or a Boy) Popular (or Unpopular)? African American Children's Perceptions and Developmental Differences

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Open-ended questions were used to obtain narrative accounts of what makes a girl (or a boy) popular (or unpopular) at school. The participants were 489 African American students in Grades 1, 4, and 7 recruited from high-risk inner-city neighborhoods. Appearance and self-presentation were mentioned the most in Grades 4 and 7. Prosocial characteristics were especially relevant for popularity in Grade 1, as were studentship in Grade 4 and peer affiliations in Grade 7. Deviant behaviors were nominated for popularity more frequently in Grade 7 than in the younger grades and more for boys' popularity than for girls'. The mean deviance scores were negative in all grade levels, suggesting a normative peer culture. Male groups in Grade 7 showed significant homophily in reports of deviant behaviors.

Keywords: perceptions of popularity, African American children, gender, developmental differences, deviant behaviors

Peer social networks play an important role in children's social development (e.g., Cairns & Cairns, 1994; Cairns, Xie, & Leung, 1998; Hartup, 1996; Rubin, Bukowski, & Parker, 1998). Sullivan's (1953) theory of personality development suggests that at the beginning of middle childhood, children become increasingly concerned about their social status in peer networks and peer groups and that the experience of isolation may increase the risk for subsequent psychological problems. Recent research has indicated that children continue to show increasing concerns about peer acceptance and social status into early adolescence (Adler & Adler, 1998; Corsaro & Eder, 1990; Parker & Gottman, 1989). In addition, social learning theory (Bandura & Walters, 1963) sug-

gests that the peer social network is a powerful context in which children observe their peers' social behaviors and use these perceptions to guide their own behavior. The behaviors displayed by high-status peers may be especially influential given children's increased attention to social status during middle childhood and early adolescence. Furthermore, the developmental science perspective proposes that interactions with peers play a significant role in the acquisition, maintenance, and reorganization of social behaviors and social cognitions (Cairns, 1979; Magnusson & Cairns, 1996). Studies have indicated that children within the same peer groups tend to share similarities on multiple aspects of adjustment, such as aggression, academic competence, popularity, cooperation, leadership, and family background (e.g., Cairns, Cairns, Neckerman, Gest, & Gariépy, 1988; Farmer & Hollowell, 1994; Xie, Cairns, & Cairns, 1999, 2001).

Consequently, it is important to study children's perceptions of behaviors and characteristics associated with high or low social status and to understand the peer group processes underlying such perceptions. Recent research has indicated that perceived popularity represents a significant dimension of prominent social status. Perceived popular children and adolescents are viewed by their peers as attractive, influential, admirable, athletic, and "cool" (Babad, 2001; Eder, 1985; LaFontana & Cillessen, 1998, 2002; Lease, Kennedy, & Axelrod, 2002; Lease, Musgrove, & Axelrod, 2002; Merten, 1997; Parkhurst & Hopmeyer, 1998). Hence, increasing knowledge about the development of children's perceptions of popularity will largely enhance our understanding of children's social development in peer context.

Ecological theory (e.g., Bronfenbrenner, 1979) predicts that children's perceptions of popularity are likely to be influenced by the broader social context, which provides a general setting for peer interactions and social relationships. Most of the current findings on children's perceptions of popularity are based on

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studies conducted with European American youths in middle-class suburban settings. It is not clear whether minority children who live in a disadvantaged context show similar or different patterns of perceptions of popularity. These children are often at greater risk for developmental maladjustment, such as dropping out of school and being a perpetrator or victim of violence (e.g., Kaufman, Alt, & Chapman, 2004; National Center for Education Statistics, 2003). Research has shown that peer social networks provide powerful contexts in which the socialization of aggressive behaviors and academic attitudes occur (e.g., Cairns et al., 1988; Dishion, McCord, & Poulin, 1999; Kindermann, 1993). As Garcia Coll et al. (1996) have indicated, it is important to study minority children's experience in the key developmental contexts such as school and neighborhood to understand their normative development.

Given the above considerations, the primary purpose of this study was to investigate children's perceptions of popularity in school peer social networks in a sample of African American youths who lived in disadvantaged inner-city neighborhoods that have low levels of social capital and high levels of crime and violence. In consideration of the specific developmental context for the participants, we expected several issues to be highly relevant in our study: children's perceptions of aggressive behaviors for popularity, children's perceptions of studentship, children's perceptions of deviant behaviors, and gender differences in perceptions of popularity.

Previous research has shown that exposure to community violence is likely to increase children's aggressive behaviors (i.e., overt forms), depression, and/or anxiety (e.g., Cunningham, Hurley, Foney, & Hayes, 2002; Garbarino, Dubrow, Kostelny, & Pardo, 1992; Gorman-Smith & Tolan, 1998; Schwartz & Proctor, 2000). The experience of dealing with the peer gangs and turf hassles in inner-city neighborhoods is also associated with aggression (Cunningham & Meunier, 2004). According to the phenomenological variant of ecological systems theory (Spencer, 1995), overt forms of aggression (physical and verbal) in this context may be understood as a normative adaptation reaction to contextual risks (e.g., Cunningham & Meunier, 2004; Stevenson, 1997) and not viewed as indicators of psychopathology. With older age, African American youths may experience greater exposure to contextual risks such as neighborhood gang and community violence. They may display higher levels of physical and verbal aggression as part of their adaptation reactions. Consistent with this argument, Grade 4 and Grade 7 African American children in this inner-city sample reported high levels of physical aggression in peer conflicts (Xie, Farmer, & Cairns, 2003). Given the common experience of peers who live in the same high-risk neighborhood, heightened levels of physical aggression may be viewed as more normative and adaptive in older age groups than in younger age groups. A previous study on a sample of urban children with diverse ethnic backgrounds (LaFontana & Cillessen, 2002) found a positive correlation between physical aggression and perceived popularity for African American children. In light of the theoretical considerations and previous findings, a positive association between physical aggression and popularity was expected in our sample, and the association might be stronger among early adolescents than among young children.

In addition to aggression, some have suggested that urban African American adolescents often experience an "oppositional" peer culture against school achievement (e.g., Fordham & Ogbu,

1986). However, this proposal of oppositional peer culture has been challenged by recent research. A national survey with high-school students (e.g., Ainsworth-Darnell & Downey, 1998) showed that the association between self-reported popularity among peers and good studentship was higher among African American students than among students of other ethnic backgrounds. Furthermore, African American children in elementary schools reported high levels of prosocial attitudes in an ethnographic study (Tyson, 2002). Given these findings, we expected a positive association between good studentship (e.g., good grades, nondisruptive) and popularity, with a stronger association in elementary school than in middle school. The later expectation was based on a recent finding of greater acceptance of good studentship in Grade 5 than in Grade 6 among a sample drawn from a middle-class Caucasian community (Bukowski, Sippola, & Newcomb, 2000).

Besides physical aggression and studentship, we were interested in children's general perceptions of deviant behaviors and prosocial characteristics. For the purpose of this study, we defined *deviance for popularity* as the extent to which deviant behaviors are nominated for popularity or prosocial characteristics are nominated for unpopularity. Deviant behaviors include drug use, gang involvement, sexual activities, poor studentship, and aggression (physical, verbal, and social). Prosocial characteristics include good studentship, being nice, and being trustworthy. Specific operationalization of "deviance for popularity" is explained in the Method section. We explored how maturational factors and peer group affiliations may be related to children's perceptions of deviance for popularity.

Recent studies have indicated that as children age, peer acceptance of aggression and deviance increases, whereas peer acceptance of academic achievement decreases (Bukowski et al., 2000; Cillessen & Mayeux, 2004; LaFontana & Cillessen, 2002; Rose, Swenson, & Waller, 2004). Given these findings, we expected stronger associations between deviant behaviors and popularity (or prosocial characteristics for unpopularity) in Grade 7 than in Grade 4. Two aspects have been speculated to contribute to the developmental differences: individual maturational factors and social contextual factors. The social contextual factors focus on the transition to middle school. Individual maturational process highlights the fact that as children enter adolescence, a strong desire for independence and autonomy develops (e.g., Simmons & Blyth, 1987; Steinberg & Morris, 2001). Deviant or aggressive behaviors proscribed by the society and parents may become especially appealing to them because such behaviors are viewed as symbols of autonomy and maturity, whereas prosocial behaviors or good studentship that are endorsed by the society may be viewed by the youths as lack of independence and autonomy (Bukowski et al., 2000; Kandel, 1980; Moffitt, 1993). Moffitt (1993) proposed that this increased tendency toward deviance is caused by the "maturation gap" that adolescents face. Namely, physical maturation precedes the attainment of adult social status by several years during adolescence. On the basis of this proposal, one could predict that older age for the grade or greater physical maturity (i.e., greater maturation gap) would be associated with a greater acceptance of deviant behaviors.

In addition to the individual maturational processes, peer group affiliations are likely to shape children's perceptions of deviant behaviors for popularity. Studies have shown that socialization

within the peer groups plays an important role in the development of deviant behaviors (e.g., Cairns & Cairns, 1994; Cairns et al., 1988; Dishion et al., 1999; Farmer & Cadwallader, 2000; Thornberry & Krohn, 1997; Vitaro, Tremblay, Kerr, Pagani, & Bukowski, 1997). The relationship between peer groups affiliation and children's perceptions of deviant behaviors for popularity has not been examined in previous research. Given the significance of peer affiliation for deviant behaviors, we expected group homophily (i.e., similarity among group members) in children's perceptions of deviant behaviors for popularity (or of prosocial behavior for unpopularity).

Finally, some studies have suggested that the impact of disadvantaged neighborhoods may be greater for boys' adjustment problems than for girls' (e.g., Beyers, Bates, Pettit, & Dodge, 2003; Ensminger, Lamkin, & Jacobson, 1996; Spencer, Dobbs, & Swanson, 1988). In coping with neighborhood risks and negative racial images, African American adolescent boys living in high-risk neighborhoods often develop bravado attitudes that encourage aggression, risk taking, and deviance (Cunningham & Meunier, 2004; Majors & Billson, 1992; Stevenson, 1997). Cunningham and Meunier (2004) emphasized the need to understand African American boys' peer social experience and the development of bravado attitudes (e.g., violence as manly, danger as exciting). They reported that certain aspects of peer experience at school (e.g., alienation from peers, not feeling comfortable with peers in a classroom) were related to bravado attitudes. However, other aspects of peer social processes in school (e.g., peer groups and peer culture) have not been examined. Our study is in a unique position to further explore whether peer affiliations and notions of popularity at school may support the development of African American boys' attitudes toward aggression, risk taking, and deviance. Our previous analyses of this sample found that boys' use of physical and verbal aggression was associated with high levels of centrality in the social networks (Xie et al., 2003). Other studies have suggested that academic achievement seems to be valued more by African American girls than by African American boys (Graham, Taylor, & Hudley, 1998; Kennedy, 1995; Spencer, Dupree, & Swanson, 1996; Spencer, Noll, Stoltzfus, & Harpalani, 2001). Taking this research together, we expected higher levels of antisocial behaviors and lower levels of good studentship for boys' popularity than for girls'.

In addition to the primary issues relevant to the unique sample of our study, we developed two corollary aims to address two general issues in the literature. One corollary aim was to determine both individual and interpersonal dimensions that are perceived by children and adolescents as important factors for popularity and unpopularity. Previous developmental research has primarily relied on prespecified individual characteristics (e.g., attractiveness, aggressive behaviors, prosocial characteristics) to determine factors associated with popularity in peer social networks. Such an approach leaves little room to explore interpersonal domains that may be perceived by students as important correlates of popularity if they were not so specified by the researcher. Ethnographic work (e.g., Eder, Evans, & Parker, 1995; Eder & Kinney, 1995) has shown that in middle school, affiliation with popular peers and participation in certain extracurricular activities (i.e., sports, cheerleading) become important avenues for popularity. This observation is consistent with a report on early adolescents (i.e., Grade 6) showing that the level of peer preference of a child's friends

predicts the child's own subsequent level of peer preference (Sabongui, Bukowski, & Newcomb, 1998). Open-ended questions transcend the limitations of questionnaire measures by yielding valuable information on interpersonal domains that may have not been tapped in previous developmental investigations. In this study, participants were asked in individual interviews in an open-ended format what makes a child popular or unpopular. This method enabled us to extend previous research focusing on individual characteristics of popularity to various aspects of peer affiliation that may be related to popularity in peer social networks.

Another corollary aim of this study was to describe differences in children's perceptions of popularity and unpopularity across distinct developmental stages. Up to now, most research on perceived popularity has been conducted with preadolescents or early adolescents (e.g., LaFontana & Cillessen, 2002; Lease, Kennedy, Axelrod, 2002; Lease, Musgrove, & Axelrod, 2002; Parkhurst & Hopmeyer, 1998). Given that middle childhood to early adolescence is a period when the peer systems evolve and display significant changes (e.g., Cairns et al., 1998; Rubin et al., 1998) and children show increasing concerns over peer acceptance and popularity status (Adler & Adler, 1998; Corsaro & Eder, 1990; Parker & Gottman, 1989; Sullivan, 1953), it is important to investigate perceived popularity among younger children. By Grade 1, distinct peer groups can be reliably identified on the basis of children's reports (e.g., Estell, Cairns, Farmer, Cairns, 2002). Studies have also shown that Grade 1 children can report on the peer preference and popularity of a target student (Krantz & Burton, 1986; Malloy, Yaras, Montvilo, & Sugarman, 1996), and some can talk about what makes a person popular (Adler, Kless, & Adler, 1992). However, it is not clear how Grade 1 children's perceptions of popularity may differ from those of older children and adolescents. In this study, we explored and compared children's perceptions of popularity in middle childhood, preadolescence, and early adolescence.

In summary, this study investigated the normative developmental differences of inner-city African American children's perceptions of popularity in peer social networks at school. Given the high-risk context in which the participants lived, we were interested in investigating their perceptions of aggression, deviant behaviors, and studentship across three distinct developmental periods. Maturational factors and peer group affiliations were examined to determine their relationships with participants' perceptions of deviance.

Method

Participants

This study involved 489 participants from four inner-city public schools. Over 99% of students enrolled in these schools were African American, and all participants in this study were African American. There were 93 Grade 1 participants (54 boys and 39 girls) and 142 Grade 4 participants (67 boys and 75 girls) from two elementary schools, and there were 254 Grade 7 participants (99 boys and 155 girls) from two middle schools. These schools were located in two neighborhoods of a major Southeastern city (one elementary school and one middle school from each neighborhood). According to the 1990 Census tract data, more than one third of the families in the district served by the schools lived below the poverty line. Neighborhood police accounts and Census tract records indicated that all four schools were located in "high-crime" areas of the city. Information on the income and education levels of the participants' parents was not obtained.

Participants were individually interviewed at school as part of a larger study conducted in the spring semester of 1995. Interviews were audiotaped. All students in the designated grades in each school were invited to participate in the study. A signed consent was required from both parent and student. The participation rate was 60%. Comparisons indicated no differences between the participants and nonparticipants in Grades 1 and 4 on English and math final exam scores or in total numbers of offenses at school. The Grade 7 participants, as compared with the Grade 7 nonparticipants, scored higher on English and math exams and had fewer offenses at school.

Measures

Narrative accounts of popularity and unpopularity. In the semistructured social-cognitive interview, participants first reported on their friendships, peer social groups at school, knowledge of neighborhood gangs, and conflicts with peers. Subsequently, participants were asked two questions about popularity and unpopularity for each gender: "What makes a girl (or a boy) popular?" and "What makes a girl (or a boy) unpopular?" The set of popularity and unpopularity questions related to a participant's own gender were asked first. Except for clarification of the questions and answer, no further probes were used. When a participant failed to respond to a question, the interviewer would repeat the question once. Following this section, questions about weapon carrying, educational and career aspirations, and family composition were asked.

Audiotaped interviews were coded by trained research assistants. The coding of popularity and unpopularity questions involved two steps. In the first step, distinct responses were extracted from the open-ended narrative answers for each of the four popularity and unpopularity questions. Two assistants independently coded reports from 60 participants randomly selected from the sample; they identified the same number of responses in 88% of the cases, and differed by one response or less in 99% of the cases ($\kappa = .89$). In the second step, the content of each response was coded into 1 of 41 categories identified on the basis of participants' reports in this sample and previous literature (see Appendix). Most of the content categories are bipolar, so that a response may be coded as either +1 (e.g., pretty, nice, lots of friends) or -1 (e.g., ugly, mean, no friends). Only 3 categories do not have positive or negative ends (other, unscorable, and an answer of "don't know"), and they were coded with 1 (mentioned or applicable) or 0 (not mentioned or not applicable). If a content category was not mentioned in a codable answer, a score of zero was assigned. If a participant provided an unscorable answer to a specific question or answered "don't know," a missing value was assigned to all the other content categories for that specific question. High levels of agreement were achieved for every content category across coders on a subset of randomly selected cases ($n = 60$). Interrater agreement ranged from 93% to 100%, with a median agreement of 99.6% and a median kappa of .91. All of the final codes used in the analyses reported here have been cross-checked by another coder. When a disagreement arose, it was discussed and resolved among at least three coders.

On the basis of previous literature (Adler & Adler, 1998; LaFontana & Cillessen, 2002) and each category's face values, the categories were grouped into domains. The correlation patterns among the initial categories were examined to further tighten up and refine the domains, and 16 content domains were created (see Appendix). Eleven domains concern individual characteristics: appearance, self-presentation, spending power, prosocial behavior, studentship, sports and activities, dominance, victimization, social aggression, overt aggression, and deviant behaviors. Five domains concern interpersonal relationships: social interaction, peer preference, cross-gender relationship, social connections, and friends' popularity. The score in a specific domain was calculated as the sum score across content categories within that domain. In one case, the scores of content categories within the same domain contradicted each other (i.e., +1 on one category and -1 on another). The contradiction was resolved by going back to the

participant's original answers, and a consensus was reached to recode the participant's answers as one score on that domain.

Prominence of domains. The degree to which a specific domain was mentioned for popularity or unpopularity was captured by a prominence score. It was calculated as the average of the absolute scores across four categories, girl popular, girl unpopular, boy popular, and boy unpopular, for a specific domain (e.g., appearance). The prominence scores were used to determine which domains were perceived as highly salient for popularity and unpopularity in school.

Deviance for popularity. This measure was created to assess the extent to which children's perceptions of behaviors associated with popularity and unpopularity deviate from a society's value of encouraging prosocial behaviors and discouraging antisocial behaviors. We measured the degree to which children reported deviant behaviors for popularity or prosocial behaviors for unpopularity. We used eight categories of antisocial or deviant behaviors (i.e., disruptive, social aggression, physical aggression, verbal aggression, bullying, substance use, gang activities, and sexual activities) and three categories of prosocial behaviors (i.e., prosocial behavior, trustworthiness, and studentship). For each popularity question (e.g., "what makes a girl popular?"), a perceived deviance score was calculated as the sum score across the eight antisocial behavior categories minus the sum score across the three prosocial categories. Likewise, for each unpopularity question (e.g., "what makes a boy unpopular?"), a perceived deviance score was calculated as the sum score across the three prosocial categories minus the sum score across the eight antisocial behavior categories. The scores ranged from -4 to +3. High levels of correlation were found between deviance scores for popularity and for unpopularity (ranging from .37 to .74, with a median correlation of .63, $ps < .001$). To increase the reliability and variability, we calculated a deviance score for each target gender as the mean across popularity and unpopularity.

Age. A participant's chronological age at the beginning of the study was calculated on the basis of the participant's date of birth from his or her own report and school records. The mean ages were 6.98 years for the Grade 1 participants ($SD = 0.40$), 9.96 years for the Grade 4 participants ($SD = 0.41$), and 13.09 years for the Grade 7 participants ($SD = 0.57$).

Physical maturation. After the individual interview, interviewers evaluated each participant's maturation status on a 5-point scale. Each point of the scale corresponds to one of Tanner's (1962) five stages of pubertal development (e.g., 1 = childlike, 3 = adolescent, 5 = adult). Girls' maturation status was assessed by three items: breast development, body configuration, and general level of maturation ($\alpha = .92$). Boys' maturation status was assessed by four items: voice change, facial hair development, body configuration, and general level of maturation ($\alpha = .94$). An overall maturation score was calculated as the mean across the items, with 1 referring to very immature and 5 referring to very mature. All Grade 1 participants scored 1 for overall maturation. The average maturation score for the Grade 4 participants was 1.61 ($SD = 0.80$), and the average maturation score for the Grade 7 participants was 3.44 ($SD = 0.79$).

Peer social groups. Peer social networks in the school were determined from individual, tape-recorded interviews conducted with every participant. In one section of the interview, participants were asked, "Now tell me about your school. Are there some people who hang around together a lot?" and "How about you? Do you have a group that you hang around with?" If a participant only reported peer groups of one gender, a standard probe was used to obtain group nominations for the other gender: "How about boys (girls)? Are there some boys (girls) who hang around together a lot?"

According to the nominations of peer groups from all respondents within a grade of each school, the social-cognitive map (SCM) procedure (Cairns, Gariépy, & Kindermann, 1991) was used to identify peer social groups. Group membership was determined for every participant. The vast majority of groups were of the same gender. Previous publications have provided a detailed description of the SCM procedure (Cadwallader & Cairns, 2002;

Cairns & Cairns, 1994; Cairns et al., 1988; Estell et al., 2002). The validity of peer affiliation patterns identified by SCM procedure has been proved by direct observations (e.g., Cairns, Perrin, & Cairns, 1985; Gest, Farmer, Cairns, & Xie, 2003). The test-retest reliability of the SCM procedure is high (Cairns, Leung, Buchanan, & Cairns, 1995).

Peer characteristics. Teachers rated each participant on his or her aggression, academic competence, and popularity using the Interpersonal Competence Scale (Cairns, Leung, Gest, & Cairns, 1995). The characteristics of peers that a participant affiliated with in the social network were calculated as the average scores of group members (excluding the participant) on teacher ratings. Aggression (overt) was assessed by three items: "gets in a fight," "gets into trouble," and "argues" ($\alpha = .87$); academic competence was assessed by two items: "good at math" and "good at spelling" ($\alpha = .75$); and popularity was assessed by three items: "popular with boys," "popular with girls," and "lots of friends" ($\alpha = .70$). All items were rated on a 7-point scale.

Results

General Awareness of Popularity and Unpopularity

Participants' general awareness of what makes a person popular or unpopular in school was examined with two indices, an answer of "don't know" and the total number of codable responses they generated. Table 1 summarizes the means and standard deviations. Participants' answer of "don't know" was coded dichotomously (1 = "don't know," 0 = otherwise). A repeated measure analysis of variance (ANOVA) was conducted that included two within-subject factors, popularity (popularity or unpopularity) and target gender (girl or boy), and two between-subjects factors, grade (first, fourth, or seventh) and participant gender (girl or boy).

Significant main effects of popularity, $F(1, 427) = 17.63, p < .001$, effect size estimated by partial eta squared ($p\eta^2 = .04$), and grade, $F(2, 427) = 4.77, p < .01, p\eta^2 = .02$, were found, along with an interaction effect between these two factors, $F(2, 427) = 10.30, p < .001, p\eta^2 = .05$. Participants were more likely to answer "don't know" to popularity questions than unpopularity questions in Grade 1, $F(1, 61) = 26.99, p < .001$ (see Table 1). No such differences were found for the Grade 4 and Grade 7 participants, $F_s < 0.27, p > .60$. In other words, a greater proportion of

the Grade 1 participants than the Grade 4 and Grade 7 participants answered "don't know" to the popularity questions, $F(2, 447) = 11.61, p < .001$ ($ps < .05$ in Duncan multirange post hoc tests). However, there were no grade differences in participants' replies to the unpopularity questions, $F(2, 448) = 0.10, p > .90$.

We also found a main effect of participant gender, $F(1, 427) = 12.23, p = .001, p\eta^2 = .03$, along with a two-way interaction of Target Gender \times Participant Gender, $F(1, 427) = 4.56, p < .05, p\eta^2 = .01$, and a three-way interaction of Popularity \times Target Gender \times Participant Gender, $F(1, 427) = 3.11, p < .05, p\eta^2 = .01$. In general, female participants were less likely to answer "don't know" than male participants (see Table 1). However, no gender difference was found in participants' answers to the boy unpopularity question, $F(1, 462) = 0.12, p > .70$.

Similar to our analysis of the "don't know" answers, a 2 (popularity) \times 2 (target gender) \times 3 (grade) \times 2 (participant gender) repeated measure ANOVA was conducted for the total number of responses a participant generated for the open-ended questions. We identified significant main effects of popularity, $F(1, 262) = 8.04, p < .01, p\eta^2 = .03$, and grade, $F(2, 262) = 4.97, p < .01, p\eta^2 = .04$. Participants tended to generate more responses for popularity questions ($M = 1.67$, 95% confidence interval [CI]: 1.56, 1.79) than for unpopularity questions ($M = 1.48$, 95% CI: 1.39, 1.58). On average, the Grade 7 and Grade 4 participants also provided more information than the Grade 1 participants (mean responses of 1.74, 1.67, and 1.39, respectively; $ps < .05$ in Duncan multirange post hoc tests).

Main effects of participant gender, $F(1, 262) = 7.86, p < .01, p\eta^2 = .03$, and target gender, $F(1, 262) = 5.48, p < .05, p\eta^2 = .02$, were found, along with a two-way interaction between these factors, $F(1, 262) = 7.80, p < .01, p\eta^2 = .03$. Female participants tended to provide more responses ($M = 1.63$, 95% CI: 1.54, 1.73) than male participants ($M = 1.52$, 95% CI: 1.43, 1.62; see Table 1). This gender difference, however, was much stronger in the reports of girls' popularity and unpopularity, $F(1, 313) = 27.97, p < .001$, than in the reports of boys' popularity and unpopularity, $F(1, 325) = 3.49, p = .06$.

Table 1
Awareness of What Makes a Person Popular or Unpopular: Target Gender, Grade, and Participant Gender

Indices	Popular				Unpopular				ns
	Girl		Boy		Girl		Boy		
	M	SD	M	SD	M	SD	M	SD	
“Don’t know”									
Grade 1	0.39	0.49	0.39	0.49	0.16	0.37	0.14	0.34	74–81
Grade 4	0.20	0.40	0.21	0.41	0.20	0.40	0.14	0.34	133–138
Grade 7	0.17	0.38	0.13	0.34	0.14	0.35	0.16	0.37	249–251
Female	0.17	0.37	0.16	0.37	0.12	0.33	0.14	0.35	257–261
Male	0.27	0.45	0.25	0.43	0.22	0.41	0.16	0.36	204–206
Total no. of responses									
Grade 1	1.42	0.69	1.24	0.56	1.27	0.57	1.17	0.51	45–70
Grade 4	1.75	0.83	1.60	0.76	1.62	0.72	1.43	0.71	107–115
Grade 7	1.91	0.99	1.77	0.89	1.56	0.69	1.50	0.67	208–216
Female	2.02	1.01	1.70	0.85	1.59	0.71	1.48	0.70	216–228
Male	1.47	0.64	1.59	0.82	1.43	0.66	1.35	0.63	148–174

Table 2
Means and Standard Deviations of Domains for Popularity and Unpopularity: Target Gender, Grade, and Prominence

Domain	Popular				Unpopular				Prominence score	
	Girl		Boy		Girl		Boy		score	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Individual characteristics										
Appearance										
Grade 1	0.04	0.30	0.06	0.24	-0.10	0.35	-0.07	0.31	0.07 _a	0.23
Grade 4	0.51	0.69	0.43	0.61	-0.40	0.66	-0.30	0.53	0.38 _c	0.49
Grade 7	0.27	0.54	0.28	0.54	-0.24	0.55	-0.22	0.52	0.25 _b	0.41
Self-presentation										
Grade 1	0.04	0.30	0.04	0.20	-0.01	0.12	-0.01	0.12	0.02 _a	0.13
Grade 4	0.37	0.66	0.21	0.47	-0.11	0.32	-0.09	0.28	0.19 _b	0.33
Grade 7	0.63	0.81	0.48	0.73	-0.28	0.57	-0.27	0.50	0.40 _c	0.51
Spending power										
Grade 1	0.02	0.15	0.02	0.14	-0.01	0.12	-0.01	0.12	0.02 _a	0.13
Grade 4	0.09	0.29	0.17	0.44	-0.07	0.28	-0.07	0.29	0.09 _b	0.21
Grade 7	0.03	0.18	0.08	0.31	-0.01	0.12	-0.01	0.14	0.04 _a	0.13
Prosocial behavior										
Grade 1	0.27	0.50	0.18	0.39	-0.25	0.44	-0.17	0.38	0.22 _b	0.36
Grade 4	0.11	0.31	0.07	0.26	-0.09	0.32	-0.08	0.27	0.10 _a	0.25
Grade 7	0.15	0.41	0.09	0.31	-0.11	0.33	-0.06	0.24	0.10 _a	0.22
Studentship										
Grade 1	0.18	0.44	0.08	0.28	-0.07	0.26	-0.09	0.37	0.11 _a	0.25
Grade 4	0.16	0.39	0.19	0.53	-0.30	0.57	-0.30	0.59	0.24 _b	0.41
Grade 7	0.07	0.37	0.04	0.30	-0.03	0.40	-0.11	0.51	0.13 _a	0.29
Sports and activities										
Grade 1	0.04	0.21	0.02	0.14	0.00	0.00	0.00	0.00	0.02 _{a,b}	0.11
Grade 4	0.01	0.09	0.03	0.17	0.00	0.00	-0.01	0.09	0.01 _a	0.05
Grade 7	0.08	0.32	0.10	0.33	0.00	0.00	-0.02	0.17	0.05 _b	0.18
Dominance										
Grade 1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00 _a	0.00
Grade 4	0.05	0.21	0.08	0.28	0.01	0.22	0.00	0.19	0.06 _b	0.19
Grade 7	0.05	0.24	0.08	0.27	0.02	0.18	0.00	0.27	0.06 _b	0.14
Victimization										
Grade 1	0.02	0.15	0.02	0.14	0.16	0.37	0.07	0.26	0.08 _b	0.21
Grade 4	0.00	0.00	0.00	0.00	0.05	0.21	0.07	0.26	0.03 _a	0.12
Grade 7	0.00	0.07	0.00	0.07	0.03	0.19	0.02	0.15	0.02 _a	0.10
Social Aggression										
Grade 1	0.02	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00 _a	0.03
Grade 4	0.02	0.13	0.02	0.14	0.08	0.28	0.07	0.26	0.05 _b	0.14
Grade 7	-0.01	0.10	0.00	0.07	0.08	0.28	0.03	0.18	0.03 _{a,b}	0.12
Overt aggression										
Grade 1	0.00	0.30	-0.04	0.54	0.27	0.57	0.24	0.55	0.22 _b	0.39
Grade 4	0.03	0.16	0.10	0.36	0.11	0.37	0.16	0.41	0.13 _a	0.25
Grade 7	0.03	0.18	0.07	0.26	0.07	0.31	0.11	0.38	0.08 _a	0.18
Deviant behaviors										
Grade 1	0.02	0.15	0.02	0.14	0.03	0.17	0.03	0.17	0.02 _a	0.13
Grade 4	0.01	0.09	0.04	0.19	0.02	0.19	0.03	0.16	0.03 _a	0.14
Grade 7	0.08	0.27	0.09	0.29	0.10	0.33	0.05	0.27	0.09 _b	0.20
Interpersonal relationships										
Social interaction ^a										
Grade 1	0.24	0.43	0.22	0.42	-0.10	0.31	-0.11	0.32	0.15 _b	0.27
Grade 4	0.05	0.21	0.00	0.00	-0.07	0.25	-0.04	0.20	0.04 _a	0.10
Grade 7	0.02	0.18	0.01	0.15	-0.25	0.52	-0.20	0.45	0.12 _b	0.24
Peer preference										
Grade 1	0.18	0.39	0.14	0.35	-0.07	0.26	-0.07	0.26	0.09 _b	0.21
Grade 4	0.02	0.13	0.00	0.00	-0.04	0.23	-0.02	0.13	0.03 _a	0.12
Grade 7	0.01	0.10	0.02	0.14	-0.01	0.10	-0.01	0.12	0.01 _a	0.08
Cross-gender relationship										
Grade 1	0.07	0.25	0.04	0.20	0.00	0.00	0.00	0.00	0.02 _a	0.08
Grade 4	0.08	0.33	0.06	0.23	-0.03	0.17	0.00	0.13	0.05 _{a,b}	0.16
Grade 7	0.12	0.38	0.10	0.31	-0.02	0.17	-0.04	0.22	0.07 _b	0.19

Table 2 (continued)

Domain	Popular				Unpopular				Prominence score	
	Girl		Boy		Girl		Boy			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
	Interpersonal relationships (<i>continued</i>)									
Social connections										
Grade 1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00 _a	0.00
Grade 4	0.03	0.16	0.02	0.14	−0.01	0.10	−0.01	0.09	0.02 _a	0.07
Grade 7	0.12	0.38	0.11	0.34	−0.05	0.21	−0.03	0.18	0.08 _b	0.22
Friends' popularity										
Grade 1	0.00	0.00	0.04	0.20	0.00	0.00	0.00	0.00	0.01 _a	0.05
Grade 4	0.07	0.26	0.02	0.14	−0.04	0.19	−0.02	0.13	0.03 _{a,b}	0.13
Grade 7	0.09	0.29	0.11	0.31	−0.04	0.19	−0.04	0.19	0.07 _b	0.18

Note. Sample sizes for girls' popularity, boys' popularity, girls' unpopularity, and boys' unpopularity, respectively, were 45, 49, 67, and 70 (Grade 1); 111, 108, 107, and 115 (Grade 4); and 208, 216, 214, and 209 (Grade 7). For each domain, prominence score means with different subscripts differed significantly at $p < .05$ with Duncan's multirange post hoc tests.

^a Most reports from Grade 1 fell into one category of social interaction, companionship, whereas reports from Grade 7 focused on two other categories, sociability and nerd.

Perceived Differentiation Between Popularity and Unpopularity

We next investigated how children's perceptions of popularity and unpopularity differ on various domains. An overall test was first performed that included all 16 domains in a repeated measure multivariate analysis of variance (Domain \times Popularity \times Target Gender \times Grade \times Participant Gender). Significant effects involving domain were main effect of domain, $F(15, 3885) = 4.99, p < .001$; Domain \times Grade, $F(30, 3885) = 2.57, p < .001$; Domain \times Popularity, $F(15, 3885) = 24.97, p < .001$; Domain \times Popularity \times Grade, $F(30, 3885) = 8.66, p < .001$; and Domain \times Popularity \times Target Gender, $F(15, 3885) = 1.73, p < .05$. Other significant effects included popularity, $F(2, 259) = 321.51, p < .001$; Popularity \times Grade, $F(2, 259) = 6.08, p < .01$; and Popularity \times Target Gender \times Gender, $F(1, 259) = 6.40, p < .05$. Follow-up analysis was conducted for each domain in a 2 (popularity) \times 2 (target gender) \times 3 (grade) \times 2 (participant gender) repeated measure ANOVA. Table 2 summarizes the means and standard deviations of scores for all 16 content domains according to grade and target gender.

Main effects of popularity versus unpopularity. A significant main effect of popularity indicates that children's perceptions of popularity and unpopularity differ on a specific domain. Such main effects were found for 13 domains. Significantly higher scores were endorsed for popularity than unpopularity on the following domains: appearance, self-presentation, spending power, prosocial behavior, studentship, sports and activities, social interaction, peer preference, cross-gender relationship, social connection, and friends' popularity, $F_s(1, 262) > 4.81, p_s < .02, p\eta^2_s = .02-.20$, with a median of .10. Unpopularity was associated with higher levels of victimization and overt aggression than popularity, $F_s(1, 262) > 12.76, p_s < .001; p\eta^2 = .05$ for victimization and $p\eta^2 = .08$ for overt aggression. No significant differences were found in three domains: dominance, social aggression, and deviant behaviors.

Interaction effects between popularity and grade. To examine differences of popularity and unpopularity across grade levels, we examined interaction effects between popularity and grade. Such

interaction effects were identified for 11 of the 13 domains that showed significant differences between popularity and unpopularity, as mentioned above, $F_s(1, 262) > 3.27, p_s < .05; p\eta^2_s = .02-.19$, with a median of .055, with exceptions for victimization and cross-gender relationship.

To clarify each interaction effect, we conducted a 2 (popularity) \times 2 (target gender) \times 2 (participant gender) repeated measure ANOVA for each grade. Overt aggression and peer preference reliably differentiated popularity from unpopularity only in Grade 1, $F_s(1, 25) > 7.85, p < .01$. Sports and activities, social connection, and friends' popularity differentiated popularity from unpopularity only in Grade 7, $F_s(1, 160) > 19.01, p < .001$.

Self-presentation and spending power were mentioned by many participants in Grades 4 and 7 as highly important domains for popularity or unpopularity, $F_s > 13.07, p_s < .001$, but only by a few Grade 1 participants. Self-presentation showed greater differentiation between popularity and unpopularity in Grade 7 than in Grade 4, $F(1, 237) = 4.41, p < .05$, whereas spending power had greater differentiation in Grade 4 than in the Grade 7, $F(1, 237) = 10.61, p = .001$. Appearance was a prominent domain in Grades 4 and 7 for differentiating popularity from unpopularity, $F_s > 57.43, p_s < .001$, with greater differentiation in Grade 4 than in Grade 7, $F(1, 237) = 9.31, p < .01$.

Finally, prosocial behavior, studentship, and social interaction had significant effects in all three grade levels, $F_s > 4.60, p_s < .05$. Prosocial behavior had a stronger differentiating effect between popularity and unpopularity in Grade 1 than in Grades 4 or 7, $F_s > 8.17, p_s < .01$. Studentship differentiated popularity from unpopularity more in Grade 4 than in Grade 7, $F(1, 237) = 20.1, p < .001$. Social interaction showed greater differentiation in Grades 1 and 7 than in Grade 4, $F_s > 11.45, p_s < .001$. However, the Grade 1 participants primarily mentioned companionship (e.g., play with people) for popularity, whereas the Grade 7 participants focused on the lack of sociability (e.g., stay to themselves, a nerd) for unpopularity.

Prominence of Domains for Popularity and Unpopularity

A prominence score was created to capture the degree a factor or domain was mentioned either for popularity or for unpopularity, regardless of the direction of the ratings. It was calculated, for each of the 16 domains, as the average of the absolute score across four categories: girl popular, girl unpopular, boy popular, and boy unpopular (see Table 2 for means and standard deviations). An overall repeated measure multivariate analysis of variance (Domain \times Grade \times Gender) was first conducted to test grade and gender differences across all 16 domains. Significant effects were found for domain, $F(15, 6810) = 31.49, p < .001$; Domain \times Grade, $F(30, 6810) = 12.22, p < .001$; grade, $F(2, 454) = 23.47, p < .001$; and gender, $F(1, 454) = 16.16, p < .001$. Follow-up analyses were conducted for each domain to clarify different patterns of grade differences in a univariate ANOVA with the prominence score as the dependent variable and grade and gender as independent variables.

In all 16 domains, we found significant grade differences, $F_s(2, 454) > 3.02, p_s < .05$. Post hoc tests (i.e., Duncan's multirange tests) were performed to identify exact patterns of differences among Grades 1, 4, and 7, which were represented in Table 2 by different subscripts of the mean prominence scores. Four domains showed significantly greater prominence in Grade 1 than in Grades 4 and 7: prosocial behavior, overt aggression, peer preference, and victimization. Three domains had greater prominence in Grade 4 than in Grades 1 and 7: appearance, studentship, and spending power. Three domains were mentioned more in Grade 7 than in Grades 1 and 4: Self-presentation, deviant behaviors, and social connections. The Grade 7 participants also viewed sports, cross-gender relationships, and friends' popularity as being more important than did Grade 1 participants. Social interaction was mentioned less by the Grade 4 participants than by Grades 1 and 7 participants.

Across Grades 1, 4, and 7, there were substantial shifts in participants' perceptions of the primary domains associated with popularity and unpopularity. Spearman rank-order correlations of the rankings of the mean prominence scores of the 16 domains were modest and nonsignificant between Grades 1 and 4 (.41, $p > .10$) and between Grades 1 and 7 (.33, $p > .20$). A significant similarity was found between Grade 4 and Grade 7, with a Spearman rank-order correlation coefficient of .61, $p < .05$.

Deviance for Popularity

Deviance scores were created to assess the degree to which deviant behaviors and characteristics were nominated for popularity and prosocial characteristics were nominated for unpopularity. A 2 (target gender) \times 3 (grade) \times 2 (participant gender) repeated measure ANOVA was conducted. We obtained a significant main effect of target gender, $F(1, 411) = 7.58, p < .01, p\eta^2 = .018$. Greater deviance was reported for boys' popularity and unpopularity ($M = -0.30, SE = 0.05, 95\% CI: -.39, -.21$) than for girls' ($M = -0.39, SE = 0.05, 95\% CI: -.48, -.30$), and this pattern was consistent across grades, as no significant interaction between target gender and grade was found. We also obtained a main effect of grade $F(2, 411) = 8.05, p < .001, p\eta^2 = .038$. Duncan post hoc tests indicated that the deviance scores in Grade 7 ($M = -0.19, SE = 0.04$) were higher than the deviance scores in Grade 4 ($M = -0.33, SE = 0.05$) and Grade 1 ($M = -0.51, SE = 0.07$). Reports

of deviance did not differ by participant gender, and no interaction effects between participant gender and grade were obtained. Figure 1 illustrated the effects of target gender and grade.

Individual and Peer Correlates of Perceived Deviance

Age and maturation. Pearson's correlation coefficients between the mean deviance score (across target gender) and individual factors were calculated separately for boys and girls in each grade (see Table 3). Among girls, a significant coefficient was found in Grade 4, which was negative, contrary to the predictions made by "maturation gap" hypothesis. Older age among Grade 4 girls was associated with less deviance for popularity (i.e., lower deviance score). Among boys, a significant positive coefficient was found in Grade 7, consistent with "maturation gap" hypothesis. Older age among the Grade 7 boys was associated with reports of greater deviance for popularity. The correlation between perceptions of deviance and physical maturity was positive among the Grade 4 boys, but it fell short of statistical significance.

Peer characteristics. The average scores of peer group members' aggression, academic achievement, and popularity were not related to girls' reports of deviance for popularity (see Table 3). However, greater deviance for popularity was reported by Grade 4 boys whose peers in the same social group had higher levels of aggression and lower levels of academic competence. Among Grade 7 boys, reports of greater deviance were associated with lower teacher ratings of popularity of peers.

Group homophily. Analysis of variance was conducted to examine similarity among peer group members in their reports of deviance for popularity, with mean deviance score as the dependent variable and group membership as the independent variable. The analysis was done separately for boys and girls in each grade. Significant homophily in the reports of deviance for popularity was found among the boys' peer groups in Grade 7, intraclass $r' = .46, F(17, 36) = 3.59, p = .001$, indicating that boys of the same group had similar perceptions of the degree to which deviant behaviors promoted popularity. Group homophily among the Grade 4 boys was modest ($r' = .12$) but not statistically significant, $F(10, 43) = 1.68, p = .12$. No group homophily was found for the Grade 1 boys or among girls of any grade.

Discussion

A notable finding from this study is that the average scores on the deviance for popularity measure were negative in all the three

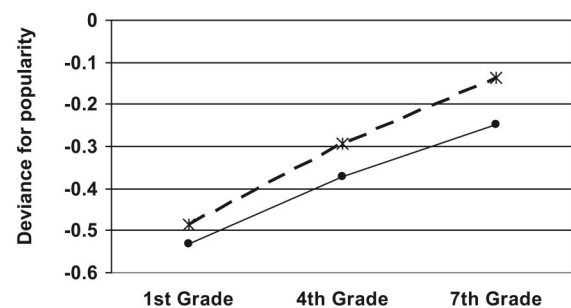


Figure 1. Scores of deviance for popularity across grade and target gender (solid line represents girls' popularity and broken line represents boys' popularity).

Table 3
Correlations Between Perceived Deviance for Popularity and Maturational and Peer Factors by Grade and Participant Gender

Gender	Age	Maturation	Peer-AGG	Peer-ACA	Peer-POP	ns
Girls						
Grade 1 ^a	-.18		.11	.10	-.04	30-34
Grade 4	-.31*	-.10	.00	.04	.14	54-72
Grade 7	-.14	-.09	-.04	.02	-.08	106-149
Boys						
Grade 1 ^a	-.23		-.20	.15	.15	34-46
Grade 4	-.07	.22†	.32*	-.43**	-.16	50-61
Grade 7	.25*	-.07	-.03	-.03	-.29*	55-93

Note. Peer-AGG = mean teacher ratings of aggression for peers in the same group with the participant; Peer-ACA = mean teacher ratings of academic competence for peers; Peer-POP = mean teacher ratings of popularity for peers.

^a All Grade 1 participants were rated 1 on the Physical Maturation scale.

† $p < .10$. * $p < .05$. ** $p < .001$.

grade levels, although significantly higher levels were obtained in Grade 7 than in Grades 1 and 4. It suggests a normative peer culture among inner-city African American youths, even in Grade 7. Previous research primarily focused on the increases in the correlations between popularity and aggression or deviant behaviors. The results from this study indicate that early adolescent peer culture may not necessarily be deviant in an absolute sense (which would have been indicated by a positive score on the deviance for popularity scale), rather it appears to be less prosocial than the peer culture in earlier developmental periods.

Aggression and Studentship Among African American Youths

In this sample of African American youths from a disadvantaged inner-city context, we failed to identify a positive relationship between overt aggression and popularity. In contrast, overt aggression was nominated for unpopularity in Grade 1, and it was not significantly related to either popularity or unpopularity in Grades 4 and 7. This pattern of developmental differences is consistent with previous studies on different samples that have shown increased peer acceptance of aggression in older age youths (e.g., Bukowski et al., 2000; Cillessen & Mayeux, 2004; LaFontana & Cillessen, 2002; Rose et al., 2004).

However, the lack of positive association between overt aggression and popularity in our sample contradicted a previous report on a sample of urban children with diverse ethnic backgrounds (LaFontana & Cillessen, 2002) in which a positive correlation between physical aggression and perceived popularity was found for African American children. One possible explanation for this discrepancy may be the different ethnic compositions of students in the schools. Participants in our sample attended schools with students from a highly homogeneous ethnic background (over 99% African American), whereas participants in the LaFontana and Cillessen (2002) study attended schools with greater diversity of students. Recent research has shown that the ethnic composition of students in school largely affects students' experience such as victimization in peer social networks (e.g., Graham & Juvonen, 2002). It points to an important direction for future research to examine how school ethnic context influences notions of popular-

ity for children of different ethnic backgrounds, especially for minority children.

In contrast to the oppositional culture proposal (Fordham & Ogbu, 1986), inner-city African American participants from all three grade levels in this study endorsed good studentship for popularity (or poor studentship for unpopularity). No gender differences were found in the endorsement of good studentship for popularity. Compared with Grade 4, in Grade 7, good studentship was less related to popularity. This difference between Grade 7 and Grade 4 is similar to the results from a Caucasian sample in a middle-class community (Bukowski et al., 2000). The findings suggest that African American children in high-risk context value studentship and education, although studentship seems more prominent in elementary schools than in middle schools.

Overall, African American children's perception of aggression and studentship show normative patterns of developmental differences largely consistent with the patterns found in other samples of youths from less disadvantaged backgrounds. Given that popularity with peers becomes an important concern for older children and adolescents, it will be important to investigate in future studies how perceptions of popularity in peer social networks interact with experiences in other systems (e.g., family, neighborhood) to shape the normative developmental course of minority children in high-risk context.

Deviance for Popularity: Gender and Developmental Differences

Participants reported greater deviance for boys' popularity than for girls' popularity. This finding is consistent with an earlier ethnographic study in a middle-class suburban elementary school (Adler et al., 1992). The result from our study highlights that African American children of both genders and of different ages endorse greater deviance and aggression for boys' popularity than for girls'. It corresponds to the observation that overtly aggressive behaviors are more likely to be associated with dominant or central status in the peer social networks among boys than among girls (e.g., Farmer, Estell, Bishop, O'Neal, & Cairns, 2003; Pellegrini, 2003; Rodkin, Farmer, Pearl, & Van Acker, 2000; Xie et al., 1999, 2003). This finding suggests that the development of bravado

attitudes among African American adolescent boys in high-risk contexts is likely to be supported by the kind of peer culture in school (see also Cunningham & Meunier, 2004).

Reports of deviant behaviors for popularity (or prosocial behavior for unpopularity) were higher in Grade 7 than in Grades 1 and 4, a pattern of developmental differences consistent with previous research in different samples (e.g., Bukowski et al., 2000; Cillessen & Mayeux, 2004; Rose et al., 2004). One explanation of the difference is the "maturation gap" hypothesis (Moffitt, 1993). We tested this hypothesis by examining the relation between (a) participants' ages and physical maturation and (b) the level of perceived deviance for popularity. Only modest support was found for this hypothesis, and it was only among boys. Older age in Grade 7 was associated with boys' perceptions of greater deviance for popularity. This result echoes an earlier finding among African American early adolescent boys on the positive association between maturation status and preference for independent learning style (Spencer, Dupree, Swanson, & Cunningham, 1998). We did not find the predicted patterns among girls. Another factor that has been proposed to explain the increased deviance during early adolescence is the transition to middle school (Bukowski et al., 2000). We speculate that a third possible factor—the inner-city context—may be highly relevant in understanding the observed grade differences of deviance for popularity in this study. Previous research has indicated that exposure to community violence and the experience of dealing with peer gangs and turf hassles are associated with higher levels of aggression (e.g., Cunningham & Meunier, 2004; Gorman-Smith & Tolan, 1998). Early adolescents are more likely to be exposed to community violence and peer gangs than younger children, and they may display more and show greater tolerance to aggressive and deviant behaviors.

This study represents the first effort to explore peer social processes underlying children's and adolescents' perceptions of the degree to which deviant behaviors promote popularity. We found some expected patterns among boys, but none among girls. In Grade 4, reports of greater deviance for popularity were strongly associated with boys' deviant peer affiliation (i.e., high aggression and low academic competence). In Grade 7, there was a strong peer group homophily on the deviance score, indicating that boys who reported greater deviance for popularity also affiliated with other boys who endorsed similar levels of deviance (the vast majority of peer groups are of the same gender). Neither peer characteristics nor group homophily were implicated in girls' reports of deviant behaviors for popularity. These findings suggest that affiliation and socialization with same-sex peers may play an important role in African American boys' development of physical aggression, deviant behaviors, and related attitudes in high-risk context (see Dishion et al., 1999). We speculate that the development of deviant behaviors and attitudes among African American girls may be largely affected by other social relationships in adolescence, such as romantic relationships with deviant and older males (e.g., Magnusson, Stattin, & Allen, 1985; Pepler & Craig, 2005). It should be cautioned that these findings are preliminary and need to be replicated in future longitudinal studies that use different methods and samples.

Taken together, these findings indicate that as youths enter adolescence, the notions of popularity in the peer social networks support certain deviant and aggressive behaviors. This study confirms a strong contagion effect (i.e., reports of deviant behaviors

for popularity) within the peer groups of African American adolescent boys. However, peer processes not only operate at the group level but also involve broader social networks (e.g., notions of popularity). This implies that monitoring or altering the peer culture and peer dynamics at the social network level is likely to add to the effectiveness of the existing prevention and interventions strategies focusing on the individual child and/or peer groups (see also Farmer, 2000).

Children's Awareness of Popularity and Unpopularity

Children's indications of what makes a person popular or unpopular in school show significant differences across gender and grade levels. Female participants were more aware of the factors associated with popularity and unpopularity than were male participants, and they often generated more reports. Such gender differences were more salient in their answers about girls' popularity and unpopularity and did not vary across grade levels. Our finding is quite consistent with earlier reports of girls as more acute observers of social status and peer relations in the network (e.g., Cillessen & Bellmore, 1999; LaFontana & Cillessen, 1999).

A substantial proportion of Grade 1 participants could not identify the factors that they perceived as making a girl or a boy popular. When they did report on specific characteristics, they provided only limited information. In contrast, the Grade 4 and Grade 7 participants were more ready to report factors that make a child popular, and there was no further difference between Grade 4 and Grade 7. These findings suggest that by Grade 4 the concept of perceived popularity has been well established, and children are very aware of the factors that make a person popular or unpopular at school. In contrast, perceived popularity may not be a salient or well-differentiated dimension in Grade 1 peer social networks. A significant proportion of Grade 1 participants reported that peer preference (e.g., liked by other children, preferred playmate) and companionship (e.g., play together) would make a girl or a boy popular, which suggests that perceived popularity may not have been well-differentiated from peer preference.

Factors Associated With Popularity and Unpopularity: Developmental Differences

Compared with Grade 4 and Grade 7 participants, Grade 1 participants provided quite different answers for what makes a boy (girl) popular (unpopular). According to the Grade 1 reports, the primary factors that make a person popular were prosocial behaviors, companionship, and peer preference, whereas overt aggression was viewed as the primary reason for unpopularity. These factors showed poor correspondence to the factors reported by the Grade 4 and Grade 7 participants. Attractive appearance was not reported by the Grade 1 participants as an important factor for popularity, whereas it was one of the most prominent factors for popularity in Grade 4 and Grade 7. This finding is consistent with previous research showing that physical attractiveness is not related to social visibility among preschool children, as indicated by the amount of visual attention they receive from their peers (e.g., Vaughn & Langlois, 1983). Altogether, these findings suggest that the period between Grade 1 and Grade 4 sees major development in children's social conceptions of perceived popularity. Given the lack of information on children's conception of perceived popu-

larity and its development during middle childhood, there is a great need to study the developmental processes that will take into account both individual social-cognitive factors and the broader peer social dynamics in the network.

Compared with the Grade 1 participants' reports, the Grade 4 participants did not view peer preference and overt aggression as important factors for popularity or unpopularity. Instead, attractiveness (e.g., pretty, nice clothes), self-presentation, and good studentship became prominent factors for popularity, and poor appearance and studentship were key factors for unpopularity. Prosocial behaviors still showed a significant difference between popularity and unpopularity in Grade 4, but with a much smaller magnitude compared with its importance in Grade 1.

The Grade 7 participants continued to view attractiveness as a salient dimension for popularity. Self-presentation gained hegemony at this point, and studentship was less relevant compared with its relevance in Grade 4. Consistent with previous research (Eder, 1985; Sabongui et al., 1998), we found that a group of social relationship factors and extracurricular activities became more prominent in Grade 7: sports, social connections, and friends' popularity. Furthermore, lack of sociability was viewed, along with poor self-presentation and lack of attractiveness, as the primary factors that make a student unpopular. Despite these differences, a significant rank-order correlation between Grade 4 and Grade 7 was obtained. This suggests that the domains relevant for popularity and unpopularity are somewhat similar between preadolescence and early adolescence, yet are undergoing important modifications that reflect changing school context (e.g., the availability of extracurricular activities), evolving peer systems (e.g., the salience of peer affiliation), and developing individual orientations (e.g., romantic interests).

Strengths and Limitations

Participants' narrative accounts of what makes a person popular or unpopular highlighted some factors that have not been extensively investigated in quantitative studies using questionnaire measures. For instance, cross-gender relationships, social connection, and friends' popularity were quite relevant dimensions for popularity and unpopularity, especially in Grade 7. Previous research has focused primarily on individual characteristics, thus omitting interpersonal and network characteristics. Future studies should further explore how individual and interpersonal characteristics interact or converge to promote a child's popularity status in the peer social networks.

A couple of this study's limitations warrant consideration. First, comparisons showed that nonparticipants in Grade 7 were more deviant than Grade 7 participants in this sample. This difference limits the generalizability of findings from this study. Had the Grade 7 nonparticipants been included, greater endorsement for deviance in popularity and stronger group homophily on deviance might have been obtained. In other words, the effects of gender and grade differences and group homophily on the deviance scores might have been strengthened. Second, a significant proportion of Grade 1 participants did not know what makes a girl (boy) popular (unpopular), and those who did nominated fewer factors than the Grade 4 and Grade 7 participants. As a result, findings on popularity and unpopularity factors in Grade 1 were based on rather limited sample size and information, and the results on grade

differences should be interpreted with care. Given that perceived popularity represents a person's prominent status in peer social networks and that first graders have limited cognitive and verbal skills, the open-ended question format in this study might have been too general for the young participants. Future research might consider asking information about specific individuals' popularity status in the peer networks (rather than general questions). Further, observational methods may be used in combination with nomination and narrative methods to investigate perceived popularity among younger children.

In summary, findings from this study indicate that inner-city African American children's perceptions of popularity and unpopularity at school show normative patterns of development that largely resemble those of children from different contexts and ethnic backgrounds. Important grade and gender differences are obtained. They point to a great need in future research to investigate the emergence of perceived popularity in middle childhood; to understand how individual, peer, and school context influence minority children's development in high-risk settings; and to examine the impact of collective peer culture (e.g., deviant behaviors for popularity) on the development of gender differences in anti-social behaviors.

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(Appendix follows)

Appendix

Content Domains and Categories for Coding

Individual Characteristics

1. Appearance
 - Looking (+1, pretty; -1, ugly, fat, wild hair)
 - Clothes (+1, nice, pretty clothes; -1, ugly, saggy clothes)
 - Hygiene (+1, good hygiene; -1, poor hygiene, smells)
2. Self-presentation
 - The way they look (+1, popular question; -1, unpopular question)
 - The way they dress (+1, popular question; -1, unpopular question)
 - The way they act (+1, popular question; -1, unpopular question)
 - Their attitudes or personality (+1; popular question; -1, unpopular question)
3. Spending power
 - Spending power (+1, new clothes, jewelry; -1, don't have new clothes)
 - Wealth, money (+1, rich, have money; -1, poor)
4. Prosocial behavior
 - Prosocial-antisocial characteristics (+1, nice, help; -1, mean)
 - Trustworthy, manner, attitudes, personality (+1, positive, good; -1, negative, bad attitudes)
5. Studentship
 - Studentship (+1, good student/grades; -1, poor student/grades)
 - Intelligence (+1, smart; -1, dumb, not smart)
 - Disruptive or defiant behaviors (+1, disruptive, talking back to teacher; -1, not disruptive)^a
6. Sports and activities
 - Athletic, sports (+1, participate, good at; -1, do not participate, not good)
 - Cheerleaders (+1, participate; -1, do not participate)
 - School activities (+1, participate; -1, do not participate)
7. Dominance
 - Dominance (+1, nobody would mess with them; -1, being sissy, scared of people)
 - Snobby, showing off, bragging (+1, snobby, bragging; -1, not snobby)
8. Victimization
 - Victim (+1, beaten up by people, they call her names; -1, not a victim)
9. Social aggression
 - Social aggression (+1, start mess, talking about people; -1, not talking about people)
10. Overt aggression
 - Physical aggression (+1, fight; -1, don't fight)
 - Verbal aggression (+1, tease, argue, name calling; -1, do not tease/argue)
 - Bully (+1, acts like or is a bully; -1, not a bully)

11. Deviant behaviors

- Substance use (+1, drug, cigarette, drink; -1, no use)
- Gang involvement (+1, involved; -1, not involved)
- Sexual or related activities (+1, participate; -1, do not participate)

Interpersonal Relationships

12. Social interaction
 - Companionship (+1, play with other, be friends with each other; -1, play alone)
 - Sociability (+1, sociable, talk to others; -1, stay to themselves, quiet, shy)
 - Nerd (+1, a nerd; -1, not a nerd)^a
13. Peer preference
 - Peer preference or rejection (+1, they play with her, like him/her; -1, nobody plays with him, not liked by others)
 - Fun and humor (+1, fun to play with, funny; -1, not funny)
14. Cross-gender relationship
 - Liked by the opposite-sex peers (+1, well liked; -1, disliked)
 - Boyfriend/girlfriend (+1, go on dates; -1, no boyfriend/girlfriend)
 - Interest in opposite-sex peers (+1, show interest; -1, not interested)
15. Social connections
 - Known by others (+1, everybody knows them; -1, nobody knows them)
 - Have friends (+1, lots of friends; -1, no friend)
16. Friends' popularity
 - People they hang around with (+1, popular question; -1, unpopular question)
 - Who their friends are (+1, popular question; -1, unpopular question)
 - Popularity of friends (+1, friends popular; -1, friends unpopular)

Other Content Categories (1, applicable; 0, not applicable).

- Other (e.g., have own opinions, want to be popular)
- Unscorable answer (e.g., no response, inaudible answer)
- Don't know

^a Codings were reversed in calculating the domain score.