

Differences in the Relations Between Antisocial Behavior and Peer Acceptance Across Contexts and Across Adolescence

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This study tests the hypothesis that, during adolescence, antisocial behavior becomes positively associated with peer acceptance. This hypothesis was tested considering both classroom and out-of-class peer relations. Data from a previously published study, with a cross-sectional sample of 577 Italian 11- to 13-year-olds, were used. Analyses showed that in the 6th grade antisocial behavior was negatively related to classroom peer preference, but not significantly related to out-of-class peer inclusion. By the 8th grade, antisocial behavior was positively related to out-of-class peer inclusion, but not significantly related to classroom peer preference. Similar results were found for males and females. The higher level of peer acceptance among the 8th grade antisocial individuals was primarily due to nominations received by other antisocial individuals.

Moffitt's (1993) theory of adolescent-limited and life-course-persistent antisocial behavior predicts that, during adolescence, antisocial behavior comes to be viewed as desirable because it represents adult status and access to adult opportunities. If this is true, it could be argued that antisocial behavior will not consistently be related to low peer acceptance throughout adolescence. Instead, the relation between antisocial behavior and peer acceptance should become positive as antisocial behavior comes to be viewed more positively by peers. Although past research has shown that antisocial and aggressive youth tend to be rejected by their peers (Brendgen, Vitaro, Turgeon, & Poulin, 2002; Kiesner, 2002; Kiesner, Cadinu, Poulin, & Bucci, 2002; Newcomb, Bukowski, & Pattee, 1993), little is known about the age-related differences in these relations that are predicted by Moffitt's theory. This study was conducted to test for changes in the relation between antisocial behavior and peer acceptance, considering peer relations across two different contexts, with a sample of Italian middle school students.

Changes in the Relation Between Peer Acceptance and Antisocial Behavior

Few studies have tested for age-related differences in the relation between antisocial behavior and

peer acceptance, and the few studies that have tested for such differences primarily have focused on aggressive behaviors. For example, Haselager, Cillessen, Van Lieshout, Riksen-Walraven, and Hartup (2002) followed 274 children 6–11 years old, and found that the relation between aggressive behavior and peer rejection remained nearly unchanged across this age range ($r = .50$ at 6 years, and $r = .44$ at 11 years). Similarly, in a cross-sectional study, LaFontana and Cillessen (2002) found stable relations between aggressive behavior and peer acceptance from the fourth grade to the eighth grade: Across all age groups (except the sixth grade) physical aggression was moderately and negatively associated with social preference.

Whereas the above studies suggest that the relation between aggressive behavior and peer acceptance is stable (at least through the eighth grade), other research has come to a different conclusion. For example, Cillessen and Mayeux (2004) found that, from the fifth grade to the ninth grade, the relation between physical aggression and social preference dropped from $\beta = -.280$ to $-.068$, controlling for gender, perceived popularity, and relational aggression. Importantly, although the negative relation between physical aggression and social preference decreased over time, there was no evidence that aggressive youth actually became liked by their peers.

Bukowski, Sippola, and Newcomb (2000), on the other hand, found that the transition from elementary school to middle school was associated with an increase in attraction to aggressive peers. This finding was true for girls' attraction to aggressive boys,

Data used for this study come from a larger project from which data have previously been published.

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and for boys' attraction to aggressive boys and girls. These authors concluded that, consistent with Moffitt's (1993) theory, during early adolescence aggressive behavior becomes associated with higher levels of peer acceptance rather than rejection.

Although the studies discussed above do not consistently lead to the same conclusion, the studies by Cillessen and Mayeux (2004) and Bukowski et al. (2000) provide a basis for expecting that antisocial youth, or at least aggressive youth, achieve higher levels of peer acceptance during adolescence than they had during childhood. However, further work is needed before clear conclusions can be drawn. In doing so, there remain two important issues that must be addressed.

The first issue regards the context in which peer relations are studied. In all of the studies discussed above, peer relations were examined within the school context. It is important to recognize, however, that peer acceptance may differ across contexts at the same developmental stage. For example, previous studies have shown generally weak relations between classroom peer acceptance and out-of-school self-reported peer acceptance (Ladd, 1983; Ray, Cohen, & Secrist, 1995). However, these relations appear to be somewhat stronger ($r \approx .45$) when using peer reports of classroom peer acceptance and out-of-school peer acceptance (e.g., sports clubs, church groups; Durrant & Henggeler, 1986).

In a recent study, Kiesner, Poulin, and Nicotra (2003) examined additive peer homophily across peer contexts, using a sample of sixth to eighth graders (the same sample that is used in this study). Although not central to their research questions, Kiesner et al. (2003) observed that classroom problem behavior was negatively correlated with classroom social preference ($r = -.26$) but unrelated to out-of-school peer inclusion, whereas delinquency showed a weak positive correlation with out-of-school peer inclusion ($r = .12$) but no relation with classroom social preference. These differences in the relation between antisocial behavior and peer acceptance across contexts likely depend on a number of variables. For example, the type of behavior may be important: Substance use and stealing may be more attractive to adolescent peers than disruptive classroom behaviors. Another variable is the degree to which individuals are able to select and avoid peer contacts. For example, school personnel typically decide classroom membership, and thus the students have no choice with whom they spend their school days. Therefore, weaker relations between antisocial behavior and peer rejection could be expected outside of the classroom, where youth are more free to

select peer affiliates and ignore and avoid youth who are antisocial. This could be expected at least during pre- and early adolescence.

During the course of adolescence, however, the relation between antisocial behavior and peer acceptance should change. As Moffitt's (1993) theory suggests, during adolescence antisocial behavior should be viewed as a sign of maturity, and thus possibly related to higher levels of peer acceptance. Moreover, we could expect that this change would be stronger outside of the classroom, for three reasons. First, outside of the classroom, the noxious and aversive aspects of antisocial behavior may be more easily avoided by peers, and thus will be less likely to result in negative effects on peer acceptance by those peers who still do not approve of such behavioral tendencies. Second, nonclassroom settings allow one to demonstrate antisocial behaviors that are more symbolic of maturity (smoking, drinking, stealing), and that are likely to be more social in nature (done with peers). Third, during after-school hours, adolescents gain increasing freedom from their parents, providing opportunities to associate with individuals who would not be approved of by parents or other adults. This study will specifically test for contextual differences in the relations between antisocial behavior and peer acceptance, and how these relations change across early adolescence.

A second issue regards the type of antisocial behavior considered. The studies by Cillessen and Mayeux (2004) and Bukowski et al. (2000) examined the relation between peer acceptance and aggressive behavior. However, Moffitt's (1993) theory focuses on a general construct of antisocial behavior, not specifically aggressive behaviors. It could be hypothesized that a general antisocial lifestyle, rather than aggressive behaviors specifically, would be more strongly linked to increases in peer acceptance. For example, French and Conrad (2001) found the negative relation between a general measure of antisocial behavior and peer preference to be stable from the eighth grade ($r = -.26$) to the tenth grade ($r = -.39$). However, examining the items that contributed to the antisocial behavior scale suggests that this measure primarily addressed aggressive behaviors and interpersonal conflict. In a study using a longitudinal design, Maggs, Almeida, and Galambos (1995) found that the correlation between peer acceptance and a general construct of antisocial behavior increased from $r = .05$ at 11.6 years to $r = .24$ at 14 years. Although these researchers examined a general construct of antisocial behavior, and the results are consistent with predictions made in the present study, the measure of peer acceptance was a

self-report of how well the individual felt accepted by his or her peers. Therefore, these results may not reflect an actual increase in peer acceptance.

In this study we test for age-related differences in the relation between antisocial behavior and peer acceptance considering a general construct of antisocial behavior. To do this we use multiple informants (self-report, peer report, and teacher report) and structural equation modeling (SEM) to create a latent construct of antisocial behavior.

By Whom is Delinquency Accepted?

If antisocial adolescents are more positively accepted by their peers during middle adolescence, as compared with early adolescence, we must ask by whom they are becoming more accepted. According to Moffitt's (1993) theory, during adolescence antisocial youth are admired and imitated by average adolescents. Thus, it could be hypothesized that non-antisocial, or at least average, adolescents would begin to have more positive relations with antisocial youth as they move from early to mid-adolescence. Therefore, in this study, we expect that an increased acceptance of antisocial youth would be attributable, specifically, to an increase in acceptance by average peers.

Alternatively, Dishion's peer confluence model (Dishion, French, & Patterson, 1995; Dishion, Patterson, & Griesler, 1994) postulates that delinquent peers form homogeneous groups who reinforce antisocial behavior among themselves. Thus, according to Dishion's confluence model, we should expect that increases in peer acceptance of antisocial youth would be attributable to increases in affiliation among antisocial youth, rather than increased acceptance by average or non-antisocial youth. Consistent with this model, a great deal of research has demonstrated peer homophily when considering a wide range of antisocial behaviors (Cairns, Cairns, Neckerman, Gest, & Gariépy, 1988; Espelage, Holt, & Henkel, 2003; Kiesner et al., 2002, 2003; Poulin et al., 1997; Urberg, Degirmencioglu, & Pilgrim, 1997).

On the other hand, there also appears to be a high degree of mixing of aggressive and nonaggressive youth, even as early as elementary school (Farmer et al., 2002). If Moffitt's theory is correct, then such "mixing" could become more common during adolescence as "average" youth become more attracted to antisocial youth. Therefore, in this study we will test whether increases in peer acceptance of antisocial youth are attributable to increased affiliations among antisocial youth or to increased acceptance by average youth.

This Study

In this study we examine age-related differences in the relations between antisocial behavior and in- and out-of-classroom peer acceptance during early adolescence, with a sample of Italian middle school students. Peer acceptance is measured within the classroom, at the schoolwide level, and outside of the school at the neighborhood level. It is expected that the relation between antisocial behavior and classroom peer acceptance will be negative in the sixth grade and will diminish in strength throughout the seventh and eighth grades. On the other hand, it is expected that antisocial behavior will become increasingly and positively related to peer acceptance outside of the classroom throughout the middle school years. Moreover, we will test whether such age-related differences are attributable to an increase in acceptance by average peers or to an increase in associations among antisocial youth.

This study comes from a relatively large-sample cross-sectional study conducted in Milan, Italy. Data from this sample have been previously published (Kiesner et al., 2003; Kiesner, Nicotra, & Notari, 2005), and although most of the measures used in this study were also included in one of those previous publications (Kiesner et al., 2003), the research questions addressed in these two studies are very different. Specifically, whereas the earlier paper examined individual-group homophily across contexts, and the link between peer acceptance across contexts and depressive symptoms, this study tests whether the relations between antisocial behavior and peer acceptance across contexts differ across age groups.

Gender Differences

Antisocial behavior may be judged differently when performed by males and females, and thus differently related to peer acceptance. For example, Cillessen and Mayeux (2004) found that the negative relation between physical aggression and social preference was stronger for girls than for boys in the sixth grade. Therefore, in this study we will compare males and females with regard to age differences in the relation between antisocial behavior and peer acceptance across contexts.

Considerations Regarding an Italian Sample of Adolescents

Previous research has shown both cross-national differences and similarities between Italian and North American youth regarding family and peer

relations (Attili, Vermigli, & Schneider, 1997; Casiglia, Lo Coco, & Zappulla, 1998; Claes, Lacourse, Bouchard, & Luckow, 2001; Eslea et al., 2004; Kiesner et al., 2002; Schneider, Fonzi, Tani, & Tomada, 1997; Tomada & Schneider, 1997). Considering the existing literature, we have concluded that the overall pattern of relations between individual behavior, peer relations, and social adjustment appears to be similar across Italian and North American cultural contexts.

There is, however, one important aspect of the Italian educational system that is worth noting: Italian middle school students remain with the same class of peers for all classes across all three years of middle school (the same class of 25 students spend all day together for 3 years of middle school). As a result, it may be more difficult in Italian schools to change one's level of peer acceptance from one year to the next.

Finally, it should also be noted that in Italian middle schools: (1) students are not tracked into specific types of schools based on tests or past performance; (2) students typically attend the neighborhood middle school, although they are able to attend any other middle school if space is available; (3) students return home around 2:00 p.m.; and (4) Italian middle schools typically do not offer extracurricular activities such as sports activities.

Methods

Much of the material in the following section has been presented in an earlier publication (Kiesner et al., 2003). However, as a service to the reader, we have also included this information here. More detailed information regarding neighborhood, sample characteristics, and procedure can be found in the earlier publication using this data set (Kiesner et al., 2003).

Participants

This study was conducted in a neighborhood of Milan, Italy. All three middle schools serving that neighborhood agreed to participate. All students (sixth to eighth grades) from all three middle schools were asked to participate. A total of 798 students were enrolled in these schools, of which 30 did not regularly attend school. Therefore, the total possible sample was 768. Parental permission to participate was obtained for 593 students, of whom 577 (75% of the total possible sample) actually participated. The percentage of students who participated, within each of the 40 classrooms, ranged from 18% to 100%, with 80% of the classes having a participation rate of 60%

or higher, and only one class with a participation rate below 40%. Of the 577 participants (288 girls, 289 boys), 215 were sixth graders, 171 were seventh graders, and 191 were eighth graders. Four participants had missing data and were not included in the following analyses. Based on the year of birth (exact dates were not asked), the mean age was approximately 11.5 years for the sixth graders, 12.5 years for the seventh graders, and 13.5 years for the eighth graders. Of the 577 participants, 540 (93.6%) identified themselves as being ethnically Italian (457 reported being only Italian, and 83 reported being Italian and some other ethnicity such as Albanian, French, Jewish). Thirty-seven participants (6.4%) reported belonging only to a non-Italian ethnic group (e.g., Albanian, French, German).

Measures

Self-report of antisocial behavior. A self-report questionnaire (Kiesner, 2002; Kiesner et al., 2003) was used as one measure of the participants' antisocial behavior. All of the items measuring antisocial behaviors (18 items) were included in the self-report score of antisocial behavior. These items included, for example, "lied to parents," "hit someone," "stole something from a store," "did graffiti on public transportation or property," "used alcohol," and "used drugs." Participants were asked to indicate how often they were involved in these behaviors thinking about the last week, using a 4-point scale: with 0 = *never*, 1 = *rarely*, 2 = *sometimes*, 3 = *frequently*. The Cronbach's alpha for these items was $\alpha = .87$, with all item-to-total correlations greater than .30. The self-report antisocial behavior score is the mean of the nonstandardized scores on the 18 items. A one-way analysis of variance (ANOVA) showed a significant difference across age groups ($F(2, 570) = 10.14; p < .001$), with levels of self-reported antisocial behavior increasing from the sixth grade to the eighth grade (means are presented in Table 1).

Peer reports of problem behavior. Peer nominations were conducted within each classroom, providing each participant with a list of all classroom peers (participants and nonparticipants were included on the list). Unlimited and cross-gender peer nominations on three behavioral questions were used as a measure of problem behavior. These questions were: "Who are the kids that tease (in a mean way) other kids?," "Who are the kids that hit other kids?," and "Who are the kids that get into trouble?." The number of nominations received by classmates on each of these questions was computed and then standardized within each classroom to control for

Table 1
Correlations Among all Measured Variables, by Grade Level

	1	2	3	4	5	6	7
Sixth grade (<i>n</i> = 214)							
1. Antisocial: self	1						
2. Antisocial: teacher	0.37***	1					
3. Antisocial: peer	0.42***	0.67***	1				
4. Like most	-0.09	-0.29***	-0.39***	1			
5. Like least	0.14*	0.45***	0.59***	-0.77***	1		
6. Group: in-school	0.12	-0.07	-0.16*	0.45***	0.38***	1	
7. Group: out-of-school	0.18**	-0.02	-0.05	0.35***	0.25***	0.68***	1
<i>M</i>	0.83	1.93	-0.02	0.03	0.07	3.35	2.18
<i>SD</i>	0.49	1.21	0.89	0.94	0.93	2.38	2.02
Seventh grade (<i>n</i> = 170)							
1. Antisocial: self	1						
2. Antisocial: teacher	0.38***	1					
3. Antisocial: peer	0.34***	0.66***	1				
4. Like most	0.10	-0.05	-0.07	1			
5. Like least	-0.04	0.12	0.20**	-0.79***	1		
6. Group: in-school	-0.01	-0.06	-0.03	0.57***	0.49***	1	
7. Group: out-of-school	0.01	-0.07	-0.02	0.41***	0.31***	0.63***	1
<i>M</i>	0.78	1.70	-0.05	0.04	0.07	4.36	2.72
<i>SD</i>	0.43	0.98	0.87	0.94	0.98	2.90	2.31
Eighth grade (<i>n</i> = 189)							
1. Antisocial: self	1						
2. Antisocial: teacher	0.44***	1					
3. Antisocial: peer	0.52***	0.67***	1				
4. Like most	0.21**	0.04	0.04	1			
5. Like least	-0.06	0.06	0.17*	-0.80***	1		
6. Group: in-school	0.18*	0.25**	0.23**	0.49***	0.39***	1	
7. Group: out-of-school	0.24**	0.21**	0.26***	0.38***	0.21***	0.64***	1
<i>M</i>	1.01	1.59	-0.04	0.05	0.06	4.47	2.40
<i>SD</i>	0.54	0.92	0.86	0.93	0.93	3.20	2.51

* $p < .05$. ** $p < .01$. *** $p < .001$

differences in class size. The Cronbach's alpha for these items was $\alpha = .91$, with all item-to-total correlations greater than .80. These standardized scores were then averaged together to create the peer report of antisocial behavior score.

Teacher report of problem behavior. An adapted version of a teacher-report questionnaire (Kiesner, 2002) was used to measure problem behavior in the classroom during the past week. Six items from the questionnaire were used to calculate the problem behavior score. These questions included, for example, "was argumentative?" and "disturbed classmates?" All questions required a response using a 6-point scale, ranging from *no, not at all* to *yes, frequently*. A separate form was used for each student. The Cronbach's alpha for the 6 items was $\alpha = .92$, with all item-to-total correlations greater than .70. Individual scores are the mean of the nonstandard-

ized items. These scores were not standardized within the classroom because each child's score was independent of the number of students within each classroom. A one-way ANOVA showed a significant difference across age groups ($F(2, 570) = 5.12; p < .01$), with levels of teacher-reported antisocial behavior decreasing from the sixth grade to the eighth grade (means are presented in Table 1).

Classroom peer preference. Peer nominations were conducted within each classroom, providing each participant with a list of all classroom peers (participants and nonparticipants were included on the list). Unlimited and cross-gender peer nominations from classmates on the liked-most (LM) and liked-least (LL) questions were used to assess each adolescent's level of social preference. The number of nominations received on these items was computed for each participant; these scores were then stan-

standardized within each classroom and across gender. The bivariate correlation between LM and LL was $r = -.78$ ($p < .0001$, $n = 577$).

The LM and LL scores were used to create a latent construct of classroom peer preference. For the SEM analyses using this latent construct, the LL score was reverse coded (multiplied by -1) so that high scores on the latent construct indicate high peer preference and low scores indicate low peer preference.

Nominations of in-school network members and after-school network members. Nominations of in-school and after-school peer networks were used to have measures of each individual's level of in-school and after-school peer network inclusion (Kiesner et al., 2003). The procedure for obtaining these nominations involved two steps. First, students were given a definition of a "group" that included two key characteristics: (1) there must be at least three children in the group (including the target child), and (2) these children must spend time together. Thus, a dyad would not qualify as a group and a set of independent friends who do not spend time together would not qualify as a group. In the second step, participants were asked to list the names of their peers who were in their group. This procedure was repeated for an in-school group and an after-school group. Participants were allowed to nominate only one group for each context. For the in-school group, participants were able to list any students from the school, whether or not those students were participating in the study. For the after-school group, participants were allowed to nominate anybody, whether or not those individuals attended the same school, and whether or not those individuals were participating in the study. All participants were asked to nominate the in-school group first and the after-school group second. As previously reported (Kiesner et al., 2003), 17 participants (2.9%) reported having no in-school group, and 21 participants (3.6%) reported not having an after-school group. Four of these participants had neither an in-school nor an after-school group. The mean proportion of overlapping members was $M = 0.33$ ($SD = 0.30$), with 125 (23%) having no overlapping members and 37 (6.8%) having complete overlap.

A 2 (gender) \times 3 (grade) multivariate analysis of variance (MANOVA) was used to test for differences in the size of the groups for both the in-school group and the out-of-school group. The overall MANOVA indicated a main effect for grade (Wilk's lambda = .94, $F(4, 1072) = 8.5$, $p < .001$), but no effect of gender and no interaction between grade and gender. Univariate tests confirmed a significant effect of grade for both the in-school group ($F(2, 537) = 9.15$, $p < .001$) and the out-of-school group ($F(2, 537) = 13.0$,

$p < .001$). Examination of the means indicated a general tendency for older children to have slightly larger in-school groups (sixth grade $M = 4.96$, seventh grade $M = 6.07$, eighth grade $M = 5.71$), and out-of-school groups (sixth grade $M = 4.59$, seventh grade $M = 5.35$, eighth grade $M = 5.60$). For both in-school and out-of-school groups, group size was positively, although generally weakly, related to the three measures of antisocial behavior (correlations ranging from $r = .08$ to $r = .21$), suggesting that antisocial youth tended to nominate slightly larger groups.

Because individuals could nominate study participants and nonparticipants as group members, we did not have data on all nominated group members and a precise measure of reciprocity was not possible. However, to estimate the level of reciprocity for each participant, the number of nominations that were reciprocated was divided by the number of nominated group members who were study participants. This was done separately for the in- and after-school groups. For the in-school group the mean proportion of reciprocated nominations was $M = 0.59$ ($SD = 0.34$), and for out-of-school groups the mean proportion of reciprocated nominations was $M = 0.45$ ($SD = 0.37$). These proportions likely underestimate actual reciprocity because individuals may belong to multiple groups in each context, but were restricted to nominating only one group for each context. Reciprocity was slightly negatively correlated with the three measures of antisocial behavior (correlations ranging from $r = -.02$ to $-.18$), suggesting that antisocial individuals received slightly fewer reciprocated nominations.

For the out-of-school group, the average proportion of members who attended the same school as the target individual was $M = 0.61$ ($SD = 0.35$). The proportion of out-of-school group members who attended the same school as the target child was uncorrelated with all three of the measures of antisocial behavior.

To obtain separate measures of a child's peer inclusion across contexts, we computed two separate scores. First, we computed the number of times that each child was nominated by his or her peers as an in-school network member (in-school peer network inclusion). Second, we computed the number of times that each child was nominated by his or her peers as an after-school network member (after-school peer network inclusion). The mean number of nominations received as an in-school network member was $M = 4.0$ ($SD = 2.9$) and as an after-school network member was $M = 2.4$ ($SD = 2.3$). Because the reference group for the in-school peer network inclusion measure was the same-school peers, this score was standardized within each school.

The in-school and after-school peer inclusion scores were used to create a latent construct of peer inclusion outside of the classroom. The bivariate correlation between the standardized in-school peer network inclusion score and the after-school peer network inclusion score was $r = .62$ ($p < .0001$, $n = 577$). Thus, individuals who are accepted by peers at the school level also tend to be accepted by peers outside of the school.

Group-delinquency score. A group-delinquency score was calculated to measure the average level of delinquency demonstrated by the group members within (1) the in-school group and (2) the after-school group. These scores are based on a subscale of 6 items from the self-report measure of antisocial behavior that assessed more severe forms of antisocial behavior such as vandalism, stealing, and substance use. The Cronbach's alpha for these 6 items was $\alpha = .77$, with all item-to-total correlations greater than .48.

To obtain this score we calculated the average level of delinquency within each peer network, including all nominated network members except the target individual. This was done separately for the in-school network and the after-school network. For individuals who had no peer network (either in- or after-school) or for whom no network members were participants (thus, for whom we had no behavioral data), we assigned missing data for the corresponding network score. Note that network members who were not study participants (i.e., attended one of the schools but did not participate; lived outside of the neighborhood and attended some other school) could not be included in the calculation of network behavior scores. The mean proportion of peer network members who were participants, and thus for whom we had data, was $M = 0.75$ ($SD = 0.24$, $n = 560$) for the in-school peer network and $M = 0.50$ ($SD = 0.32$, $n = 556$) for the after-school peer network.

Use of a latent construct for antisocial behavior. As stated in the introduction, in the primary analyses of this study we use a latent construct of antisocial behavior, including various types of problem behavior that occur in a variety of contexts. Although it arguably would be better to consider different types of antisocial behavior separately (substance use, aggressive behavior, property crimes), in the present data set we did not have multiple informants for each of these behavior types, and thus behavior type would have been confounded with informant, and differences in effects would not have been unambiguously attributable to behavior type or informant bias. Note that, in a previous publication using these data (Kiesner et al., 2003), in-school problem behavior and after-school delinquency were analyzed

separately. However, because those earlier analyses focused primarily on the group-delinquency scores, for which we had multiple informants, response biases of specific respondents did not represent a threat to the internal validity. Also, it should be noted that, although the three reports of antisocial behavior considered different time periods (self- and teacher reports asked about behavior over the past week, whereas peer reports asked about general behavioral tendencies), the use of a latent construct allowed us to have a general measure of antisocial behavior, free from bias introduced by any of the specific reporters or time periods. Therefore, we decided to use a latent construct of antisocial behavior, which we believe provides the most conservative approach for testing the present hypotheses.

Results

To test the hypothesis that the relations between antisocial behavior and peer acceptance, across contexts, differ across the sixth, seventh, and eighth grades, we used SEM multigroup analyses (LISREL 8, Jöreskog & Sörbom, 1996). The correlation matrices, means, and standard deviations for all measures are presented in Table 1, separately for each grade level. Examining these bivariate correlations, a general trend can be seen for antisocial behavior to be negatively related to in-class peer acceptance in the sixth grade but positively related to out-of-class peer acceptance in the eighth grade. Importantly, it should be noted that this overall pattern is very similar across all three measures of antisocial behavior.

Measurement Models

The first step of these analyses was to test whether the two separate measurement models (the antisocial construct on the left side of Figure 1, and the peer-relations constructs on the right side of Figure 1) were plausible, and to test for measurement invariance across the three age groups. After testing whether each measurement model was appropriate for the overall sample, we used procedures outlined by Jöreskog (1971) to test for age-related differences in the covariance matrices for each of the two measurement models, and then to test for differences in the factor loadings.

We first examined the measurement model for the antisocial behavior construct. Because this model was saturated, it was not possible to test for a good fit; however, the factor loadings indicated that all three measures were significantly correlated with the latent construct (standardized factor loadings were

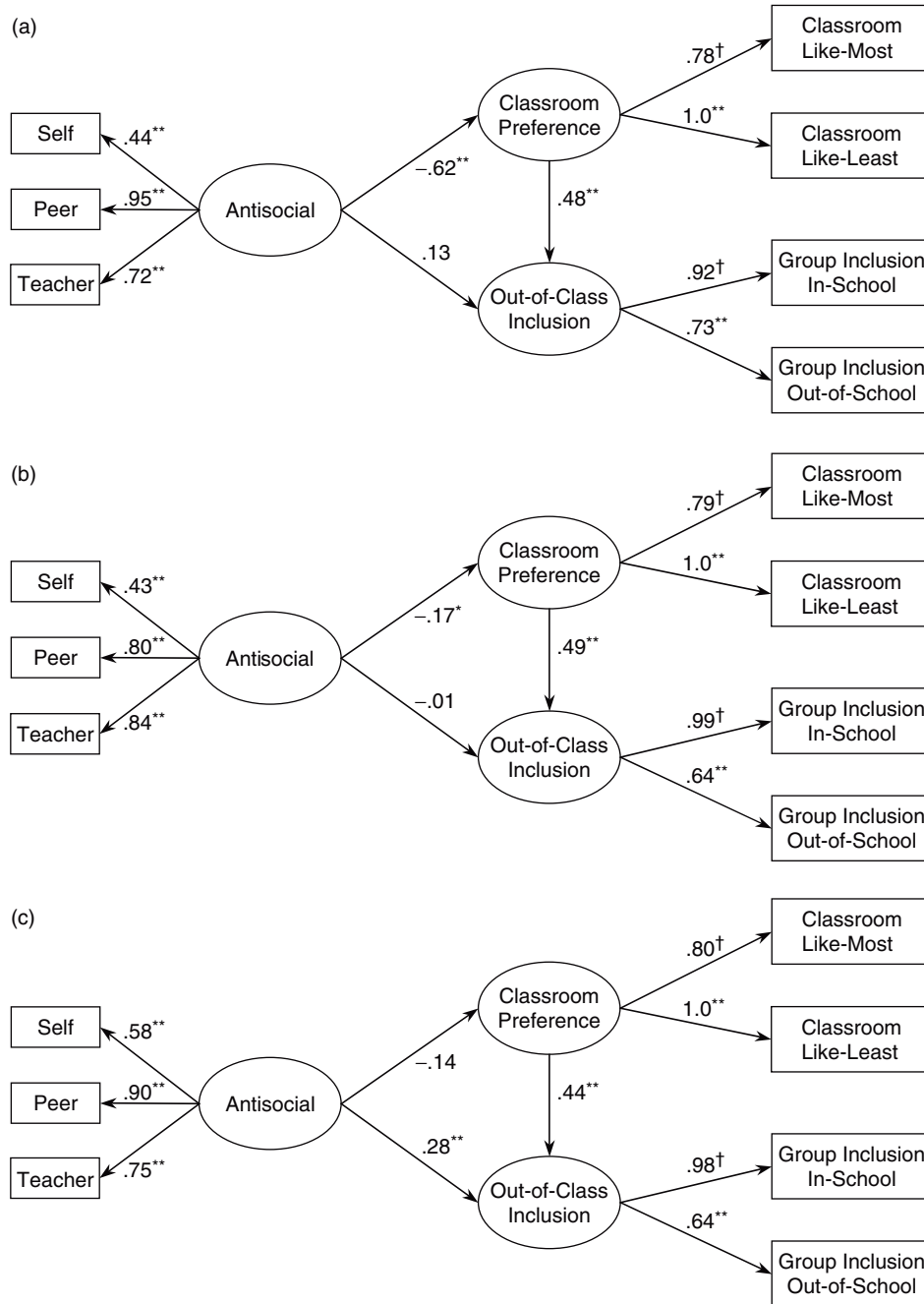


Figure 1. Structural equation models conducted separately for the sixth grade (a), seventh grade (b), and eighth grade (c). Fit indexes are presented in the text. †Significance not estimated for these parameters, * $p < .05$, ** $p < .001$.

.48 for self-report; .75 for teacher report; .88 for peer report; all t s > 11.0). A multigroup analysis testing for age-related differences in the covariance matrices of the three measures of antisocial behavior demonstrated that significant differences did exist ($\chi^2 = 33.62, df = 12, p < .001$). Moreover, the multigroup analysis testing for invariance of the factor loading across the three age groups also resulted in significant differences ($\chi^2 = 13.05, df = 6, p = .05$). Although

significant differences were found in this multigroup analysis, an examination of the factor loadings, separately for each class, indicated that the differences were very small, and that the same general pattern held across all three age groups (standardized factor loadings for self-, teacher-, and peer-reports were .48, .76, and .88 for the sixth grade, .44, .86, and .77 for the seventh grade, and .59, .75, and .88 for the eighth grade, respectively).

Second, we examined the measurement model for the peer-relations constructs. The first step was to compare a one-factor model (with all four measures of peer-relations loading onto the same single factor) with a two-factor model (including a path going from classroom preference to out-of-class inclusion, as presented on the right side of Figure 1). The one-factor model did not fit the data well ($\chi^2 = 230.64$, $df = 2$, $p < .001$, GFI = .85, CFI = .76, NNFI = .27, RMSEA = .41). For the two-factor model, although the χ^2 was significant, the other fit indexes showed that this model did fit the data reasonably well ($\chi^2 = 8.63$, $df = 1$, $p = .01$, GFI = .99, CFI = .99, NNFI = .95, RMSEA = .12), and demonstrated a significant improvement to the one-factor model ($\Delta\chi^2 = 222.01$, $\Delta df = 1$, $p < .001$).

We next conducted a multigroup analysis comparing the covariance matrices (across age groups) of the four peer-relations measures. Differences were again found ($\chi^2 = 40.82$, $df = 20$, $p = .004$). However, a multigroup analysis testing for differences specifically in the factor loadings showed that the factor loadings were invariant across the three age groups ($\chi^2 = 12.21$, $df = 7$, $p = .09$).

Relations Between Antisocial Behavior and Peer Relations

To test our hypotheses regarding differences in the relations between antisocial behavior and peer relations, across the different age groups, we used the model presented in Figure 1. In this model we used three measures of antisocial behavior to create a latent construct for antisocial behavior; we used two peer-report measures to create a latent construct for classroom peer preference; and we used two peer-report measures to create a latent construct for out-of-class peer inclusion. We then specified paths going from antisocial behavior to each of the peer-relations constructs. These are the paths used to test the hypotheses regarding changes in the relations between antisocial behavior and peer relations, and are therefore the path coefficients most important with regard to theory testing and interpretation. We also allow a path from classroom peer preference to out-of-class peer inclusion.

To test for differences across the three age groups, we followed a three-step procedure. First, we specified a single "baseline" model separately for all three groups (sixth, seventh, and eighth grades) to determine whether the overall model was plausible for each of the three age groups. Second, we tested for differences in χ^2 when each of the paths of interest was constrained to be equal across age groups, and then when it was allowed to vary across age groups.

Finally, for the sixth and eighth grades, we tested for changes in χ^2 when each of the paths of interest was first constrained to be zero, then when it was released.

In all of the models presented below, the error variance for the classroom LL nominations was constrained to be zero, and the error variance for LM nomination was allowed to correlate with the error variance of the two out-of-class nominations measures. For simplicity, these correlations will not be presented in the figures, but it should be noted that they were significant in all cases.

In the first step, we tested the specified model separately for each of the three age groups. The fit indexes were as follows: $\chi^2 = 26.96$, $df = 11$, $p = .005$, GFI = .97, CFI = .98, NNFI = .96, RMSEA = .08 for the sixth graders (note that the degrees of freedom for this group are different because we were required to constrain one additional error variance term); $\chi^2 = 12.27$, $df = 10$, $p = .27$, GFI = .98, CFI = .99, NNFI = .99, RMSEA = .04 for the seventh graders; and $\chi^2 = 37.17$, $df = 10$, $p < .001$, GFI = .95, CFI = .95, NNFI = .89, RMSEA = .12 for the eighth graders. Although the χ^2 was significant for sixth and eighth graders, this index has been widely criticized, and it is generally recommended to also consider other goodness-of-fit indexes (Mulaik et al., 1989). Examining the other fit indexes suggests that this model provided a reasonably good fit for all three age groups. Based on these results, we concluded that, in order to test for age-related differences in the structural coefficients of interest, it was reasonable to apply the same structural model to all three age groups.

The structural coefficients for each of the three age groups are presented in Figures 1a–c. The first important finding in these analyses is that, as predicted, the relation between antisocial behavior and classroom peer preference is negative and significant in the sixth grade, but then drops in magnitude and significance in the seventh and eighth grades. The second important finding in these analyses is that the relation between antisocial behavior and out-of-class peer inclusion is not statistically significant in the sixth and seventh grades, but becomes significant and positive in the eighth grade. Thus, in the eighth grade, but not the sixth and seventh grades, antisocial behavior is significantly associated with higher levels of peer acceptance outside of the classroom.

It should be noted that all of the other coefficients were remarkably stable across the 3 years. This stability was evident for the measures contributing to each of the constructs, as well as for the path going from classroom preference to out-of-class inclusion. This is important because it demonstrates that, although the factor structures and the relation between

peer acceptance in- and out-of-class remain stable, the relation between antisocial behavior and peer acceptance across different contexts changes dramatically.

Next, we tested whether it was plausible to constrain the paths from the antisocial behavior construct to each of the peer-relations constructs to be invariant across the three age groups. To do this we examined the change in χ^2 when each of these paths was first constrained to be equal across age groups, and then when it was allowed to vary across age groups. Because measurement invariance had been demonstrated for the factor loadings of the peer-relations measures, these factor loadings were fixed to be equal across age groups using the loadings obtained by the multigroup measurement model. On the other hand, because differences were found for the factor loadings of the antisocial behavior construct, these factor loadings were fixed to be equal to the loadings obtained in the baseline measurement model for each age group. Allowing each of the paths of interest to vary across groups resulted in a significant improvement in the model ($\Delta\chi^2 = 9.01$, $\Delta df = 2$, $p = .01$ for the path going from antisocial behavior to out-of-class inclusion; $\Delta\chi^2 = 32.51$, $\Delta df = 2$, $p < .001$ for the path going from antisocial behavior to classroom preference). These results demonstrate that the paths from antisocial behavior to each of the peer constructs are significantly different across age groups.

Finally, considering the sixth and eighth grades separately, we tested whether the paths from the antisocial construct to each of the peer-relations constructs could be constrained to be equal to zero. For the sixth grade, releasing the path from antisocial behavior to classroom preference resulted in a significant improvement in the model ($\Delta\chi^2 = 89.31$, $\Delta df = 1$, $p < .001$), whereas releasing the path from antisocial behavior to out-of-class inclusion did not result in a significant improvement in the model ($\Delta\chi^2 = 1.83$, $\Delta df = 1$, $p = .18$). For the eighth grade, releasing the path from antisocial behavior to classroom preference did not result in a significant improvement in the model ($\Delta\chi^2 = 2.99$, $\Delta df = 1$, $p = .084$), whereas releasing the path from antisocial behavior to out-of-class inclusion did result in a significant improvement in the model ($\Delta\chi^2 = 13.74$, $\Delta df = 1$, $p < .001$). Thus, as expected, in the sixth grade, the path from antisocial behavior to classroom preference, but not to out-of-class inclusion, was found to be important for the overall fit of the model. On the other hand, in the eighth grade, the path from antisocial behavior to out-of-class inclusion, but not to classroom preference, was found to be important for the overall fit of the model.

We also tested for differences between males and females across the three age groups. Although differences were found in the covariance matrices for males and females in both the sixth and eighth grades (but not the seventh grade), multigroup analyses comparing the structural model required that different error terms be constrained for males and females across age groups. Moreover, because of small sample sizes, these analyses appeared sensitive to disturbances of correlated errors and a few moderate outliers. Therefore, formal comparisons of the structural model were not conducted. However, when the model was fit separately for males and females, for each grade level, a similar overall pattern was observed for both males and females. From the sixth grade to the eighth grade, for both males and females, there was a decrease in the negative relation between antisocial behavior and classroom peer preference, and an increasing and positive relation between antisocial behavior and out-of-class peer inclusion.

By Whom is Delinquency Accepted?

The above analyses show that, throughout the middle school years, antisocial behavior becomes associated with increasing peer success outside of the classroom and a diminished negative effect on peer preference within the classroom. To test whether the age-related differences are attributable to an increase in affiliations between average individuals and antisocial peers, or to an increase in affiliations among antisocial peers, we conducted a $2 \times 2 \times 3$ factorial MANOVA, using gender, grade, and individual antisocial behavior as the independent variables. The dependent variables were the group-delinquency scores for both the in-school and out-of-school groups. As noted in the Methods section, these group-delinquency scores were simply the average level of delinquency among the group members (excluding the target individual), for both the in-school and out-of-school groups, on a 6-item delinquency subscale (see the Methods section for a description of how these scores were calculated).

The specific items included in the group-delinquency scores focused on vandalism, stealing, and drug use. These delinquent behaviors were used for three reasons. First, as noted in the introduction, it would be most consistent with Moffitt's theory to expect these types of behaviors to be most strongly associated with increases in peer acceptance because they are likely to be viewed as adult behaviors (as compared with disruptive classroom behaviors or other less severe forms of problem behaviors). Second,

because the SEM models presented above showed that antisocial behavior was positively associated with only out-of-class peer inclusion, we believed that antisocial behaviors likely to occur outside of the classroom would be most relevant to age-related differences in peer affiliations. Finally, because the group-delinquency scores were based on multiple respondents (of the various group members), individual response bias was not a significant threat and we were not constrained to use a latent construct of antisocial behavior. Therefore, at both a theoretical level and an empirical level, considering more severe delinquent behaviors seems most appropriate.

To create three antisocial behavior groups (low, average, high), based on individual antisocial behavior, we conducted a tertile split on a combined self-, peer-, and teacher-report antisocial-behavior score. Because the most evident differences between antisocial behavior and peer acceptance/inclusion across contexts was between the sixth graders and the eighth graders, only the sixth and eighth graders were included in this analysis.

Before addressing the stated research question, we tested for mean level differences of delinquency across the two peer groups using a 2 (group: in-school group, out-of-school group) \times 2 (gender) \times 2 (grade) repeated measures ANOVA. The measures of in-school and out-of-school group delinquency were standardized across the sixth and eighth grades to have an overall mean of zero and a standard deviation of one. Our interest was whether differences existed between the in-school and out-of-school group-delinquency scores (the within-subjects factor), and whether this factor interacted with the between-subjects factors. There was no main effect for peer group ($F(1, 315) = 2.50, ns$), but a significant interaction was observed between peer group and grade ($F(1, 315) = 4.27, p < .05$). Examination of the means shows that in the sixth grade differences were minimal ($M = -0.09$ for the in-school group; $M = -0.10$ for the out-of-school group), whereas in the eighth grade the out-of-school group showed a higher mean level of delinquency ($M = 0.26$) as compared with the in-school group ($M = 0.18$).

For testing the hypotheses regarding by whom delinquency is accepted, the measures of in-school and out-of-school group delinquency were standardized across the sixth and eighth grades to have an overall mean of zero and a standard deviation of one. Significant multivariate effects were found for grade (Wilk's lambda = .90, $F(2, 306) = 17.70, p < .0001$), individual level of antisocial behavior (Wilk's lambda = .83, $F(4, 612) = 15.02, p < .0001$), and the interaction between grade and individual antisocial behavior (Wilk's lambda = .95, $F(4, 612) = 4.08, p < .01$).

No other effects were significant. When separate analyses were conducted for the measures of in-school group delinquency and out-of-school group delinquency, the same pattern of results was found for both dependent measures. Of particular importance is the significant interaction found between grade and individual antisocial behavior for both the in-school group's delinquent behavior ($F(2, 307) = 7.15, p < .001$) and the out-of-school group's delinquent behavior ($F(2, 307) = 6.76, p < .001$; see Table 2 for cell means and standard deviations). It should be noted that, although there were significant differences in the group-delinquency scores across grade levels, the interaction cannot be attributed to this difference because the interaction is tested after controlling for the main effect of grade.

To further help interpret the interaction between grade and individual antisocial behavior, a bar graph for the out-of-school group's delinquency scores is presented in Figure 2 (the plot for the in-school group's delinquent behavior is almost identical and leads to the same conclusions, so is not presented here). The means presented in Table 2 and the bar graph presented in Figure 2 show that individuals who themselves show relatively high levels of antisocial behavior (upper tertile) consistently nominate more delinquent individuals as group members, both in the sixth and eighth grades. Moreover, across all three levels of individual antisocial behavior, participants demonstrated higher group-delinquency scores in the eighth grade as compared with the sixth grade (also verified testing for grade effects separately at each level of individual antisocial behavior, i.e., simple effects). However, the difference between the sixth grade and the eighth grade was

Table 2
Cell Means and Standard Deviations (in Parentheses) for Out-of-School and In-School Group Delinquency by Grade and Individual Level of Antisocial Behavior

	Individual antisocial behavior		
	Low	Average	High
Out-of-school group delinquency			
Grade			
Sixth	-.43 (.59)	-.42 (.48)	-0.07 (0.77)
Eighth	-.12 (.87)	-.01 (.77)	1.06 (1.52)
In-school group delinquency			
Grade			
Sixth	-.51 (.51)	-.37 (.64)	0.08 (0.82)
Eighth	-.15 (.81)	-.07 (.78)	1.04 (1.46)

Note. All $ns \geq 50$ and ≤ 71 .

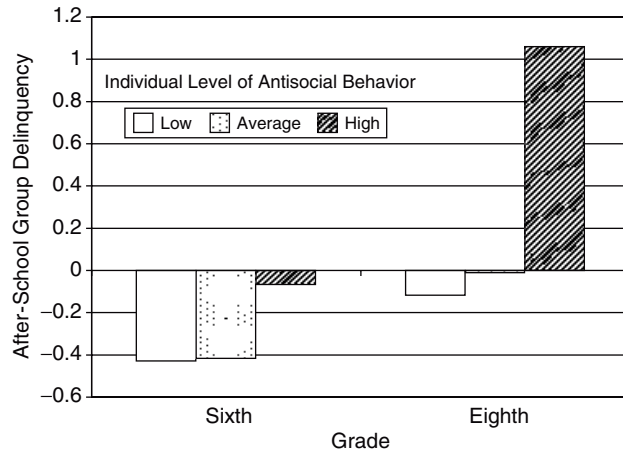


Figure 2. Bar graph for the out-of-school group-delinquency score, presented separately by grade and individual level of antisocial behavior (low, medium, high, based on tertile split).

clearly greater for the individuals who themselves were relatively high on antisocial behavior. Thus, it appears that the increase in peer acceptance of antisocial individuals is attributable to increased nominations received by other adolescents with relatively high levels of antisocial behavior.

It should be noted that these analyses were repeated using teacher and peer reports of antisocial behavior for calculating the group behavior scores, and in both cases the interaction between grade and individual antisocial behavior was nonsignificant, suggesting that these results are specific to more severe types of delinquency.

Discussion

This study was conducted to test the hypothesis that the relation between antisocial behavior and peer acceptance would differ across 3 years during adolescence (from the sixth grade to the eighth grade). Results demonstrated that in the sixth grade antisocial behavior was negatively and significantly related to classroom peer preference, but not significantly related to out-of-class inclusion. In the eighth grade, however, antisocial behavior was not significantly related to in-class peer preference but was positively and significantly related to out-of-class peer inclusion. Thus, these data support the idea that, during adolescence, antisocial individuals experience an increase in peer acceptance (and a decrease in peer rejection).

One important contribution of this study was to test simultaneously for age-related differences in the relations between antisocial behavior and peer acceptance across both classroom and out-of-class contexts. As noted by Kiesner et al. (2003), peer-

relations research has focused almost exclusively on classroom contexts, and when research in this field has included nonclassroom or nonschool peers (see, e.g., Dishion, Andrews, & Crosby, 1995; Pettit, Bates, Dodge, & Meece, 1999) it typically has not done so comparatively. In this study we were able to simultaneously test for age-related differences in both classroom and nonclassroom/out-of-school contexts. The fact that clear differences were found in the relation between antisocial behavior and peer acceptance across these different peer contexts provides compelling evidence that studying cross-context peer relations will provide important information for understanding the socializing influence of peers.

These results also suggest that our theories need to consider the context specificity of peer relations and how they are affected by individual behavior. For example, based on Moffitt's (1993) theory one could hypothesize that, during adolescence, antisocial behavior should be positively related to peer acceptance. Although the present study provides some support for this hypothesis, the hypothesis needs to be further refined to specify contextual differences in where the behavior is exhibited and which peers are considered. In the introduction we proposed that classroom and nonclassroom contexts would differ because classroom peers are not chosen, and individuals with different behavioral tendencies are constrained to be together. Moreover, in the classroom, individuals are less able to avoid the noxious and aversive behaviors of their antisocial peers. As a result, although antisocial behavior may be more tolerated during adolescence, it does not appear to be associated with high levels of acceptance within the classroom. The out-of-class context, however, appears to be very different. In this context, where individuals are able to avoid the noxious and aversive behaviors of antisocial youth, and are able to select more actively with whom they pass their time, antisocial behavior becomes positively associated with peer inclusion. Thus, theories regarding antisocial behavior and peer acceptance should consider both age and context effects.

Although the age-related differences in the relation between peer acceptance and antisocial behavior are consistent with Moffitt's theory, the present data also showed that much of this difference is attributable to increased affiliations among delinquent youth and not to an increased acceptance of delinquent youth by average peers. Thus, rather than becoming popular with average individuals, antisocial individuals are becoming more popular with each other. This suggests an increased organization and grouping of delinquent youths during the mid-

dle school years, and is consistent with Dishion's confluence model (Dishion et al., 1994; Dishion, French, & Patterson, 1995) that delinquent individuals form homogeneous groups who reinforce antisocial behavior among themselves.

As noted in the introduction, the fact that Italian middle school students stay with the same classmates all day, for all 3 years of middle school, may make it more difficult for Italian middle school students to change their school-based peer relations from one year to the next. If this is true, then the differences across age groups observed in the present sample may be attenuated (at least when considering the school context) as compared with what would be found in other countries. Furthermore, research and replication across different countries will be needed to better understand how cross-national differences in school organization and culture may influence these effects.

In a previous publication based on the same data set (Kiesner et al., 2003), it was shown that in-school peer inclusion and after-school peer inclusion interacted in explaining variance in depression. Specifically, for youth with high levels of peer inclusion outside of the school, there was no relation between in-school peer inclusion and depressive symptoms. Thus, high peer acceptance in one context may buffer the negative effects of low peer acceptance in other contexts. Considered together with the present findings, it could be hypothesized that the relation between antisocial behavior and depression (Capaldi, 1991; Kiesner, 2002) also changes across this age period, and that such relations would be differentially mediated through peer relations across different contexts. Such context-specific mediation may help explain why the mediational model proposing that antisocial behavior predicts peer failure, which then predicts depressive symptoms, has not received strong support (Kiesner, 2002).

It is also important to note that in the previous publication using this data set (Kiesner et al., 2003), it was suggested that specific behavior types, and the contexts in which they occur, should be considered in research focusing on antisocial behavior and peer relations. This point is further emphasized by the results from the present study showing that the increased networking among the eighth-grade antisocial youth was found for more severe forms of delinquency, but not for teacher and peer reports of classroom problem behavior. However, in the primary analyses of this study we used a general construct of antisocial behavior. This was done because we did not have multiple informants for various types and contexts of antisocial behavior, and re-

sponse biases unique to a specific source of information would have represented a serious threat to the internal validity of this study (which was not the case for the earlier publication, or the analyses in this study using the group-delinquency scores). Thus, it will be the task of future research to further test the current findings considering different behavior types that are specific to the different contexts.

A related point is that, whereas mean levels of self-reported antisocial behavior increased across the three age groups, mean levels of teacher-reported antisocial behavior showed a significant decrease across the three age groups. Although the relations among these variables remained similar across age groups (see factor loading for the antisocial behavior construct), the different pattern of mean differences across measures further suggests that, to understand fully the links between antisocial behavior and peer relations, we need to consider multiple behavioral contexts.

Findings from this study suggest that the overall pattern of results held for both males and females. This is different from the results of the earlier publication based on the same data set (Kiesner et al., 2003). However, because the research questions were very different and because different analytic strategies were used (latent construct of antisocial behavior vs. separate measures of antisocial behavior in different contexts), these seemingly contradictory results are difficult to interpret together.

There are several limitations in this study that should be noted. First, the construct of peer inclusion outside of the classroom was based solely on nominations of group membership. It would be very possible, however, that an individual with no group membership would have several out-of-class *friends*. Because the nominations process in this study considered only group memberships, these dyadic peer affiliations would not have been detected. However, the focus of this study was specifically on groups, and friendship nominations were not used. Thus we had no information on dyadic friendships and how such nominations may have added information to the present analyses and conclusions.

A second limitation concerns the calculation of the group-delinquency scores used to test with whom antisocial youth are becoming more accepted. These scores are based on each individual's nominations of their group members, without requiring that nominations be reciprocated or verified by another person. As a result, some group members may be included in a group even though they did not reciprocate the nomination. Moreover, two individuals who belong to the same group (by nominating many similar members) may not nominate the exact same

group members. As a result, even though these two individuals may nominate each other, and several common members, they may have different group-delinquency scores. However, creating a single uniform group for all members of the same group, although conceptually appealing, likely does not represent the reality and complexity of group memberships. For example, previously used methods for identifying cliques and social networks (NEGOPY, Richards & Rice, 1981; Social-Cognitive Maps, Cairns, Perrin, & Cairns, 1985) provide maps or sociograms of various groups within a school or class, but these maps may not correspond to what the individuals consider to be their groups. This occurs when various group members nominate some overlapping members but not all overlapping members (e.g., if child A nominates children B, C, and D, and children C and D reciprocate these nominations and also nominate children E, F, and G, then the group would likely include children A, B, C, D, E, F, and G, even though child A did not nominate children E, F, and G). The social map for the specific individual then can become larger and more inclusive than the individual would consider to be his or her group. Moreover, an individual may nominate a person in his or her group, but if most other group members do not also nominate that person, then he or she will not be included in the group, even though that person is very important for the target individual. Using the above example, this would occur if child B was not nominated by most of the other members, but was considered to be a very important individual, and group member, to the target child. Therefore, although the approach used for creating group-delinquency scores in this study has some limitations, we believe that it is the best way to capture the peer context of who the individual considers to be his or her group.

A third limitation concerns the measures of peer acceptance that were used. Although classroom peer preference and nominations received as a group member do capture certain aspects of peer acceptance, the full picture is certainly more complex than can be captured with these measures. For example, LaFontana and Cillessen (2002) found that, although physical aggression was associated with high levels of being disliked and low levels of being liked, aggressive youth were *perceived* to be the most popular and the least unpopular. These findings underline the difference between being liked by peers (measured by asking students who they like and dislike) and being perceived as popular by peers (asking students who they think is popular and unpopular). Other studies have also demonstrated clear differ-

ences in being liked by peers and being perceived as popular, as well as how these two measures are differently related to aggressive behavior (Cillessen & Mayeux, 2004; Farmer, Estell, Bishop, O'Neal, & Cairns, 2003; Prinstein & Cillessen, 2003). Also, a recent study by Lease, Musgrove, and Axelrod (2002) integrated various aspects of peer relations and acceptance, including likeability, perceived popularity, and social dominance, showing that integrating these different aspects of peer relations will likely be important for better understanding relations between child behavior, peer relations, and future development. As suggested by Lease et al., future research should attempt to integrate these different aspects and complexities of peer relations.

Finally, the sample used in this study was ethnically homogeneous, with 93% identifying themselves as ethnically Italian. Although such a homogeneous sample simplifies hypothesis testing because it minimizes the variance attributable to ethnicity, it can also be considered as a limitation because we were not able to test for ethnic differences or interactions including ethnicity. It is very possible that, within the same school and community, adolescents of different ethnic groups will have different norms that will contribute to the relations between behavior and acceptance. Future research will need to extend the present line of research by also considering ethnic differences within a similar paradigm.

These limitations considered, it should be noted that this study is one of the very few studies to extend peer-relations research outside of the classroom and school. To our knowledge, it is the only study to compare directly how antisocial behavior and peer acceptance are related to each other across contexts and across age groups.

In summary, this study provides partial support for the proposal that, during early adolescence, antisocial behavior becomes associated with peer acceptance. However, the higher level of peer acceptance of antisocial youth in the eighth grade appears to result from increased networking among antisocial youth, rather than acceptance by average youth. These results suggest that future research, as well as future prevention and intervention efforts, should attend to these age-related and context-specific differences. In doing so, it may be especially important to consider the apparent increases in networking among antisocial youth.

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