

# Similarity and Complementarity of Behavioral Profiles of Friendship Types and Types of Friends: Friendships and Psychosocial Adjustment

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This study investigated different types of friendships and the behavioral profiles of different types of friends in relation to individual adjustment. In 102 classes with preadolescents (mean age 11), 737 independent friendship dyads, and in 149 classes with adolescents (mean age 14), 1,102 friendship dyads were identified. At each age group, cluster analyses on the behavioral profiles of the dyads yielded three friendship types, with two types of friends within each friendship type: Socially Withdrawn friendship (Victimized Withdrawn and Prosocial Withdrawn friends), Prosocial friendship (High Prosocial and Less Prosocial friends), and Antisocial friendship (Bullying Antisocial and Antisocial friends). The behavioral profiles of the two friends in Prosocial friendships were marked by similarity and in the other two types by complementarity. Both Victimized Withdrawn and Bullying Antisocial friends were less adjusted than participants without friends while Prosocial friends were more adjusted.

Friendship is a relationship based on reciprocity of attraction, companionship, support, and involving compatible behavior or interaction profiles. Despite the many links between having friends and favorable individual adjustment, it has been suggested that the identity of friends can affect individual developmental pathways more than merely having

friends (Hartup, 1996). Indeed, the behavioral characteristics of children's friends have been found to be linked to their internalizing and externalizing behavior problems (Dishion, Eddy, Haas, Li, & Spracklen, 1997; Hartup, 1993; Mrug, Hoza, & Bukowski, 2004). Considering the salience of children's social interactions in the formation of friendships, the focus of this study was on the behavioral profiles of friendship dyads and the members of a friendship dyad. First, the friendship dyad was taken as the unit of study in order to identify different types of friendships. Next, the behavioral profiles of the two members of each friendship type were examined in order to identify types of friends and any individual differences between friends in a dyad. Finally, the different types of friends were analyzed to gain a better understanding of the links between friendship and psychosocial adjustment.

### BEHAVIOR, FRIENDSHIP, AND ADJUSTMENT

Many studies have compared individuals with and without friends in order to identify the influence of having friends. The results reveal clear associations between having friends and both positive adjustment and prosocial behaviors (Sebanc, 2003). Children with friends are more cooperative and self-confident (Clark & Drewry, 1985) and more altruistic and score higher in emotional perspective taking (McGuire & Weisz, 1982) than children without friends. In contrast, studies show an inconsistent pattern in the link between friendship and aggression. While some studies show negative links between antisocial behavior and the number of friends (Gest, Graham-Bermann, & Hartup, 2001), others demonstrate overt aggression to be unrelated to having friends (Sebanc, 2003). Some studies further show aggressive children to be equally likely to have friends as nonaggressive children (Cairns, Cairns, Neckerman, Gest, & Garipey, 1988) and also equally likely to have just as many friends (Ray, Cohen, Secrist, & Duncan, 1997). Thus, while prosocial behavior patterns may typify many friendships, there are also friendships characterized by antisocial behavior. Up until now, however, research on friendships has examined prosocial and antisocial behaviors separately. The distinction of friendships based on different behavioral profiles need to be studied in order to fully examine the relations between friendship and individual psychosocial adjustment (Hartup, 1996).

In the present investigation, five behavioral constructs were selected to characterize friendship dyads. *Antisocial behavior*, *prosocial behavior*, and *social withdrawal* are dimensions of social competence that characterize individuals from an early age and pervade many different areas of func-

tioning (Hartup & van Lieshout, 1995). These three dimensions of social competence or behavioral orientations have also been shown to influence peer acceptance (Hay, Payne, & Chadwick, 2004). *Bullying* and *victimization* are additional forms of interaction that emerge during middle childhood and have been shown to be related to adjustment at both the individual and peer-group levels (Rubin, Bukowski, & Parker, 1998).

### SIMILARITY AND COMPLEMENTARITY IN FRIENDSHIPS

Similarities between friends are commonly reported (Newcomb & Bagwell, 1995). Best friends are found to be more similar with respect to behavior than attitudes or personality (Kandel, 1978). Behavioral similarity also plays an important role in liking, the selection of friends, and the termination of friendships (Urberg, Değirmencioglu, & Tolson, 1998; Werner & Parmelee, 1979). These results confirm the "reputational salience hypothesis" (Hartup, 1996) and emphasize the role of social behavior in friendship similarity. In fact, the behavioral similarity among friends appears to be most pronounced for aggressive behavior, delinquency, and drug use (Cairns et al., 1988; Dishion, Capaldi, Spracklen, & Li, 1997). A previous investigation using part of the present data set nevertheless showed friends to be more similar than nonfriends with respect to not only antisocial, but also prosocial and withdrawn behavior patterns (Haselager, Hartup, van Lieshout, & Riksen-Walraven, 1998). Other research also shows similarities among friends in prosocial behavior (Newcomb & Bagwell, 1995) and withdrawn behavior (Poulin et al., 1997). In the light of the above, we expected to find similarity in terms of prosocial, antisocial, and socially withdrawn patterns of behavior. In other research, bullying has been linked to antisocial patterns of behavior and victimization to withdrawn patterns of behavior (Berthold & Hoover, 2000; Schwartz, McFadyen-Ketchum, Dodge, Pettit, & Bates, 1998). Given the pronounced similarity between friends with respect to antisocial behavior (e.g., aggression, delinquency, and drug use), bullying of peers can show similarity for some friends. Furthermore, the observed similarities among friends with respect to withdrawn behavior should lead to some similarity on victimization as well.

Although there is a general tendency for friends to display similar behaviors, it is possible that their overall behavioral profiles and interactions differ systematically. The similarity indices (i.e., correlations) for friends are generally not very high suggesting that compatibility of friends can be based on differences and complementarity as well (Aboud & Mendelson, 1996; Urberg et al., 1998). For example, a low antisocial friend may

support a high antisocial friend in bullying classmates or a low withdrawn friend may protect a highly withdrawn friend from being bullied. Thus, there should be friendships characterized by complementarity rather than similarity.

### **TYPES OF FRIENDS WITHIN DIFFERENT TYPES OF FRIENDSHIPS**

In order to identify relevant individual differences between the two friends in a friendship, the *individual* behavioral profiles of the friends can be examined. As prosocial behavior is most closely linked to mutual liking, cooperation, and reciprocity, friendships involving such a profile are likely to be characterized by highest level of similarity. Research on bullying shows about 27% of the peer group are involved in the bullying, but as reinforcers or assistants rather than as bullies (Salmivalli, Lagerspetz, Björkqvist, Österman, & Kaukiainen, 1996). Those with an antisocial behavioral profile can therefore be friends with other antisocial peers who are not bullies themselves. These nonbullying, but antisocial preadolescents and adolescents may also display prosocial behavior in light of the fact that prosocial and antisocial behavior are only moderately correlated and thus not opposite ends of a continuum (Krueger, Hicks, & McGue, 2001). Thus, we expected to find a subgroup of antisocial preadolescents and adolescents whose friendships are characterized by complementarity with regard to bullying. Finally, research has shown that socially withdrawn children are often friends with less withdrawn children (Schneider, 1999). Thus, we expect the friendships of withdrawn children to show a relatively higher degree of complementarity with regard to social withdrawal. Similarly victimized children often have protective friends (Hodges, Boivin, Vitaro, & Bukowski, 1999) who are likely to have prosocial characteristics that motivate them to befriend and protect peers who are rejected or victimized. Some peers with a socially withdrawn or victimized profile can be expected to have friends who are less withdrawn and more prosocial than they are.

### **PSYCHOSOCIAL ADJUSTMENT OF DIFFERENT TYPES OF FRIENDS**

Various measures of psychosocial adjustment and behavior were used to validate the different types of friends and friendships identified above. The aim of this validation was to demonstrate differences in the types of friends with respect to psychosocial adjustment and to compare participants without mutual classroom friendships with different types of

friends. Before launching the comparison of various types of friends and those without friends, we first compared the group of participants with and without mutual classroom friends on the various psychosocial adjustment measures. The aim of this comparison was to present the profile of preadolescents and adolescents without mutual friends in comparison with those with friends. Based on previous research comparing children with and without mutual classroom friends (Hartup, 1996), we expected that individuals without friends generally have more unfavorable adjustment than those with mutual friendships in their classrooms.

Next, we compared participants without classroom friends and the different types of friends on the following psychosocial adjustment measures: self-reported internalizing and externalizing problem behaviors (Rubin et al., 1998) and peer-reported measures of social, emotional, and academic competence (Schneider, 2000). We hypothesized that preadolescents and adolescents without classroom friends would not always show the most unfavorable adjustment. Those taking part in friendships characterized by high levels of antisocial behavior profiles should show low levels of academic competence but medium to high levels of social and emotional competence coupled with high levels of externalizing problem behaviors. In contrast, participants in friendships characterized by prosocial profiles should show medium to high levels of competence in all domains; finally those in friendships with socially withdrawn characteristics should show high levels of internalizing problem behaviors and low levels of emotional and social competence coupled with medium to high levels of academic competence.

### AGE- AND GENDER-RELATED ISSUES

Research has shown age and gender to be important in determining friendship patterns (Aboud & Mendelson, 1996). In line with the well-established gender differences in the patterns of antisocial and prosocial behavior (Maccoby, 1986), we predicted friendships among girls to reflect Prosocial friendships more than boys. In contrast, boys' friendships would be more often characterized as Antisocial friendships.

As the role of behavioral similarity in attraction and friendship formation does not seem to change from preadolescence to adolescence (Aboud & Mendelson, 1996), we did not expect age differences with respect to friendship types and types of friends based on similarity and complementarity of behavioral profiles. However, salience of behavior decreases with age: behavioral characteristics seem to play a greater

role in friendships in preadolescence than in adolescence (Aboud & Mendelson, 1996). Therefore, we expected that perceived behavior distinguish better between types of friends in preadolescence than in adolescence.

## METHOD

### Participants

*Individuals.* The participants in this investigation were 2,057 preadolescents and 2,824 adolescents involved in the third and fourth cross-sectional waves of a larger longitudinal study conducted in the Nijmegen-Arnhem area of the Netherlands (Abecassis, Hartup, Haselager, Scholte, & van Lieshout, 2002; Cillessen, van IJzendoorn, van Lieshout, & Hartup, 1992; Haselager et al., 1998). The first initial wave targeted 231 boys from 54 kindergarten and 43 first-grade classes. These participants were followed in their respective school classes 1, 5, and 8 years later than the initial time point. At each assessment point, the classmates of the boys were also included in the study and were thus administered the same questionnaires. The second wave involved 2,566 participants in first or second grade; the third wave involved 2,518 participants in fourth, fifth, or sixth grade; the fourth wave involved 3,333 participants in seventh, eighth, or ninth grade.

The third wave (hereafter: "preadolescents") consisted of 2,518 participants (47% girls, 53% boys) from 102 school classes in 59 schools. The fourth wave (hereafter: "adolescents") consisted of 3,333 adolescents (43% girls, 57% boys) from 149 school classes in 41 schools. The preadolescents had a mean age of 11 years ( $SD = 1.2$ ). The adolescents had a mean age of 14 years and 6 months ( $SD = 9$  months). The preadolescents and adolescents were relatively independent due to the school transition (i.e., start of high school) occurring between the two waves.

Information on the ethnic backgrounds of the preadolescents was not collected as part of the study. The 1990–1991 school census records for this area of the Netherlands showed 89.5% of the elementary school students to be of a Dutch/Caucasian origin. The respective origins of the ethnic-minority preadolescents were from Suriname (.8%), the Dutch Antilles (.1%), Moluccas (1.2%), Turkey (1.3%), Morocco (1.2%), or other (5.9%). The information on the ethnic backgrounds of the adolescents showed 5% to have a minority background: 1.5% from Suriname, the Dutch Antilles, or the Molucca Islands, 2% from Mediterranean countries, and 1.5% from other countries.

Information on educational background of parents was obtained in the fourth wave. The parents of the adolescents had middle to high levels of education: 68.4% of the fathers and 79.6% of the mothers were high school graduates while 25.7% of the fathers and 12.7% of the mothers were college graduates. Considering the high number of schools participating in the study, the two samples were representative of the Dutch school population for this geographic region.

*Dyads.* The participants per class were taken to constitute a friendship dyad when two students nominated each other as “my friend” on the sociometric questionnaire. The maximum number of nominated friends was three, and the order of nomination did not matter. This procedure resulted in 1,701 friendship dyads for the preadolescents (2,148 individuals with 48.6% girls and 51.3% boys) and 2,416 friendship dyads for the adolescents (2,713 individuals with 45.1% girls and 54.9% boys). To ensure the independence of the sampling units, dyads were eliminated following a random selection procedure with no participants thus occurring in more than one friendship dyad within the final data set. The final dyad sample thus encompassed 737 and 1,102 friendship dyads for preadolescence and adolescence, respectively, and 1,474 individual preadolescents and 2,204 individual adolescents taking part in these dyads.

In addition, all of the classmates without a friend in their school class were included in the final set of analyses as a comparison group. Thus, 583 pre-adolescents (34.5% girls, 65.5% boys) and 620 adolescents (33.2% girls, 66.8% boys) who did not have a mutual friendships were included to produce a total 2,057 of individual preadolescents and 2,824 individual adolescents in the *final* individual sample. The mean age and gender composition of the final sample did not differ significantly from the initial sample.

## Procedure

*Recruitment procedure.* The parents of the participants in the longitudinal project were asked to provide permission for their child's participation in the study. School authorities, teachers, and all other parents and participants were also informed about the investigation and assured of confidentiality. Consent was obtained from all the school principals, participants, and their parents as well.

*Classroom procedure.* During an otherwise normal classroom session the preadolescents in our study were asked to complete one sociometric

and two self-report questionnaires and the adolescents in our study were asked to complete one sociometric and four self-report questionnaires. A trained graduate student led all of the classroom sessions. The students were given a brief introduction, guaranteed confidentiality and anonymity, and reminded that their participation was voluntary. The classroom sessions lasted 1 hour for the preadolescents and 90 minutes for the adolescents.

## Measures

### *Clustering variables*

*Self-reports of involvement in bullying and/or victimization.* Involvement in bullying and/or victimization was assessed in preadolescence and adolescence using a Dutch translation of the bully/victim inventory developed by Olweus (1989). Before filling out the questionnaire, the students were given a definition of direct bullying. The questionnaire involves three scales, two of which are of concern here: *Victim of direct bullying* (five items, e.g., "How often have you been bullied in the last 5 days?";  $\alpha = .78$  for pre-adolescents,  $\alpha = .72$  for adolescents), and *Bullying others* (five items, e.g., "How often have you bullied other children in the last five days?";  $\alpha = .78$  for preadolescents,  $\alpha = .81$  for adolescents). The item scores were standardized and averaged.

*Peer-reported social behavior.* Peer nominations with regard to different aspects of social behavior were used to assess peer-reported behavior in preadolescence and adolescence. Preadolescents could nominate a maximum of three same- or different-sex classmates in response to each question. The maximum number of allowed nominations was five during adolescence. Only the first three of these nominations were used in order to have comparable numbers of nominations in the two samples. Self-nomination was not allowed and the students were provided a list with the names of all the students in the classroom. Per item, the number of nominations received by each student was summed. For each item, the binomial probability scores in each classroom corrected for different class sizes (Newcomb & Bukowski, 1983).

The questions had the format "Which three of your classmates \_\_\_\_\_?" The nomination items were not always identical for preadolescents and adolescents. A principal components factor analysis with oblimin rotation on eight peer-reported questions resulted in three factors with item loadings higher than .64 and explaining 68% of the total variance in preadolescence. In adolescence similar three factors with item loadings higher than .72 were found to explain 64% of the total variance. The factors clearly

measured *Antisocial behavior* (three items: starts fights, disturbs, bullies other students for preadolescents; becomes angry quickly, disturbs, bullies other students for adolescents); *Prosocial behavior* (two items; offers help, is cooperative for pre-adolescents; likes to work with others, is considerate for adolescents); and *Social withdrawal* (two items: is shy, is being bullied, asks for help for pre-adolescents; is shy, is being bullied, is withdrawn for adolescents). The standardized means of the probability scores for the items representing the three constructs of social behavior were then taken to constitute peer-report scales.

### *Self-report measures of psychosocial adjustment*

*Depressive symptoms by preadolescents.* Four scales from the Depression Questionnaire for Children (De Wit, 1987) were used to screen for core symptoms of depression in preadolescents. The scales were: (1) Depressive Mood, (2) Decrease, delay, regression of functions and behavior, (3) Negative self-evaluations, and (4) Physical complaints. The 46 items were scored as *true* or *false*, summed, and standardized (46 items;  $\alpha = .90$ ).

*Psychological well-being by adolescents.* Psychological well-being of adolescents was assessed along five dimensions: self-esteem, loneliness (inverse), worrying about home (inverse), liking to be at home, and brooding (inverse) (see Scholte, van Aken, & van Lieshout, 1997). The scores for the five dimensions were first standardized and then averaged (23 items;  $\alpha = .80$ ).

*Delinquent behavior by adolescents.* A total of 18 questions ( $\alpha = .89$ ) regarding how often an adolescent had engaged in delinquent and antisocial behavior during the past 12 months was used to assess delinquency (see Scholte et al., 1997). Items covered: covert delinquency (behaviors such as theft, vandalism, running away from home, or staying out all night without parents), overt delinquency (violence and involvement in fights), and conflict with authority (conflicts with parents or teachers). The scores were averaged and standardized.

*Addictive behaviors by adolescents.* Four questions addressed consumption of cigarettes, alcohol, drugs, and the gambling behavior of the adolescents during the previous month (see Scholte et al., 1997). The four item scores were standardized and averaged to produce a final score for addictive behaviors ( $\alpha = .58$ ).

### *Peer-report measures of psychosocial adjustment*

*Competence of adolescents.* A principal components factor analysis with varimax rotation on 14 other sociometric peer nomination items (see above "peer-reported social behavior" for information on sociometric assessments) showed three factors with loadings higher than .46 to explain 48%

of the total variance: *Academic competence* (six items: is lazy/unambitious [reverse], is unreflective/unintelligent [reverse], is absentminded/gives up easily [reverse], unable to concentrate/not persistent [reverse], not hardworking/not precise [reverse], relaxed/resilient; eigenvalue = 2.55); *Social competence* (six items: is sensible/perceptive, is secure/steady, is spontaneous/demonstrative, is enthusiastic/likes being with others, is intelligent/imaginative, is relaxed/resilient; eigen value = 2.45); and *Emotional competence* (three items: is emotional/anxious [reverse], is uncreative/unimaginative [reverse], is nervous/insecure [reverse]; eigenvalue = 1.75). (For more specific information on the peer nominations, see Scholte et al., 1997.)

*Sociometric status.* For each student, the raw number of nominations received for “like a lot” (acceptance) and “don’t like at all” (rejection) were summed and transformed into probability scores using a binomial distribution in order to account for different class sizes. The probability scores (*p*-scores) for acceptance, rejection, and social impact were used to determine the sociometric status of each participant as Popular, Average, Controversial, Rejected or Neglected (Newcomb & Bukowski, 1983).

## RESULTS

*Descriptives.* In the final sample, 71.2% of the preadolescents and 78.0% of the adolescents had a mutual classroom friendship. Of the preadolescents’ mutual friendship dyads, 49.9% were same-sex girl friendships, 45.9% were same-sex boy friendships, and 4.2% were mixed-sex friendships. In the adolescent group, these percentages were 43.4%, 51.5%, and 5.2%, respectively.

*Different types of friendships.* In order to typify dyads in terms of similarity and complementarity, the *mean* and the *discrepancy* scores were used. The *mean score* was the average of the individual scores for two members of a dyad and thus indicates the average level of engagement in certain behaviors. However, mean scores alone do not necessarily describe a dyad adequately; the analysis of dyadic data obtained from individual-level outcomes requires also information on discrepancy (Kashy & Kenny, 2000). The *discrepancy scores* or the absolute difference between the scores for the two members of a dyad were therefore also calculated. Note that a high score (i.e., large difference) indicates complementarity and a low score (i.e., small difference) indicates similarity.

The standardized self-report scores of bullying and victimization were used along with the peer-report scores for antisocial behavior, prosocial behavior, and social withdrawn behavior to analyze the friendships dyads. The *mean* and *discrepancy* scores per dyad were calculated for these five variables and then entered into separate cluster analyses for preadolescents and adolescents. Owing to the high number of cases, *k*-means cluster analysis was applied using the SPSS Quick Cluster method. The amount of explained variance ( $ETA^2_k$ ), relative improvement against the previous solution ( $PRE_k$ ), and the explained versus unexplained variance (*F*-max) test statistics were taken into consideration to decide on the number of clusters in the solution. Different starting values for the *k*-cluster centers were also used to measure cluster stability (Bacher, 2001; Everitt, Landau, & Leese, 2001). In both age groups, a three-cluster solution was maintained. The use of two different samples provided a natural test of the generalizability of the three-cluster solution. In Table 1, the cluster-centers for the 10 variables are presented for the clusters of dyads (i.e., different types of friendships) in childhood and adolescence.

The Socially Withdrawn cluster (i.e., type of friendship) contained 30.0% of the preadolescent and 33.3% of the adolescent friendship dyads and showed the highest mean scores on social withdrawal for both preadolescents and adolescents. This cluster also showed the highest mean score for victimization and low prosocial behavior scores for both age groups. The discrepancy scores for social withdrawn behavior, prosocial behavior, and victimization were also quite high for this cluster.

The Prosocial cluster or type of friendship contained 38.8% of the preadolescent and 33.1% of the adolescent friendship dyads and showed the highest mean scores for prosocial behavior, the lowest mean scores for virtually all of the other variables, and the lowest discrepancy scores in general. These results show the members of a Prosocial friendship to be very similar and not to be involved in bullying, victimization, antisocial behavior, or socially withdrawn behavior.

The Antisocial cluster or type of friendship contained 31.2% of the preadolescent and 33.6% of the adolescent friendship dyads. The highest mean scores occurred for antisocial behavior and bullying. These dyads were further characterized by major discrepancies between the members of the dyads for these same variables.

*Gender composition of different types of friendships.* The relation between gender composition and friendship type was investigated using Configural Frequency Analysis (CFA; Von Eye, 1990; see Table 2). CFA is a

TABLE 1  
 Cluster Centers for the Three Types of Friendships for Preadolescents and Adolescents on the Clustering Variables (i.e., Self-reported Bullying and Victimization and Peer-reported Antisocial, Prosocial, and Socially Withdrawn Behavior)

	<i>Friendship Cluster</i>				<i>F</i> (2,734)
	<i>Grand Mean (SD)</i>	<i>Socially Withdrawn (SD)</i>	<i>Prosocial (SD)</i>	<i>Antisocial (SD)</i>	
Preadolescents	<i>n</i> = 737	<i>n</i> = 221; 30%	<i>n</i> = 286; 39%	<i>n</i> = 230; 31%	
Mean					
Bullying	-.02 (.58)	-.16 <sup>b</sup> (.41)	-.28 <sup>a</sup> (.32)	.42 <sup>c</sup> (.71)	134.60***
Victimization	-.10 (.51)	.19 <sup>c</sup> (.60)	-.31 <sup>a</sup> (.33)	-.12 <sup>b</sup> (.46)	72.17***
Antisocial behavior	-.09 (.83)	-.38 <sup>b</sup> (.56)	-.64 <sup>a</sup> (.37)	.88 <sup>c</sup> (.57)	641.49***
Prosocial behavior	.22 (.74)	-.14 <sup>a</sup> (.66)	.67 <sup>b</sup> (.61)	-.01 <sup>a</sup> (.68)	116.48***
Social withdrawal	-.11 (.79)	.64 <sup>b</sup> (.61)	-.49 <sup>a</sup> (.58)	-.35 <sup>a</sup> (.66)	239.03***
Discrepancy					
Bullying	.60 (.61)	.49 <sup>b</sup> (.47)	.39 <sup>a</sup> (.37)	.94 <sup>c</sup> (.79)	65.46***
Victimization	.55 (.57)	.81 <sup>c</sup> (.72)	.34 <sup>a</sup> (.35)	.55 <sup>b</sup> (.52)	46.53***
Antisocial behavior	.67 (.72)	.54 <sup>b</sup> (.53)	.32 <sup>a</sup> (.38)	1.23 <sup>c</sup> (.86)	147.99***
Prosocial behavior	.87 (.71)	1.09 <sup>c</sup> (.81)	.71 <sup>a</sup> (.62)	.87 <sup>b</sup> (.67)	18.44***
Social withdrawal	.83 (.66)	1.15 <sup>b</sup> (.80)	.71 <sup>a</sup> (.51)	.69 <sup>a</sup> (.57)	39.18***
Adolescents	<i>n</i> = 1,102	<i>n</i> = 367; 33%	<i>n</i> = 365; 33%	<i>n</i> = 370; 34%	<i>F</i> (2,1099)
Mean					
Bullying	-.01 (.58)	-.19 <sup>a</sup> (.43)	-.17 <sup>a</sup> (.37)	.32 <sup>b</sup> (.71)	113.12***
Victimization	-.03 (.51)	.17 <sup>b</sup> (.61)	-.13 <sup>a</sup> (.40)	-.12 <sup>a</sup> (.45)	43.10***
Antisocial behavior	-.02 (.87)	-.38 <sup>a</sup> (.70)	-.47 <sup>a</sup> (.63)	.77 <sup>b</sup> (.63)	410.07***
Prosocial behavior	.15 (.79)	-.07 <sup>b</sup> (.76)	.70 <sup>c</sup> (.62)	-.19 <sup>a</sup> (.68)	184.11***
Social withdrawal	-.08 (.84)	.84 <sup>b</sup> (.60)	-.54 <sup>a</sup> (.50)	-.53 <sup>a</sup> (.51)	794.48***
Discrepancy					
Bullying	.55 (.58)	.45 <sup>a</sup> (.45)	.43 <sup>a</sup> (.42)	.77 <sup>b</sup> (.74)	43.12***
Victimization	.54 (.64)	.70 <sup>c</sup> (.81)	.42 <sup>a</sup> (.41)	.49 <sup>b</sup> (.61)	19.19***
Antisocial behavior	.72 (.75)	.48 <sup>a</sup> (.54)	.53 <sup>a</sup> (.55)	1.15 <sup>b</sup> (.81)	108.95***
Prosocial behavior	.88 (.72)	.81 <sup>b</sup> (.73)	.82 <sup>a</sup> (.67)	1.00 <sup>b</sup> (.75)	7.78***
Social withdrawal	.64 (.67)	1.09 <sup>b</sup> (.78)	.40 <sup>a</sup> (.45)	.44 <sup>a</sup> (.49)	154.55***

Note. The clusters with different superscripts differ significantly from one another.  
 \*\*\**p* < .001.

cross-tabulation method used to determine if groups are observed significantly more often than expected (Types) or less often than expected (Antitypes) with a normal approximation of the binomial distribution. Given the high number of tests performed and the use of CFA for pattern

TABLE 2  
 Percentage of Gender Composition of Different Types of Friendships

		<i>Socially Withdrawn</i>	<i>Prosocial</i>	<i>Antisocial</i>	<i>Total</i>
Girl-girl	Preadolescents	<b>68.8 (41.3)</b>	<b>64.0 (49.7)</b>	<u>14.3 (9.0)</u>	49.9 (100)
	Adolescents	46.9 (36.0)	<b>64.4 (49.2)</b>	<u>19.2 (14.9)</u>	43.4 (100)
Boy-boy	Preadolescents	<u>29.0 (18.9)</u>	<u>31.8 (26.9)</u>	<b>79.6 (54.1)</b>	45.9 (100)
	Adolescents	49.3 (31.9)	<u>29.0 (18.7)</u>	<b>75.7 (49.4)</b>	51.5 (100)
Mix	Preadolescents	2.3 (16.1)	4.2 (38.7)	6.1 (45.2)	4.2 (100)
	Adolescents	3.8 (24.6)	6.6 (42.1)	5.1 (33.3)	5.2 (100)
Total	Preadolescents	100 (30.0)	100 (38.8)	100 (31.2)	100 (100)
	Adolescents	100 (33.3)	100 (33.1)	100 (33.6)	100 (100)

Note. Types ( $p < .005$ ) are indicated in bold and Antitypes ( $p < .005$ ) are underlined.

recognition purposes, conservative  $z$ -values of 2.74 and  $-2.74$  ( $p < .005$ ) were used as the cutoff points for the Types and Antitypes, respectively.<sup>1</sup>

As expected, Prosocial girl-girl friendships were found to be typical and boy-boy Prosocial friendships atypical in both ages. In contrast, Antisocial boy-boy friendships constituted a Type, and Antisocial girl-girl friendships constituted an Antitype for both ages (see Table 2). Girl-girl Socially Withdrawn friendships in preadolescence occurred more often than expected by chance and were therefore a distinct Type. In contrast, boy-boy Socially Withdrawn friendships in preadolescence were found to constitute an Antitype.

**Types of friends in different friendships.** For each type of friendship (i.e., the Antisocial, Prosocial, and Socially Withdrawn friendships) a two-cluster analysis was next conducted at the individual level to identify the two groups of individuals participating in each type of friendship. Only a two-cluster solution was investigated because our interest was in whether the two members of a friendship dyad could be distinguished from each other or not and whether one member could be placed in one cluster and the other member in a second cluster.

The individual scores of the participants on the same five self-reported and peer-reported variables were used for this cluster analysis at the individual level: bullying, victimization, antisocial, prosocial, and socially withdrawn behavior. Two separate clusters could be identified for each of the three types of friendships. The cluster-center means of the resulting six

<sup>1</sup> Similar results were also found using a more lenient significance level ( $p < .05$ ).

TABLE 3  
Mean scores for Different Types of Friends and Those Preadolescents and Adolescents Without Friends

	Types of Friends									
	Socially Withdrawn			Prosocial			Antisocial			Without Friends
	W	w	P	P	p	A	a	A	a	
Preadolescents	56.8%	43.2%	59.3%	40.7%	38.7%	61.3%				n = 583
	n = 251	n = 191	n = 339	n = 233	n = 178	n = 282				
Bullying	-.08 <sup>b</sup>	-.25 <sup>a</sup>	-.31 <sup>a</sup>	-.24 <sup>a</sup>	1.15 <sup>c</sup>	-.05 <sup>b</sup>				.06 <sup>b</sup>
Victimization	.38 <sup>d</sup>	-.05 <sup>b</sup>	-.32 <sup>a</sup>	-.30 <sup>a</sup>	.11 <sup>c</sup>	-.27 <sup>a</sup>				.28 <sup>d</sup>
Antisocial behavior	-.21 <sup>b</sup>	-.60 <sup>a</sup>	-.64 <sup>a</sup>	-.63 <sup>a</sup>	1.38 <sup>e</sup>	.56 <sup>d</sup>				.23 <sup>c</sup>
Prosocial behavior	-.70 <sup>a</sup>	.62 <sup>e</sup>	1.22 <sup>f</sup>	-.13 <sup>c</sup>	-.46 <sup>b</sup>	.26 <sup>d</sup>				-.62 <sup>ab</sup>
Social withdrawal	1.05 <sup>d</sup>	.10 <sup>c</sup>	-.44 <sup>a</sup>	-.56 <sup>a</sup>	-.10 <sup>b</sup>	-.51 <sup>a</sup>				.31 <sup>c</sup>
Adolescents	49.5%	50.5%	66.7%	33.3%	65.5%	34.5%				n = 620
	n = 363	n = 371	n = 487	n = 243	n = 485	n = 255				
Bullying	-.24 <sup>a</sup>	-.14 <sup>a</sup>	-.17 <sup>a</sup>	-.16 <sup>a</sup>	.48 <sup>c</sup>	.02 <sup>b</sup>				.05 <sup>b</sup>
Victimization	.36 <sup>c</sup>	-.03 <sup>a</sup>	-.12 <sup>a</sup>	-.16 <sup>a</sup>	-.09 <sup>a</sup>	-.16 <sup>a</sup>				.19 <sup>b</sup>
Antisocial behavior	-.27 <sup>c</sup>	-.49 <sup>ab</sup>	-.40 <sup>bc</sup>	-.60 <sup>a</sup>	1.35 <sup>e</sup>	-.32 <sup>c</sup>				.13 <sup>d</sup>
Prosocial behavior	-.79 <sup>a</sup>	.63 <sup>d</sup>	1.19 <sup>e</sup>	-.26 <sup>c</sup>	-.19 <sup>c</sup>	-.21 <sup>c</sup>				-.54 <sup>b</sup>
Social withdrawal	1.14 <sup>d</sup>	.55 <sup>c</sup>	-.49 <sup>ab</sup>	-.65 <sup>a</sup>	-.56 <sup>ab</sup>	-.47 <sup>b</sup>				.41 <sup>c</sup>

Note. Different superscripts indicate significant differences ( $p < .05$ ). Percentages of friend types are calculated within each friendship type. W, victimized withdrawn; w, prosocial withdrawn; P, high prosocial; p, less prosocial; A, bullying antisocial; a, antisocial.

TABLE 4  
Percentages of Different Combinations of Friends for Three Friendship Types

<i>Dyad Member Combination</i>	<i>Preadolescents (%)</i>	<i>Adolescent (%)</i>
Socially withdrawn friendship		
Ww: victimized withdrawn and prosocial withdrawn	57.5	42.2
WW: victimized withdrawn and victimized withdrawn	28.0	28.3
ww: prosocial withdrawn and prosocial withdrawn	14.5	29.4
Prosocial friendship		
Pp: high prosocial and less prosocial	35.3	40.8
PP: high prosocial and high prosocial	41.6	46.3
pp: less prosocial and less prosocial	23.1	12.9
Antisocial friendship		
Aa: bullying antisocial and antisocial	48.7	53.2
AA: bullying antisocial and bullying antisocial	14.3	38.9
aa: antisocial and antisocial	37.0	7.8

*Note.* Ww: combination of a Victimized Withdrawn friend and a Prosocial Withdrawn friend in a Socially Withdrawn friendship type; etc.

types of friends are presented in Table 3. Note that the grand mean scores of preadolescents and adolescents are zero (due to standardization), and that cluster-center means are deviations from the grand mean. According to Cohen (1988), a score between .20 and .50 represents a minor (slight) deviation, between .50 and .80 a moderate deviation, and greater than .80 a large deviation. The six types of friends and those without mutual classroom friends differed significantly from one another on all five self-reported and peer-reported variables both in preadolescence, all  $F$ 's(6, 1,997) > 55.32,  $p < .001$  and adolescence, all  $F$ 's(6, 2,817) > 30.14,  $p < .001$ .

*Socially withdrawn friendships.* The clusters obtained for the preadolescents and adolescents in Socially Withdrawn friendships differed significantly on each of the five variables. As can be seen from Table 3, the first cluster contained individuals with high victimization scores, very high social withdrawal scores, and very low prosocial behavior scores. The individuals in the second cluster were significantly less socially withdrawn, less victimized, and displayed high levels of prosocial behavior. The two clusters for Socially Withdrawn friendships are therefore considered to represent Victimized Withdrawn friends and Prosocial Withdrawn friends. As depicted in Table 4, the majority of the Socially Withdrawn friendship dyads consisted of a Victimized Withdrawn friend combined with a Prosocial Withdrawn friend. These results confirm our expectation that preadolescents and adolescents victimized more than

average tend to engage in complementary friendships and thus friendships with significantly discrepant behavioral profiles particularly with regard to withdrawn and prosocial behavior.

*Prosocial friendships.* Inspection of Table 3 shows the clusters obtained for preadolescents in Prosocial friendships to differ only with respect to the variable prosocial behavior. The clusters for the adolescents in Prosocial friendships differed with respect to prosocial and antisocial behavior. The first cluster contained individuals displaying very high levels of prosocial behavior and is therefore referred to as High Prosocial. The second cluster contained individuals displaying less prosocial behavior and is therefore referred to as Less Prosocial. In keeping with our expectations, the two types of friends had similar profiles with respect to low levels of involvement in bullying and victimization, as well as with respect to low levels of displayed antisocial and withdrawn behavior. As depicted in Table 4, less than half of the Prosocial friendships involved a High Prosocial with a Less Prosocial member in either preadolescence or adolescence. The remainder of the Prosocial friendships consisted of either two High Prosocial friends or two Less Prosocial friends.

*Antisocial friendships.* The two clusters of preadolescents in Antisocial friendships differed significantly from each other on all of the behavior variables. The two clusters of adolescents in Antisocial friendships differed only with respect to bullying and antisocial behavior. In general, the first cluster contained individuals showing very high levels of antisocial behavior and bullying along with low levels of prosocial behavior. The second cluster contained individuals with relatively high levels of antisocial behavior, but not bullying. The two clusters for Antisocial friendships are therefore referred to as Bullying Antisocial and Antisocial. Inspection of Table 4 shows about half of the preadolescents and adolescents in Antisocial friendships to involve a Bullying Antisocial friend and an Antisocial friend, which confirms our expectation of complementarity in Antisocial friendships. In preadolescence, only 14.3% of the Antisocial friendships involved two Bullying Antisocial friends; in adolescence this percentage was as high as 38.9%. Conversely, 37.0% of the Antisocial friendship dyads in preadolescence involved two Antisocial friends while only 7.8% did in adolescence.

*Preadolescents and adolescents without classroom friends.* In Table 3, the mean behavior scores for the participants without classroom friends are also presented. Both the preadolescents and adolescents without friends were victimized slightly more than average, but did not bully more than average. They were slightly more withdrawn and moderately less prosocial than their peers on average. Furthermore, the preadolescents

TABLE 5  
 Mean Scores of Individuals With Friends, Without Friends, and Six Types of Friends on Self- and Peer-Reported Measures of Psychosocial Adjustment

	<i>Socially Withdrawn Friendship</i>		<i>Prosocial Friendship</i>		<i>Antisocial Friendship</i>		<i>Without Friends</i>	<i>With Friends</i>
	<i>W</i>	<i>w</i>	<i>P</i>	<i>p</i>	<i>A</i>	<i>a</i>		
<b>Self-report</b>								
<b>Preadolescents</b>								
Depressive symptoms	.40 <sup>c</sup>	.02 <sup>ab</sup>	-.24 <sup>a</sup>	-.24 <sup>a</sup>	.22 <sup>bc</sup>	-.21 <sup>a</sup>	<u>.15<sup>bc</sup></u>	<u>-.04</u>
<b>Adolescents</b>								
Psychological well-being	.01	.03	.01	-.04	-.03	.08	-.05	.00
Delinquent behavior	-.31 <sup>a</sup>	-.22 <sup>ab</sup>	-.27 <sup>ab</sup>	-.15 <sup>ab</sup>	.52 <sup>d</sup>	-.03 <sup>bc</sup>	<u>.16<sup>c</sup></u>	<u>-.04</u>
Addictive behaviors	-.28 <sup>a</sup>	-.20 <sup>ab</sup>	-.01 <sup>cd</sup>	-.10 <sup>bc</sup>	.37 <sup>e</sup>	.03 <sup>cd</sup>	<u>.11<sup>d</sup></u>	<u>-.02</u>
<b>Peer-report</b>								
<b>Adolescents</b>								
Academic competence	.35 <sup>de</sup>	.52 <sup>e</sup>	.08 <sup>c</sup>	.31 <sup>d</sup>	-.90 <sup>a</sup>	-.00 <sup>bc</sup>	<u>-.13<sup>b</sup></u>	<u>.03</u>
Social competence	-.63 <sup>a</sup>	.01 <sup>c</sup>	-.26 <sup>b</sup>	.47 <sup>d</sup>	.45 <sup>d</sup>	-.05 <sup>c</sup>	<u>-.27<sup>b</sup></u>	<u>.06</u>
Emotion competence	-.62 <sup>a</sup>	-.22 <sup>b</sup>	.53 <sup>e</sup>	.31 <sup>d</sup>	.10 <sup>c</sup>	.50 <sup>e</sup>	<u>-.33<sup>b</sup></u>	<u>.08</u>

Note. Superscripts refer to significant differences between groups ( $p < .05$ ). Underlined values indicate significant differences between individuals with and without friends. W, victimized withdrawn; w, prosocial withdrawn; P, high prosocial; p, less prosocial; A, bullying antisocial; a, antisocial.

without classroom friends were perceived to be slightly more antisocial than average while the adolescents without friends did not differ from average. With respect to bullying behavior, the pre-adolescents and adolescents without friends resembled mostly the Antisocial friends; with respect to victimization and prosocial behavior, they resembled the Victimized Withdrawn friends; and they were as withdrawn as Prosocial Withdrawn friends.

**Psychosocial adjustment of different types of friends and participants without classroom friends.** First, the preadolescents and adolescents with and without friends were compared for the various adjustment measures. The preadolescents and adolescents without friends had less “favorable” adjustment on six of seven measures than those with friends. As can be seen in the two most right columns of Table 5, preadolescents without friends reported higher levels of depressive symptoms,  $t(896.86) = 3.65, p < .001$ . The adolescents with friends and without friends did not differ with respect to psychological well-being,

$t(2,504) = -1.42$ ,  $p = .16$ . However, the adolescents without friends reported higher levels of delinquency,  $t(629.23) = 3.13$ ,  $p < .001$ , and addictive behaviors,  $t(722.41) = 3.37$ ,  $p < .001$ , than adolescents with friends. The adolescents without friends were also perceived by their peers to have significantly less academic, social, and emotional competence than the adolescents with friends (all  $t$ 's (3,331)  $> 3.46$ ,  $p \leq .001$ ).

Next, the six types of friends and students without friends were compared conducting separate univariate analyses of variance (ANOVA's) to compare the different groups with two fixed factors: gender and type of friend, which had seven levels including the participants without friends. For purposes of this paper, the focus was on the main effect of type of friend and the possible interaction of this variable with gender, rather than on main effect of gender. In order to emphasize the roles of the different types of friends in the link between having friends and adjustment, pre-adolescents and adolescents without friends were taken as the reference point in the reporting of the post hoc comparison for the seven groups of students.

When ANOVA's were performed to compare the six types of friends and those without friends, the results for all seven measures of adjustment were significant, all  $F$ 's(6, 1, 968–2, 810)  $> 10.27$ ,  $p < .001$ . There was a significant main effect of type of friend for all measures, all  $F$ 's(6, 1, 968–2, 810)  $> 2.53$ ,  $p \leq .02$  (see Table 5). A significant interaction between type of friend and gender was also observed for academic competence in adolescence ( $F[6, 2, 810] = 3.22$ ,  $p < .01$ ).

*Self-reported internalizing and externalizing problem behaviors.* Tukey post hoc analyses for psychological well-being did not yield any significant differences despite the small but significant main effect of type of friend for this measure of adjustment. Tukey's post hoc tests for depressive symptoms in preadolescence indicated no significant differences between the Victimized Withdrawn, Bullying Antisocial friends and preadolescents without friends, who all reported high levels of depressive symptoms. Bullying Antisocial adolescents in Antisocial friendships engaged in significantly more delinquent acts and also reported significantly more drug, cigarette, and alcohol use than adolescents without friends and the other five types of friends. The self-reported involvement of adolescents without friends in delinquency did not differ significantly from the involvement of Antisocial friends. The adolescents without friends also did not differ from High Prosocial or Antisocial friends when drug, alcohol, and cigarette use were examined; in each case, the levels were normative. The two types of Socially Withdrawn friends were involved least in delinquency and addictive behavior and gambling.

*Peer-reported competence.* When the peer-judgments of academic competence were examined, the adolescents without friends were perceived to be just as competent as the Antisocial adolescents, but less competent than all types of friends in Prosocial or Socially Withdrawn friendships. In line with expectations on academic competence, Bullying Antisocial adolescents were perceived by their classmates to show the lowest level of academic competence. Further analysis of the interaction between type of friend and gender for academic competence showed boys without friends to be perceived as less competent than girls without friends while girls and boys for the other types of friends did not differ from one another.

Examination of peer-reported social competence revealed that adolescents without friends were not perceived to differ from High Prosocial adolescents but were nevertheless the second lowest group with respect to social competence. As expected, adolescents in friendships with antisocial or prosocial characteristics showed medium to high levels of social competence. Classmates perceived Victimized Withdrawn adolescents as being the least socially competent group. Prosocial Withdrawn and Antisocial adolescents were relatively more socially competent and the Bullying Antisocial and Less Prosocial adolescents were perceived to be the most socially competent.

The scores for emotional competence more or less mirrored the results for social competence, with the Victimized Withdrawn judged to be the most anxious followed by adolescents without friends together with the Prosocial Withdrawn adolescents. The High Prosocial and Antisocial adolescents were perceived to be the most emotionally competent. Bullying Antisocial adolescents were perceived to be less emotionally competent than the High Prosocial and Antisocial adolescents, but did not differ from the grand mean. These results confirm our expectation that those without friends need not be less adjusted when compared with the different types of friends in different types of friendships. The self and peer-reported psychosocial adjustment of the six types of friends was also found to differ substantially.

*Sociometric status of different types of friends.* The sociometric status of the six types of friends and those without friends was determined using CFA (see Table 6). For the preadolescents and adolescents without friends, the Rejected and Neglected statuses were found to be Types and the Popular status was found to be an Antitype. Moreover, for those preadolescents without friends, the Average status constituted an Antitype.<sup>2</sup> Examination of the Types and Antitypes shows that not only participants without classroom friends have a Rejected status more often than expected by chance. Indeed, both the Victimized Withdrawn

TABLE 6  
Sociometric Status of Different Types of Friends and Pre-adolescents and Adolescents Without Friends (Frequencies of Nomination and Percentages)

	Socially Withdrawn Friendship						Prosocial Friendship			Antisocial Friendship			Total
	W		w		P		p		A		a		
Popular	Preadolescents	5 (2.0)	29 (15.2)	<b>111 (32.7)</b>	16 (6.9)	14 (7.9)	<b>56 (19.9)</b>	15 (2.6)	246 (12.0)				
	Adolescents	6 (1.7)	40 (10.8)	<b>110 (22.6)</b>	21 (8.6)	42 (8.7)	36 (14.1)	15 (2.4)	270 (9.6)				
Average	Preadolescents	169 (67.3)	142 (74.3)	<b>212 (62.5)</b>	<b>197 (84.5)</b>	83 (46.6)	173 (61.3)	310 (53.2)	1,286 (62.5)				
	Adolescents	243 (66.9)	276 (74.4)	333 (68.4)	<b>195 (80.2)</b>	280 (57.7)	192 (75.3)	363 (58.5)	1,882 (66.6)				
Neglected	Preadolescents	11 (4.4)	6 (3.1)	4 (1.2)	13 (5.6)	8 (4.5)	6 (2.1)	68 (11.7)	116 (5.6)				
	Adolescents	18 (5.0)	11 (3.0)	12 (2.5)	11 (4.5)	7 (1.4)	10 (3.9)	66 (10.6)	135 (4.8)				
Controversial	Preadolescents	9 (3.6)	7 (3.7)	9 (2.7)	3 (1.3)	22 (12.4)	22 (7.8)	17 (2.9)	89 (4.3)				
	Adolescents	11 (3.0)	20 (5.4)	26 (5.3)	8 (3.3)	78 (16.1)	8 (3.1)	23 (3.7)	174 (6.2)				
Rejected	Preadolescents	57 (22.7)	7 (3.7)	3 (0.9)	4 (1.7)	51 (28.7)	25 (8.9)	173 (29.7)	320 (15.6)				
	Adolescents	85 (23.4)	24 (6.5)	6 (1.2)	8 (3.3)	78 (16.1)	9 (3.5)	153 (24.7)	363 (12.9)				
Total	Preadolescents	251 (100)	191 (100)	233 (100)	339 (100)	178 (100)	282 (100)	583 (100)	2,057 (100)				
	Adolescents	363 (100)	371 (100)	487 (100)	243 (100)	485 (100)	255 (100)	620 (100)	2,824 (100)				

Note. Types ( $p < .005$ ) are indicated in bold and Antitypes ( $p < .005$ ) are underlined. W, victimized withdrawn; w, prosocial withdrawn; P, high prosocial; p, less prosocial; A, bullying antisocial; a, antisocial.

preadolescents and adolescents and the Bullying Antisocial preadolescents were found to have a Rejected status more often than expected by chance as well.

In contrast to the Victimized Withdrawn friends, the Rejected status constituted an Antitype for the Prosocial Withdrawn friends. This discrepancy reflects the difference in how the two individuals in a Socially Withdrawn friendship may be perceived by their peers. The Rejected status was also an Antitype for those in Prosocial friendships. For both the Less Prosocial preadolescents and adolescents and the High Prosocial preadolescents, the Average sociometric status was a Type, which shows a prosocial profile to be perceived as common for both age groups. High Prosocial friends were more often than expected by chance Popular in school classes. Bullying Antisocial friends were found more often than expected by chance to have a Controversial status or a Rejected status in school classes.<sup>2</sup> For the Antisocial friends, however, the Rejected status constituted an Antitype and the for Antisocial preadolescents the Popular status constituted a Type.<sup>2</sup> This finding with regard to Antisocial friends may be due to relatively higher levels of prosocial behavior and lower levels of bullying behavior they display in their interactions with peers. The finding also emphasizes the variability in the peer perceptions of the two types of friends within an Antisocial friendship.

## DISCUSSION

The main aim of this study was to investigate the behavioral profiles of friendship types (dyads) and types of friends (individuals) and their links to psychosocial adjustment. Prosocial, Antisocial and Socially Withdrawn types of friendships were identified separately for both preadolescents and adolescents. Thus, friendships appear to parallel the three central orientations that have been found to characterize social interactions (Bronson, 1966). Similarity of the individual behavioral profiles was observed for all three of the friendship types, but this was the major characteristic of Prosocial friendships in particular. The phenomenon "birds of a feather flock together" (Hartup, 1996) appears to hold more for Prosocial friendships than for Socially Withdrawn or Antisocial friendships. About half of the friendships in both age groups were characterized by complementarity as opposed to the similarity of the behavioral profiles of friends

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<sup>2</sup>This also holds for the adolescents without friends using the conventional significance level of .01.

within the dyad. This finding draws attention to the relative importance of complementarity as a way to compatibility in mutual friendships.

*Three types of friendships and six types of friends.* Prosocial friendship is the type of friendship described in research linking friendship with positive developmental outcomes for the individual. For both the pre-adolescents and adolescents studied here, only a minority of the Prosocial friendships consisted of a Less Prosocial friend and a High Prosocial friend; the majority of the Prosocial friendships were composed of either two High Prosocial friends or two Less Prosocial friends. Despite slight differences in their levels of prosocial behavior, both High Prosocial and Less Prosocial friends appear to form friendships on the basis of prosociality and similarity.

As prosocial behavior is an often-cited reason for being liked (Newcomb, Bukowski, & Pattee, 1993), the positive and harmonious interactions of High Prosocial friends may be well-received by classmates and thus result in high popularity at the level of the group. Less Prosocial friends, in contrast, may have less prosocial interactions with their peers and thereby lower sociometric status in the class on average. High Prosocial and Less Prosocial friends also show similarly low levels of internalizing and externalizing problem behaviors.

Antisocial friendships are marked by high levels of antisocial and bullying behavior against other peers. Although both of the friends in an Antisocial friendship tend to display antisocial behavior, they can nevertheless differ significantly in the amount of antisocial behavior that they exhibit. Bullying Antisocial friends start fights, bully others, disturb the class, are quarrelsome and are also easily irritated. They are often rejected and may also have a controversial sociometric status: some peers may applaud their "cool" deviant behaviors while others may dislike them for this reason. The Antisocial friend appears to fit the normative profile for boys in preadolescence: the Antisocial friend has both antisocial and prosocial inclinations but is not involved in bullying and is not likely to be rejected by peers. An important characteristic of Antisocial friendships is that the compatibility of the friends appears to be based on complementary dispositions. The friendship between a Bullying Antisocial and Antisocial friend, which is observed for about half of the Antisocial friendships, thus confirms our expectation that Antisocial friendships often involve bullies and reinforcers (or assistants) (Salmivalli et al., 1996).

The Victimized Withdrawn friends in our study were found to be highly withdrawn and victimized by other peers; they are rejected by their peers possibly due to a lack of high social competence and socially unacceptable,

withdrawn behavior. As expected, the majority of Socially Withdrawn friendships in preadolescence and a high percentage of the Socially Withdrawn friendships in adolescence involve the asymmetry of a Victimized Withdrawn with a Prosocial Withdrawn friend. Prosocial Withdrawn friends appear to compensate for their slight social incompetence with highly prosocial interactions. They are also prosocial enough to befriend a Victimized Withdrawn friend, who is victimized or rejected by the peer group. Prosocial Withdrawn friends are unlikely to be rejected by the peer group. In the long run, the Prosocial Withdrawn friends of Victimized Withdrawn friends can provide protection from internalizing problem behaviors and further victimization (Hodges et al., 1999).

*Psychosocial adjustment of preadolescents and adolescents without friends.* Our comparison of those preadolescents and adolescents with and without classroom friends supports Hartup's contention that "not one data set suggests that children with friends are worse off than children who do not have them" (1996, p. 4). Indeed, preadolescents without mutual friends in school classes are more depressed than those with friends in school classes. Adolescents without friends engage in more delinquency and also consume more alcohol, cigarettes, and drugs than adolescents without friends. In the eyes of their peers, adolescents without mutual friendships have more concentration problems, are less hard-working, less ambitious, less persistent, more insecure, more anxious, less self-confident, and less sociable than adolescents with mutual friendships.

Mutual friendship does not constitute the entire story when it comes to individual psychosocial adjustment, however. When types of friends are distinguished, Victimized Withdrawn and Bullying Antisocial friends are found to be just as depressed as pre-adolescents without mutual friendships. In adolescence, Antisocial friends report involvement in acts of delinquency just as frequently as adolescents without friends do. High Prosocial and Antisocial adolescent friends report smoking and gambling just as much as adolescents without friends and also consume just as much alcohol and drugs. If a small amount of delinquency and alcohol, cigarette and drug consumption are viewed as the norm in adolescence (Shedler & Block, 1990), the behavior of adolescents without friends does not differ from these norms. In fact, Bullying Antisocial adolescents appear to be more at risk than adolescents without mutual friendships in school classes as they report the highest levels of delinquency and addictive behaviors.

Adolescents without friends are also perceived to be just as attentive and achievement oriented as Antisocial friends, just as sociable and self-confident as High Prosocial friends, and equally emotional and nervous as Prosocial Withdrawn friends. Viewed from the perspective of the peer

group, thus, it cannot be concluded that adolescents without friends lack certain skills and are thereby prevented from engagement in successful dyadic interactions. Adolescents without friends seem to be perceived as socially competent as some of their peers with mutual friendships and they are not perceived as too nervous, too lazy, too unsuccessful or too antisocial. So how can we explain their lack of mutual friendship?

One possible explanation for the failure of certain pre-adolescents and adolescents to have mutual friendships may lie in the specific combination of personality and behavioral characteristics that they display in their interactions. Bullying Antisocial friends are antisocial and bullying but not socially withdrawn; in fact, they are socially active, self-confident, assertive, and outgoing. Victimized Withdrawn friends are victimized, very socially withdrawn, and nervous but not antisocial; in fact they may be very hard working. Preadolescents and adolescents without mutual friendships, in contrast, are not highly prosocial, not highly self-confident, not particularly sociable, not particularly hard working, and may be delinquent and antisocial. That is, they do not have the social skills needed to compensate for their tendency to withdraw or be antisocial.

Research has shown mutual friendship and peer popularity to be very different constructs and thus be influenced by different individual characteristics and behavior (Bukowski, Hoza, & Boivin, 1993). Friendships evolve from repeated interactions with certain individuals while popularity is influenced by interactions with the peer group. Preadolescents and adolescents without friends are more likely to be rejected or neglected by the peer group while those with friends are more likely to be accepted or popular. While Bullying Antisocial friends and Victimized Withdrawn friends are likely to be rejected by the peer group, they nevertheless have mutual friendships. Thus, success in dyadic relationships can have components that are independent from success in the peer group.

*Age and gender.* Several conclusions can be drawn with regard to the role of age and gender in friendships of preadolescents and adolescents. Firstly, mixed-sex friendships were found to be rather rare for both the preadolescents and adolescents in the present study, which confirms the similarity in gender for mutual friendships as found in other research (Aboud & Mendelson, 1996). In the light of the well-known gender differences in prosocial and antisocial behavior (Maccoby, 1986), it is not surprising that Prosocial friendships tend to be common among girls and Antisocial friendships tend to be common among boys. However, our study did not investigate relational forms of aggression, but rather focused on overt aggressive and antisocial behavior. Relational aggression has been reported to be more common among girls and also to be relevant

for typifying girls' friendships (Grottpeter & Crick, 1996). Future research should also investigate social and relational aggressive behavior, which may more often characterize friendships among girls.

Socially Withdrawn friendships were found to be typical for girls and rare for boys in preadolescence while the difference disappeared in adolescence. Research shows peer-perception of withdrawal to show age-related changes in that preadolescents categorize withdrawn behavior as less acceptable than adolescents (Younger, Schwartzman, & Ledingham, 1985). Withdrawn behavior may also be considered more deviant and less acceptable for boys than for girls in preadolescence, with a reduced likelihood of boys having Socially Withdrawn friendships in preadolescence as a result.

A higher level of antisocial behavior among boys than girls is considered the norm (Maccoby, 1986), and this norm is reflected in the present study in a relatively greater incidence of boy-boy Antisocial friendships. In preadolescence, Antisocial friendships often involve Antisocial friends displaying a combination of prosocial and antisocial behaviors. A substantial percentage (37%) of the Antisocial friendships in pre-adolescence in the present study involved two Antisocial friends. This combination was more exceptional in adolescence (8%) when the combination of two Bullying Antisocial friends became more common (39%). Although the results of the present cross-sectional study do not allow firm conclusions with regard to developmental change, the results are in accordance with other research showing increased assimilation of less antisocial members of a dyad by their more antisocial buddies as a result of peer deviancy training (Coie & Miller-Johnson, 2001). Along these lines, the percentage of Bullying Antisocial friends was also found to increase considerably in the present study from 38.7% in preadolescence to 65.5% in adolescence.

*Limitations and future directions.* In the present study, numerous friendship dyads were eliminated in order to preserve the independence of the sampling units. However, this procedure meant that the additional, multiple friendships of individuals were not considered. As individuals tend to engage in friendships of the same type (i.e., Prosocial, Antisocial, or Socially Withdrawn) and thus play repeatedly the same role (i.e., being a certain type of friend), it is likely that these friendships and friend roles may lead to differing developmental outcomes. That is, the typical members of the three types of friendships—that is, High Prosocial, Victimized Withdrawn, and Bullying Antisocial friends—may play the same role in multiple friendships. In contrast, the pre-adolescents and adolescents with a less prototypical role in the different types of friendships—that is, Less Prosocial, Prosocial Withdrawn, and

Antisocial friends—may more easily play another less prototypical role in a different friendship. Van Lieshout, Verhoeven, Güroğlu, Haselager, and Scholte (2004) have recently shown the psychosocial adjustment of preadolescents and adolescents with different relationship networks (i.e., patterns of mutual friendships and/or antipathies) at school to clearly differ. Nevertheless, the differentiation of the types of friendships and friends occurring in these networks may provide an even more refined picture of the link between friendship and adjustment.

The cross-sectional design of the present study deserves further attention with respect to the limitations it presents in terms of understanding friendship formation processes based on similarity versus complementarity. Although peers with similar behavioral profiles may be attracted to one another and form friendships characterized by *similarity*, they might also become similar as a result of mutual socialization. Conversely, friends with *complementary* friendships might in time become even more discrepant due to the compensation of particular behavioral aspects by their friend. Examination of such relevant processes requires longitudinal research designs.

The results of the present research suggest that simple comparison of individuals on the basis of having or not having mutual friendships may produce misleading conclusions. Considerable caution should be exercised with making broad developmental judgments with regard to heterogeneous groups of individuals. Clear differentiation of different types of friendships and—going even one step further—differentiation of the two individuals forming such friendships is needed to provide a finer-grained picture of the individual differences in friendship and thereby bring us closer to a general concept of “friendship.” Individual differences are lost when pre-adolescents and adolescents are simply subsumed under the umbrella of “having a friend or not.” That is, comparison of individuals without friends with a very heterogeneous sample of individuals with friends may lead us to conclude that the former are not very well adjusted while this is not consistently the case. In future research, the types of friendships and types of friends identified here should be investigated to determine if they exist in different age groups, in different contexts, and particularly outside the school class.

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