

## Friends' Influence on Adolescents' Adjustment to School

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BERNDT, THOMAS J., and KEEFE, KEUNHO. *Friends' Influence on Adolescents' Adjustment to School*. CHILD DEVELOPMENT, 1995, 66, 1312-1329. Adolescents may be influenced both by their friends' behaviors and by the features of their friendships. To examine both types of influence, seventh and eighth graders ( $N = 297$ ) were asked in the fall of a school year to report their involvement and disruption at school. The students also described the positive and negative features of their best friendships. Teachers reported on the students' involvement, disruption, and grades. These assessments were repeated in the following spring. Students whose friends in the fall described themselves as more disruptive increased in self-reported disruption during the year. Girls' self-reported disruption was more influenced by that of their very best friend than was boys'. Students whose very best friendships had more positive features increased in their self-reported involvement during the year. Students whose friendships had more negative features increased in their self-reported disruption, but only if their friendships also had many positive features. The theoretical and practical implications of these findings, and the adequacy of different methods for estimating friends' influence, were discussed.

Friends can have an important influence on the behavior and development of adolescents (Savin-Williams & Berndt, 1990; Youniss, 1980). Scholars differ, however, in how they describe this influence. One theoretical perspective emphasizes the influence of a friend's attitudes, behaviors, or other characteristics. For example, adolescents may be influenced by drug-using friends so they start using drugs themselves (Kandel & Andrews, 1987). Another theoretical perspective emphasizes the influence of friendships with certain features. For example, Sullivan (1953) proposed that intimacy in friendships enhances adolescents' self-esteem and social understanding. These two perspectives have usually been examined separately. One aim of our study was to understand friends' influence more fully by examining the two perspectives simultaneously.

Most previous studies of friends' influence had correlational designs. That is, adolescents' characteristics were assessed at the same time as their friends' characteristics or the features of their friendships. Yet saying that friends influence each other is equivalent to saying that they cause changes in one

another's attitudes or behavior. Neither the changes themselves, nor their causes, can be directly assessed with a correlational design. To assess influence more directly, our study had a short-term longitudinal design. We assessed the characteristics of adolescents' friends and the features of their friendships during the fall of a school year. We then related these characteristics and features to the changes in adolescents' adjustment to school between the fall and the spring.

School adjustment is a broad construct with multiple facets. Our study focused on three facets that have been emphasized in previous research: positive involvement in classroom activities (Berndt & Miller, 1990; Wentzel, 1993); appropriate classroom behavior, and particularly the absence of disruptive behavior (Dubow, Tisak, Causey, Hryshko, & Reid, 1991; Wentzel, 1993); and academic achievement judged from report-card grades. The major issues concerning friends' influence on these aspects of school adjustment are different for the two theoretical perspectives. We first consider issues regarding the influence of friends' characteristics.

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### *Determining the Influence of Friends' Characteristics*

Social influence among friends is a mutual process: Adolescents influence their friends while being influenced by them (Savin-Williams & Berndt, 1990). The usual result of this process is that adolescents' characteristics become more similar to those of their friends. Because of the link between similarity and influence, correlations between adolescents' characteristics and their friends' characteristics have often been used to estimate friends' influence on each other. Such similarity correlations are the primary basis for conclusions that friends strongly influence adolescents' drug use, academic achievement, and other behaviors (Botvin, Baker, Goldberg, Dusenbury, & Botvin, 1992; Iannotti & Bush, 1992; Ide, Parkerson, Haertel, & Walberg, 1981).

Some researchers have questioned these conclusions, pointing out that adolescents often select friends whose characteristics are already similar to theirs (Epstein & Karweit, 1983; Jussim & Osgood, 1989; Kandel, 1978). Because similarity correlations reflect both selection and influence, they can lead to overestimates of friends' influence. To obtain more valid estimates, a few researchers have used longitudinal designs. With hierarchical regression analyses, these researchers have examined whether measures of friends' characteristics at one time predict changes over time in adolescents' characteristics (e.g., Graham, Marks, & Hansen, 1991).

Data from these studies suggest that similarity correlations exaggerate friends' influence on adolescents. The regression analyses in several longitudinal studies implied that friends' influence on adolescents' drug use and attitudes toward delinquency is nonsignificant or weak (Fisher & Bauman, 1988; Graham et al., 1991; Jussim & Osgood, 1989; Kandel & Andrews, 1987). If similar results were obtained for other attitudes and behaviors, popular beliefs about the impact of peers on adolescents' behavior would require substantial revision.

The first goal of our study was to see how much adolescents' friends influence the changes during a school year in their adjustment to school. We expected similarity correlations to suggest greater influence of friends than regression analyses. Nevertheless, we expected regression analyses to show that changes in adolescents' adjustment could be predicted from earlier mea-

sures of their friends' adjustment. Because friends often interact at school, they have many opportunities to influence one another's attitudes and behaviors.

The second goal of our study was to compare the estimates of friends' influence obtained with two procedures for measuring friends' characteristics. Adolescents have often been asked to report on their friends' behavior. For example, they have been asked to say how many of their friends smoke cigarettes (Chassin, Presson, Sherman, Montello, & McGrew, 1986). Less often, friends' characteristics have been assessed directly, from their self-reports (Davies & Kandel, 1981). Adolescents' reports on friends would yield the same results as the friends' self-reports if adolescents accurately reported their friends' behavior, but the accuracy of these reports typically is low. Adolescents often project their own characteristics onto friends, assuming that their friends' behavior matches their own even when it does not (Wilcox & Udry, 1986).

How much these errors of projection affect estimates of friends' influence is uncertain. The issue is important because asking adolescents to report their friends' behavior is much simpler for researchers than is obtaining the self-reports of those friends. In one longitudinal study (Bauman & Fisher, 1986), comparable estimates of friends' influence were obtained from adolescents' reports on friends and from the friends' self-reports. In more recent studies, however, adolescents' reports on friends suggested greater influence of friends than did the friends' self-reports (Fisher & Bauman, 1988; Jussim & Osgood, 1989). Given the recent data, we expected adolescents' reports on friends to yield inflated estimates of friends' influence.

The third goal of our study was to see whether friends' influence differs for the two sexes. In a few studies of drug use and sexual behavior in adolescence, girls seemed more influenced by friends than boys did (Billy & Udry, 1985; Davies & Kandel, 1981; Downs, 1985). In other studies, no sex differences were found (Chassin et al., 1986; Graham et al., 1991; Keefe, 1994). Because we assessed several facets of school adjustment, we could evaluate the consistency of sex differences in friends' influence.

### *Friendship Features and Their Effects*

The theoretical perspective that emphasizes the effects of friendship features is linked historically to Sullivan's (1953) hy-

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pothesis that intimate friendships have positive effects on adolescents' psychological development (Youniss, 1980). This perspective is also linked to hypotheses that relationships high in intimacy and emotional support have positive effects on psychological adjustment and coping with stress (Berndt, 1989; Sarason, Sarason, & Pierce, 1990).

Evidence consistent with these hypotheses has been obtained in correlational studies. Adolescents who describe their friendships more positively have higher self-esteem and less often suffer from emotional disorders (Barrera, Chassin, & Rogosch, 1993; Buhrmester, 1990; Bukowski & Hoza, 1989; Feldman, Rubenstein, & Rubin, 1988; Goodyear, Wright, & Altham, 1989). These adolescents also are better behaved at school and higher in academic achievement than adolescents with poorer friendships (Cauce, 1986; Dubow & Tisak, 1989; Kurdek & Sinclair, 1988; Rowlison & Felner, 1988).

By contrast, researchers who have used longitudinal designs to test hypotheses about the benefits of friendships have rarely found significant results. In one study (Vernberg, Abwender, Ewell, & Beery, 1992), the intimacy and companionship of adolescents' best friendships did not consistently predict the changes during a school year in their social anxiety. In other studies, various positive features of adolescents' friendships did not predict the changes over time in their self-esteem, depression, drug use, and academic achievement (DuBois, Felner, Brand, Adan, & Evans, 1992; Vernberg, 1990; Windle, 1992). One possible reason for the non-significant results is that adolescents were usually asked general questions about the features of all their friendships. To obtain more accurate measures, adolescents in our study were asked about the features of specific friendships. The fourth goal of our study was to use these measures to test the hypothesis that friendships with positive features increase adolescents' enjoyment of school and, therefore, improve their adjustment.

Adolescents' adjustment to school may also be affected by negative interactions with friends. Adults sometimes report that their most supportive relationships are also sources of social stress. Moreover, adults seem more strongly affected by the negative features of their relationships than by their positive features (Pagel, Erdly, & Becker, 1987; Schuster, Kessler, & Aseltine, 1990;

Vinokur & van Ryn, 1993). Although a few researchers have studied conflicts in adolescents' friendship (Laursen & Collins, 1994), the correlates of negative friendship features have rarely been investigated. The final goal of our study was to test the hypothesis that friendships with many negative features contribute to a negative interactional style and thus increase adolescents' disruptive behavior.

#### *Summary*

Viewed most broadly, our study had two purposes that relate to the two perspectives on friends' influence. The first purpose was to see how much friends' adjustment to school influences adolescents' adjustment. We assumed that similarity correlations would suggest greater friends' influence than regression analyses, but that both would suggest friends influence adolescents' adjustment. We expected measures derived from adolescents' reports on friends to suggest greater friends' influence than measures derived from the friends' self-reports. We also wanted to see if friends' influence differed for the two sexes.

The second purpose of our study was to see how the features of students' friendships affect their school adjustment. We assumed that friendships with many positive features would enhance adolescents' adjustment. We assumed that friendships with many negative features would increase adolescents' disruptive behavior.

Linked to both theoretical perspectives was one final issue of measurement. When assessing the influence of friends' characteristics, some researchers have focused on one friend of each adolescent (Jussim & Osgood, 1989), while others have focused on multiple friends (Ennett & Bauman, 1991). When studying friendship features, some researchers have assessed an adolescent's very best friendship (McGuire & Weisz, 1982), while others have assessed multiple friendships (DuBois et al., 1992). Because we obtained independent information about several friendships, we could compare the effects of a very best friendship with those of multiple friendships. We expected stronger effects for measures of multiple friendships because they more fully assess the sources of influence on adolescents.

#### **Method**

##### *Subjects*

All seventh and eighth graders in three public schools were invited to participate in

the study, and more than 60% agreed to do so and received parental consent. The original sample included 305 students, but eight students moved to other schools during the year and so were not part of the longitudinal sample. The final sample of 297 students included 194 girls and 103 boys. There were more girls than boys because more than half the students in these grades were girls and a higher proportion of girls than boys returned consent forms. The possible effect of this difference on the findings is discussed later.

When the study began, the students' mean age was 13 years 8 months. More than 95% of them were white, and most of the others were black. The proportion of white students in the sample was comparable to that in their schools. The three schools drew students from small towns, suburbs, and rural areas. School principals reported that the students' families varied in socioeconomic status, but most students were from working-class or middle-class families.

#### *Procedure*

During November or December, small groups of students completed questionnaires that asked about their behavior in school, their best friends' behavior, and the features of their best friendships. Completion of the questionnaires took about 40 min. Students completed the same questionnaires again in the following April or May. Thus, about 5 months separated the two waves of data collection.

*Assessment of involvement and disruption.*—On the first part of the questionnaire, students reported their involvement in class and their disruptive behavior at school. Involvement was assessed with six items from the scale of Berndt and Miller (1990). For example, students were asked, "How often do you take part in class discussions?" Students responded on a five-point scale with the extremes labeled *never* and *very often*. Disruption was assessed with six items adapted from the Devereux Elementary School Behavior Rating Scale (Spivack & Swift, 1966). For example, students were asked, "How often do you misbehave in class?" They responded to each item on a five-point scale.

*Students' reports on friends and perceptions of friends' behavior.*—Then students were asked to write the names of their three best friends, in order. Students were told that they could name fewer than three best friends if they had fewer than three. They were told that they could write "none"

if there was no one whom they considered a best or close friend. About 91% of the students named three friends in both the fall and the spring. About 8% named only two friends; about 1% named only one or no friends.

Next, students reported on their friends' involvement and disruption using items like those for their self-reports. For example, the self-report item on class discussions was changed to "How often does this friend take part in class discussions?" Students responded on the five-point scale they had used for self-reports, but they were also allowed to answer "don't know." In the fall and the spring, about 1% of the students answered "don't know" to all questions about their friends' involvement and disruption. The data for these students' reports on friends were treated as missing.

*Assessment of friendship features.*—Then students answered a series of questions adapted from Berndt and Perry (1986) about the features of their best friendships. Students answered 20 questions about each friendship they had identified. Twelve questions dealt with three positive features of friendship: intimate self-disclosure (e.g., "How often do you tell this friend things about yourself that you wouldn't tell most kids?"), prosocial behavior (e.g., "How often does this friend help you when you can't do something by yourself?"), and self-esteem support (e.g., "When you do a good job on something, how often does this friend praise or congratulate you?"). Eight questions dealt with two negative features of friendship: conflicts (e.g., "How often do you get into arguments with this friend?") and rivalry (e.g., "How often does this friend show off or brag about doing something better than you?"). As the examples suggest, all questions asked about the frequency of interactions that illustrate particular features of friendship. Students responded on a five-point scale with the extremes labeled as *never* and as *very often* or *every day*.

*Teachers' reports on students' behavior and achievement.*—During the period of questionnaire administration in each school, the students' English and math teachers rated their involvement and disruption on items comparable to those for students' self-reports. For example, one item for involvement was, "How often does this student take part in class discussions?" The teachers also reported the grades that the students received in their subjects on the most recent report cards.

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### *Data Reduction and Derivation of Measures*

*Students' adjustment to school.*—Final measures of students' self-reported involvement and disruption were derived by averaging the scores on the six items for each measure. In the fall, the internal consistency of these measures, judged by coefficient alpha, was .65 for involvement and .85 for disruption. The correlation between the two measures was  $-.49, p < .001$ . The alpha coefficients and the correlation between measures were similar in the spring, both for these measures and for other measures. Therefore, only the values for the fall measures are given in this section.

Final measures of teacher-rated involvement and disruption were derived by averaging the ratings of both teachers on the relevant items. These measures had alpha coefficients of .89 for involvement and .94 for disruption. The correlations between the two teachers' ratings were .57 for involvement and .53 for disruption ( $ps < .001$ ). Students' grades for English and math were scored on a 0–12 scale with 0 = F and 12 = A+. The grades that students received in English and math correlated .51 ( $p < .001$ ), so the final measure of report-card grades was created by averaging across these subjects.

Self-reported and teacher-rated involvement were correlated ( $r = .38, p < .001$ ), as were self-reported and teacher-rated disruption ( $r = .48, p < .001$ ). Students with higher grades reported more involvement and less disruption ( $rs = .29$  and  $-.34$ , respectively,  $ps < .001$ ) and were rated by teachers as more involved and less disruptive ( $rs = .67$  and  $-.46$ , respectively,  $ps < .001$ ). These correlations indicate the validity of the measures and suggest that they assessed related aspects of school adjustment.

*Students' perceptions of their friends' adjustment to school.*—Students' responses to the items about the involvement and disruption of their first-named or very best friend were averaged. The alpha coefficients for the resulting measures of the very best friend's involvement and disruption were .77 and .86, respectively.

Next, students' responses to the items about the involvement and disruption of all their friends were averaged. The resulting measures are comparable to measures of multiple friends' characteristics used in previous research (e.g., Chassin et al., 1986), but they have the advantage of being based on

independent reports about each friend's behavior. The alpha coefficients for the measures of multiple-friends' involvement and disruption were .81 and .90, respectively. These values are higher than those for the very-best-friend measures for two reasons: (a) the multiple-friends' measures are based on more items and (b) adolescents perceived their friends as similar in their school adjustment.

*Friends' actual adjustment to school.*—The actual adjustment of adolescents' friends was judged from their self-reports and their teachers' reports on them. In our study, about two-thirds (63%) of the peers whom students named as their very best or second-best friends were also participating in the study. More than half (54%) of the friends they named third were participating. The measures of these friends' school adjustment were matched to those of the students who named them. In the fall, 90% of the students were matched to one or more friends. The comparable figure for the spring was 88%. Other analyses showed that the school adjustment of students who did and did not have friends in the study did not differ significantly. Therefore, data reported later on friends' similarity in school adjustment can be taken as representative of the entire sample.

*Friendship features.*—Mean scores were calculated for the five features of each student's very best friendship by averaging the student's ratings on the relevant items. A principal-components analysis of the five mean scores yielded two factors with eigenvalues greater than 1.0. The first factor accounted for 51% of the variance. After VARIMAX rotation, this factor had very high loadings (.87–.91) for intimate self-disclosure, prosocial behavior, and self-esteem support. A measure including the 12 items for these features was very high in internal consistency (alpha = .92). The high internal consistency strongly suggests that adolescents' reports about the positive features of their best friendships form a unidimensional scale. Previous research has also suggested that children's and adults' reports about various positive features of close relationships can be combined into one scale with little loss of information (Furman & Buhrmester, 1992; Sarason et al., 1990).

The second factor accounted for 29% of the variance. After VARIMAX rotation, it had very high loadings (.88–.90) for the two negative features, conflicts and rivalry. A

measure including the eight items for these features was high in internal consistency ( $\alpha = .80$ ). This value is lower than for the measure of positive features, but there were fewer items about negative features than about positive features.

Then students' reports about all their best friendships were examined. Mean scores for the five features of multiple friendships were created by averaging the scores on each feature for all the best friendships that students described. A factor analysis of these scores revealed the same pattern of loadings as for the very best friendship. Therefore, a measure of the positive features of multiple friendships was created from the 36 items for the positive features of the three friendships that most students described. The alpha coefficient for this measure was .96. Coefficient alpha for the comparable measure created from the 24 items for the negative features of multiple friendships was .88. These values exceed those for the very-best-relationship measures, which suggests that using additional items to assess multiple friendships increases reliability. High internal consistency also implies that students perceive their best friendships as similar in their positive and negative features.

The correlation between the measures of the positive and negative features of students' very best friendships was  $-.17$ . For the measures of multiple friendships, the comparable correlation was  $-.15$ . These correlations are significant ( $ps < .01$ ) with our large sample, but they show that the two measures share little variance.

**Friendship stability.**—The friends that students named in the fall were compared with those they named in the spring. A friendship was judged as stable if a fall friend was named among a student's three best friends in the spring. To assess the stability of multiple friendships, the proportion of a student's fall friendships that remained stable until the spring was calculated.

## Results

We labeled the friend that students named first as their very best friend because we assumed that students had an especially close relationship with that friend. Our first analyses tested this assumption. The next analyses examined the influence of the friends' adjustment to school on students' adjustment. The following analyses exam-

ined the effects of friendship features on students' adjustment.

### *Very Best Friendships versus Other Friendships*

To see how students' friendships with the friend they named first differed from their other friendships, the mean scores for the positive features of students' very best, second, and third friendships were used as the dependent variables in an analysis of variance. Sex and grade were between-subjects factors; time and nomination order (i.e., named as first, second, or third friend) were within-subject factors.

As expected, the effect of nomination order was significant,  $F(2, 498) = 124.42, p < .001$ . Table 1 shows the mean scores for the very best, second, and third friendship, averaged across both times. Post hoc tests showed that students viewed their very best friendship more positively than their second friendship, and their second friendship more positively than their third friendship ( $ps < .05$ ). There were also effects of sex,  $F(1, 249) = 54.24, p < .001$ ; and time,  $F(1, 249) = 12.98, p < .001$ . As in most previous studies (Furman & Buhrmester, 1992), girls viewed their friendships more positively than did boys ( $Ms = 3.80$  and  $3.20$ ,  $SDs = .63$  and  $.75$ , respectively). Students also viewed their friendships more positively in the spring than in the fall ( $Ms = 3.67$  and  $3.53$ ,  $SDs = .75$  and  $.74$ , respectively).

Mean scores for the negative features of very best, second, and third friendships were the dependent variables in a second analysis. Only the effect of nomination order was significant,  $F(2, 498) = 5.46, p < .01$ . Mean scores averaged across time, shown in Table 1, indicate that students viewed their very best friendship as having fewer negative features than their second and third friendships. The second and third friendships did not differ significantly.

The stability of students' friendships varied only with nomination order,  $F(2, 532) = 27.66, p < .001$  (see Table 1). Very best friendships were more stable than second friendships, and second friendships were more stable than third friendships. Taken together, these results indicate that the friends whom students named first were their very best friends.

### *Influences of the Friends' Adjustment to School*

**Perceived similarity, accuracy of students' reports, and actual similarity.**—As

TABLE 1  
MEAN SCORES FOR MEASURES OF VERY BEST, SECOND,  
AND THIRD FRIENDSHIPS

| Measure            | Very Best Friendship | Second Friendship | Third Friendship |
|--------------------|----------------------|-------------------|------------------|
| Positive features: |                      |                   |                  |
| M .....            | 3.92                 | 3.49              | 3.39             |
| SD .....           | .73                  | .77               | .78              |
| Negative features: |                      |                   |                  |
| M .....            | 1.71                 | 1.79              | 1.81             |
| SD .....           | .45                  | .54               | .57              |
| Stability:         |                      |                   |                  |
| M .....            | .63                  | .46               | .32              |
| SD .....           | .49                  | .50               | .47              |

NOTE.—The mean scores for positive and negative features are the averages of those obtained in the fall and spring assessments.

noted earlier, many researchers have used data on friends' similarity to estimate their influence on each other. In addition, many researchers have used adolescents' reports on friends as measures of the friends' actual characteristics, on the assumption that adolescents provide accurate reports on their friends. Our study provided evidence on the appropriateness of these methods.

The correlations in our sample between students' self-reports and their reports on friends indicate their perceptions of their similarity to friends. The correlations between students' reports on friends and the friends' self-reports indicate the accuracy of students' perceptions. Friends' actual similarity is indicated by two sets of correlations. For the first set, students' self-reports of their involvement and disruption are correlated with the corresponding self-reports by their friends. For the second set, teachers' ratings of the students' involvement and disruption are correlated with teachers' ratings of the friends' involvement and disruption. The second set also includes the correlations between teachers' reports of students' grades and of their friends' grades.

Table 2 shows the correlations for perceived similarity, accuracy, and actual similarity for boys and girls separately, because several differed significantly by sex. Every correlation for perceived similarity was significant and many were strong. In other words, students viewed their involvement and disruption as highly similar to those of their best friends. The correlations for the multiple-friends' measures were always stronger than the comparable correlations for the very-best-friend measures. The one

correlation that differed significantly by sex was for multiple-friends' disruption in the spring. Girls perceived themselves as more similar to their friends in disruptive behavior than boys did.

The accuracy of students' reports on their friends' involvement and disruption was relatively low (see Table 2). Of the 16 accuracy correlations, 15 were lower than the corresponding correlations for perceived similarity. Most striking, all the accuracy correlations for boys' reports on their friends' disruption were nonsignificant. Every nonsignificant correlation for boys' accuracy was significantly lower than the comparable correlation for girls, except for the fall measure of the very best friend's disruption. Apparently, boys knew less about their friends' behavior at school than girls did. Boys in a previous study also knew less about their best friends than girls did (Diaz & Berndt, 1982).

As expected, each of the 16 correlations for friends' actual similarity was lower than the corresponding correlation for perceived similarity (see Table 2). That is, students perceived themselves as more similar to their friends than they actually were. Even so, most of the actual-similarity correlations were significant and a few were strong (i.e., greater than .50). Of the 20 correlations for similarity to multiple friends, 15 were greater than the corresponding correlations for similarity to the very best friend. In addition, 13 of the 16 correlations for friends' actual similarity in teacher-rated involvement and disruption were greater than the corresponding correlations for similarity in self-reported involvement and disruption. Thus

TABLE 2

CORRELATIONS FOR PERCEIVED SIMILARITY, ACCURACY OF STUDENTS' REPORTS ON FRIENDS, AND ACTUAL SIMILARITY OF FRIENDS

| MEASURE                       | VERY BEST FRIEND |        |        |        | MULTIPLE FRIENDS |        |        |        |
|-------------------------------|------------------|--------|--------|--------|------------------|--------|--------|--------|
|                               | Girls            |        | Boys   |        | Girls            |        | Boys   |        |
|                               | Fall             | Spring | Fall   | Spring | Fall             | Spring | Fall   | Spring |
| Perceived similarity:         |                  |        |        |        |                  |        |        |        |
| Involvement .....             | .38***           | .50*** | .34*** | .41*** | .51***           | .57*** | .41*** | .58*** |
| Disruption .....              | .52***           | .60*** | .38*** | .44*** | .57***           | .72*** | .49*** | .52*** |
| Accuracy of students' reports |                  |        |        |        |                  |        |        |        |
| on friends:                   |                  |        |        |        |                  |        |        |        |
| Involvement .....             | .23**            | .29*** | .35*   | .31*   | .23***           | .33*** | .13    | .16    |
| Disruption .....              | .43***           | .59*** | .26    | .14    | .34***           | .54*** | .05    | .17    |
| Actual similarity:            |                  |        |        |        |                  |        |        |        |
| Involvement:                  |                  |        |        |        |                  |        |        |        |
| Self-reports .....            | .10              | .28*** | .13    | -.11   | .17*             | .27*** | -.01   | .15    |
| Teacher ratings .....         | .44***           | .52*** | .13    | .40**  | .53***           | .61*** | .20    | .47*** |
| Disruption:                   |                  |        |        |        |                  |        |        |        |
| Self-reports .....            | .23**            | .49*** | -.18   | -.13   | .33***           | .50*** | -.12   | .11    |
| Teacher ratings .....         | .44***           | .40*** | .44**  | .50*** | .42***           | .50*** | .37*** | .36**  |
| Grades .....                  | .42***           | .39*** | .44**  | .21    | .47***           | .47*** | .47*** | .42*** |

NOTE.—For the perceived-similarity correlations,  $N = 184-194$  for girls and  $97-103$  for boys. For the accuracy and actual-similarity correlations,  $N = 134-141$  for girls and  $47-51$  for boys with the very best friends;  $Ns = 180-188$  for girls and  $78-82$  for boys with multiple friends.

\*  $p < .05$ .

\*\*  $p < .01$ .

\*\*\*  $p < .001$ .



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teachers viewed best friends as more similar in their behavior than the friends' self-reports would imply.

The correlations for boys' actual similarity to friends were significantly lower than those for girls in seven cases. Boys were less similar to their very best friends and to multiple friends in teacher-rated involvement in the fall, and in self-reported disruption at both times, than girls were. Boys were less similar to their very best friends in self-reported involvement in the spring than girls were.

*Relations of friends' adjustment to the changes in students' adjustment.*—Similarity correlations are fallible indices of friends' influence because of the confounding effects of friendship selection that were mentioned earlier. Like previous researchers (e.g., Graham et al., 1991), we assumed that hierarchical regression analyses would provide more valid estimates of friends' influence. Each measure of students' adjustment in the spring was used as the criterion in a separate regression analysis. The corresponding fall measure of adjustment was entered at the first step in the analysis. At the second step, the corresponding fall measure of the perceived or actual adjustment of the students' friends was entered. When this step shows that friends' adjustment was a significant predictor, it is reasonable to conclude that friends influenced the changes during the year in that aspect of students' adjustment.

A variable for sex was entered at the third step in each analysis. At the fourth step, a term that reflected the interaction of sex and the friends' adjustment was entered. The interaction term provides a test of sex differences in friends' influence. Before computing this term, we centered the predictors by subtracting the mean from each score. Centering reduces the problem of multicollinearity among predictors (Aiken & West, 1991).

Table 3 summarizes the results of the analyses. The statistics for Step 1 show that students' adjustment in the spring was strongly related to their adjustment in the fall. That is, school adjustment showed substantial continuity. Yet after this continuity was taken into account, both measures of the perceived adjustment of friends were significant predictors of students' adjustment. The standardized regression coefficients (the beta weights in Table 3) suggest that students became more involved during the year when they perceived their friends in

the fall as more involved. Students became more disruptive during the year when they perceived their friends in the fall as more disruptive. In short, students' perceptions of their friends influenced the changes in their self-reported involvement and disruption.

Some measures of friends' actual adjustment also were significant predictors of changes in students' adjustment. Changes in students' involvement as rated by teachers were predicted by the fall involvement of their multiple friends. Changes in students' self-reports of disruptive behavior were predicted by the fall disruption of their very best friends and multiple friends. Changes in students' grades were predicted by the fall grades of multiple friends. These findings imply that friends influenced these aspects of school adjustment. The magnitude of friends' influence should not be exaggerated, because the beta weights for these effects are not large. Given the high continuity in adjustment, however, any significant predictors of changes in adjustment are worth noting.

A significant sex difference was found only for self-reported involvement (see Table 3). Sex was coded 1 for girls and 2 for boys, so the negative regression coefficients imply that girls' involvement increased during the year more than boys did. Table 3 also shows that three interactions of sex with measures of the very-best-friend's adjustment were significant. To clarify these interactions, regression analyses were done for each sex separately.

These analyses suggested that very best friends affect the school adjustment of girls more than boys. When a girl perceived her very best friend as more disruptive in the fall, her self-reported disruption increased during the year ( $\beta = .22, p < .01$ ); the comparable effect for boys was nonsignificant ( $\beta = -.03$ ). Similarly, when an adolescent's very best friend actually reported more disruptive behavior in the fall, the self-reported disruption of girls increased during the year ( $\beta = .24, p < .001$ ), but that of boys did not ( $\beta = -.15$ ). Finally, the self-reported involvement of a very best friend was unrelated to the changes over time in girls' involvement ( $\beta = .11$ ) but was negatively related to the changes in boys' involvement ( $\beta = -.24, p < .05$ ). The negative coefficient implies, paradoxically, that boys increased their school involvement when their very best friend in the fall was less involved. In other words, boys appar-

ently shifted away from the friend's level of involvement.

#### *Influences of Friendship Features*

*Relations of school adjustment to friendship features and stability.*—Table 4 shows the correlations of students' adjustment to school with positive friendship features, negative friendship features, and friendship stability. The table shows correlations for the entire sample because only 5% of them differed significantly for the two sexes.

Students who viewed their friendships more positively described themselves and were rated by teachers as more involved in school. Students who viewed their friendships more negatively described themselves as less involved and more disruptive. In the fall, teachers rated students as more disruptive when they described their multiple friendships more negatively. Of the 20 correlations between the friendship and adjustment measures, 15 were stronger for the multiple-friendships' measures than for those of the very best friendship. Even for the multiple-friendships' measures, however, the greatest correlation was only .29. Correlations similar in magnitude were found in the studies cited earlier.

Students who had more stable friendships also reported less disruptive behavior, were rated by teachers as more involved and less disruptive, and had higher grades. These correlations are consistent with a small amount of previous data (Savin-Williams & Berndt, 1990), but their interpretation is uncertain. The stability of students' friendship could affect their school adjustment or vice versa. Longitudinal analyses cannot settle the issue, because stability is measured over the same interval as the changes in adjustment. Therefore, these findings are not discussed further.

*Relations of friendship features to changes in students' adjustment.*—Hypotheses about the effects of friendship features on students' adjustment were examined with regression analyses like those described earlier. As in the earlier analyses, adjustment in the fall was the strongest predictor of spring adjustment. However, friendship features predicted significant amounts of the remaining variance in some cases (see Table 5). First, the positive features of students' very best friendships predicted the changes in their self-reported involvement. The positive regression coefficient implies that a very best friendship that was highly support-

ive contributed to increases in students' involvement.

Second, the negative features of students' very best friendships and of their multiple friendships predicted the changes in their self-reported disruption. The regression coefficients are consistent with our hypothesis that negative interactions with friends increase students' disruptive behavior.

Third, the negative features of very best friendships predicted the changes in teacher-rated disruption (see Table 5). The negative coefficient implies that teachers viewed students who had fewer negative interactions with their very best friend as increasing in disruption during the year. This puzzling result was not replicated with the multiple-friendships' measure (see Table 5). Further analyses showed that no effects of friendship features on adjustment differed significantly for the two sexes.

*Joint effects of positive and negative features.*—The final analyses examined possible interactive effects of positive and negative features. Research with adults has suggested that the negative effects of conflicts with friends may be increased (Pagel et al., 1987) or reduced (Schuster et al., 1990) when these friendships are highly supportive. To examine interactions of this type, the regression analyses were repeated with a term for the interaction of positive  $\times$  negative features as another predictor.

The interaction term was significant in the analyses of self-reported disruption, both for the very-best-friend measures ( $\beta = .16, p < .05$ ) and the multiple-friendships' measures ( $\beta = .26, p < .01$ ). To clarify these interactions, regression equations were plotted for three levels of positive features: high (+1 SD), average (at the mean), and low (−1 SD; see Aiken & West, 1991). Figure 1 shows the three regression lines from the multiple-friendships' analysis. That for measures of the very best friendship was similar.

Among students with friendships high in positive features, high levels of negative features were related to increases in self-reported disruption. Among students with friendships low in positive features, the level of negative features was unrelated to changes in self-reported disruption. This pattern suggests that, when students' friendships were most supportive, negative interactions with friends were most likely to in-

TABLE 3  
PREDICTION OF STUDENTS' ADJUSTMENT FROM THEIR FRIENDS' ADJUSTMENT

|                                             | VERY BEST FRIEND |                       |        | MULTIPLE FRIENDS |                       |        |
|---------------------------------------------|------------------|-----------------------|--------|------------------|-----------------------|--------|
|                                             | R <sup>2</sup>   | R <sup>2</sup> Change | Beta   | R <sup>2</sup>   | R <sup>2</sup> Change | Beta   |
| Time 2 involvement (self-reported):         |                  |                       |        |                  |                       |        |
| Step 1: Time 1 involvement .....            | .390             | .390                  | .62*** | .385             | .385                  | .62*** |
| Step 2: Time 1 perceptions of friends ..... | .414             | .024                  | .17*** | .407             | .022                  | .17**  |
| Step 3: Sex .....                           | .427             | .013                  | -.12*  | .418             | .011                  | -.11*  |
| Step 4: Interaction .....                   | .437             | .007                  | -.08   | .418             | .000                  | .00    |
| Time 2 disruption (self-reported):          |                  |                       |        |                  |                       |        |
| Step 1: Time 1 disruption .....             | .399             | .399                  | .63*** | .390             | .390                  | .62*** |
| Step 2: Time 1 perceptions of friends ..... | .410             | .011                  | .12*   | .430             | .041                  | .24*** |
| Step 3: Sex .....                           | .415             | .005                  | .07    | .435             | .005                  | .07    |
| Step 4: Interaction .....                   | .424             | .009                  | -.09*  | .436             | .001                  | -.03   |
| Time 2 involvement (self-reported):         |                  |                       |        |                  |                       |        |
| Step 1: Time 1 involvement .....            | .363             | .363                  | .60*** | .399             | .399                  | .63*** |
| Step 2: Time 1 friends' actual scores ..... | .364             | .001                  | .03    | .399             | .000                  | -.02   |
| Step 3: Sex .....                           | .386             | .022                  | -.15*  | .416             | .017                  | -.13** |
| Step 4: Interaction .....                   | .405             | .019                  | -.14*  | .417             | .001                  | -.03   |
| Time 2 involvement (teacher-rated):         |                  |                       |        |                  |                       |        |
| Step 1: Time 1 involvement .....            | .677             | .677                  | .82*** | .673             | .673                  | .82*** |
| Step 2: Time 1 friends' actual scores ..... | .681             | .005                  | .07    | .679             | .006                  | .08*   |
| Step 3: Sex .....                           | .682             | .000                  | .02    | .679             | .000                  | -.01   |
| Step 4: Interaction .....                   | .688             | .007                  | -.08   | .681             | .002                  | -.05   |
| Time 2 disruption (self-reported):          |                  |                       |        |                  |                       |        |
| Step 1: Time 1 disruption .....             | .367             | .367                  | .61*** | .358             | .358                  | .60*** |
| Step 2: Time 1 friends' actual scores ..... | .382             | .014                  | .12*   | .383             | .025                  | .15**  |
| Step 3: Sex .....                           | .389             | .007                  | .08    | .385             | .002                  | .04    |
| Step 4: Interaction .....                   | .420             | .031                  | -.18** | .386             | .001                  | -.04   |
| Time 2 disruption (teacher-rated):          |                  |                       |        |                  |                       |        |
| Step 1: Time 1 disruption .....             | .662             | .663                  | .81*** | .686             | .686                  | .83*** |
| Step 2: Time 1 friends' actual scores ..... | .662             | .000                  | .02    | .689             | .003                  | .06    |
| Step 3: Sex .....                           | .668             | .006                  | .08    | .691             | .002                  | .05    |
| Step 4: Interaction .....                   | .671             | .003                  | -.05   | .694             | .002                  | -.05   |
| Time 2 grades:                              |                  |                       |        |                  |                       |        |
| Step 1: Time 1 grades .....                 | .578             | .578                  | .76*** | .638             | .638                  | .80*** |
| Step 2: Time 1 friends' actual scores ..... | .583             | .004                  | .07    | .644             | .006                  | .09*   |
| Step 3: Sex .....                           | .583             | .000                  | .01    | .644             | .000                  | .01    |
| Step 4: Interaction .....                   | .591             | .009                  | -.09   | .648             | .004                  | -.06   |

NOTE.—The interaction tested in Step 4 was that between the predictors entered in Step 2 and Step 3 in the same analysis. Values for R<sup>2</sup> and R<sup>2</sup> Change may not match precisely because of rounding. For analyses involving perceptions of friends, Ns = 284–296. For those involving friends' actual scores, Ns = 187–188 in very-best-friend analyses and 267–269 in multiple-friends' analyses.

\* p < .05. \*\* p < .01. \*\*\* p < .001.

TABLE 4

CORRELATIONS OF FRIENDSHIP WITH STUDENTS' ADJUSTMENT TO SCHOOL AT EACH TIME

| MEASURE               | VERY BEST FRIENDSHIP |        |                   |        |                      |        | MULTIPLE FRIENDSHIPS |        |                   |        |                      |         |
|-----------------------|----------------------|--------|-------------------|--------|----------------------|--------|----------------------|--------|-------------------|--------|----------------------|---------|
|                       | Positive Features    |        | Negative Features |        | Friendship Stability |        | Positive Features    |        | Negative Features |        | Friendship Stability |         |
|                       | Fall                 | Spring | Fall              | Spring | Fall                 | Spring | Fall                 | Spring | Fall              | Spring | Fall                 | Spring  |
| Involvement:          |                      |        |                   |        |                      |        |                      |        |                   |        |                      |         |
| Self-reports .....    | .14*                 | .17**  | -.14*             | -.14*  | -.05                 | .09    | .24***               | .24*** | -.11*             | -.17** | .10                  | .12*    |
| Teacher ratings ..... | .14*                 | .13*   | -.04              | .02    | .16**                | .16**  | .21***               | .20*** | -.11              | -.04   | .28***               | .30***  |
| Disruption:           |                      |        |                   |        |                      |        |                      |        |                   |        |                      |         |
| Self-reports .....    | -.02                 | -.01   | .17**             | .20*** | -.12*                | .12*   | -.06                 | -.08   | .29***            | .28*** | -.21***              | -.23*** |
| Teacher ratings ..... | -.01                 | .02    | .06               | .06    | -.13*                | -.17** | -.01                 | -.01   | .17**             | .06    | -.25***              | -.22*** |
| Grades .....          | .04                  | .04    | .06               | .03    | .14*                 | .17**  | .11                  | .08    | -.05              | .05    | .31***               | .34***  |

NOTE.—The *N* for all correlations  $\geq 295$ .\*  $p < .05$ .\*\*  $p < .01$ .\*\*\*  $p < .001$ .

TABLE 5  
PREDICTING STUDENTS' ADJUSTMENT FROM THE FEATURES OF THEIR FRIENDSHIPS

|                                     | VERY BEST FRIEND |                       |        | MULTIPLE FRIENDS |                       |        |
|-------------------------------------|------------------|-----------------------|--------|------------------|-----------------------|--------|
|                                     | R <sup>2</sup>   | R <sup>2</sup> Change | Beta   | R <sup>2</sup>   | R <sup>2</sup> Change | Beta   |
| Time 2 involvement (self-reported): |                  |                       |        |                  |                       |        |
| Step 1: Time 1 involvement .....    | .384             | .384                  | .62*** | .385             | .385                  | .62*** |
| Step 2: Time 1 friendship features: |                  |                       |        |                  |                       |        |
| Positive features .....             | .393             | .009                  | .09*   | .390             | .005                  | .08    |
| Negative features .....             | .388             | .004                  | -.06   | .389             | .004                  | -.06   |
| Time 2 involvement (teacher-rated): |                  |                       |        |                  |                       |        |
| Step 1: Time 1 involvement .....    | .682             | .682                  | .83*** | .680             | .680                  | .82*** |
| Step 2: Time 1 friendship features: |                  |                       |        |                  |                       |        |
| Positive features .....             | .683             | .001                  | .03    | .680             | .000                  | .02    |
| Negative features .....             | .685             | .003                  | .05    | .681             | .001                  | .03    |
| Time 2 disruption (self-reported):  |                  |                       |        |                  |                       |        |
| Step 1: Time 1 disruption .....     | .389             | .389                  | .62*** | .389             | .389                  | .62*** |
| Step 2: Time 1 friendship features: |                  |                       |        |                  |                       |        |
| Positive features .....             | .391             | .002                  | -.04   | .389             | .000                  | -.01   |
| Negative features .....             | .407             | .018                  | .13**  | .410             | .021                  | .15**  |
| Time 2 disruption (teacher-rated):  |                  |                       |        |                  |                       |        |
| Step 1: Time 1 disruption .....     | .697             | .697                  | .83*** | .697             | .697                  | .83*** |
| Step 2: Time 1 friendship features: |                  |                       |        |                  |                       |        |
| Positive features .....             | .697             | .000                  | -.02   | .698             | .000                  | -.02   |
| Negative features .....             | .702             | .005                  | -.07*  | .698             | .001                  | -.03   |
| Time 2 grades:                      |                  |                       |        |                  |                       |        |
| Step 1: Time 1 grades .....         | .643             | .643                  | .80*** | .641             | .641                  | .80*** |
| Step 2: Time 1 friendship features: |                  |                       |        |                  |                       |        |
| Positive features .....             | .643             | .000                  | .01    | .641             | .000                  | .02    |
| Negative features .....             | .643             | .000                  | .01    | .641             | .000                  | .00    |

NOTE.—For each Time 2 measure of adjustment, the values listed in Step 2 are from two separate analyses, one including only the variable for positive features and the other including only the variable for negative features. For all analyses, *Ns* = 293–296.

\* *p* < .05.

\*\* *p* < .01.

\*\*\* *p* < .001.

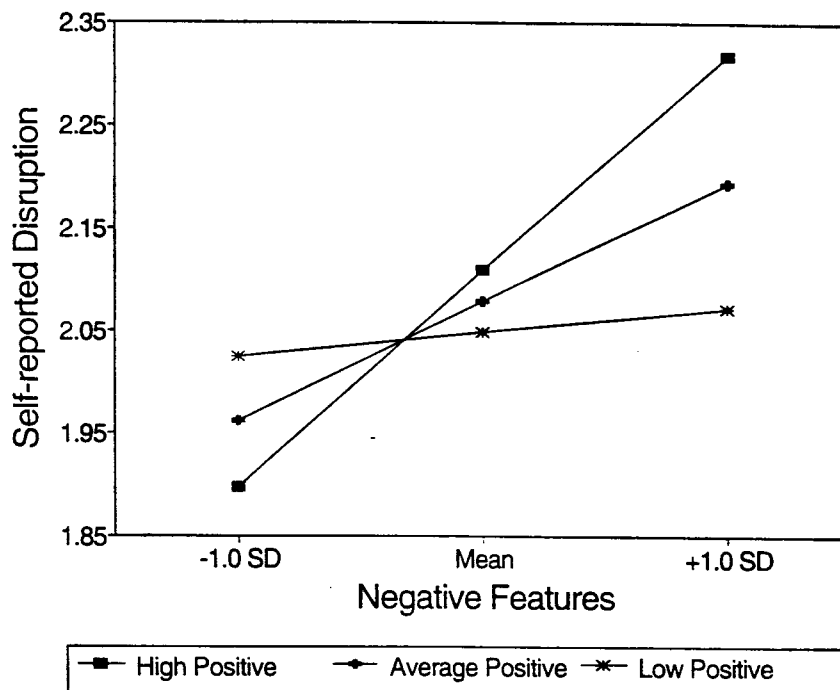


FIG. 1.—Mean scores for self-reported disruption in the spring for adolescents who differed in the positive features and negative features of multiple friendships.

crease their own reports of disruptive behavior at school.

### Discussion

The results of our analyses imply that adolescents' adjustment to school is influenced by their friends' characteristics and by the features of these friendships. Stated in this way, the results are consistent with the two theoretical perspectives outlined earlier. However, estimates of friends' influence vary across analytic techniques and measures of friendship. These variations are easiest to explain if each theoretical perspective is considered separately.

#### *Estimating the Influence of Friends' Adjustment to School*

Most correlations for friends' similarity in adjustment were significant. The correlations provide tentative evidence that friends influence adolescents' adjustment, because friends usually become more similar as they influence one another. However, the correlations for report-card grades and for teacher-rated involvement and disruption were greater than those for students' self-reports of involvement and disruption. These differences between measures may

be explained by processes of friendship selection.

As noted earlier, adolescents often select friends like themselves. For example, adolescents with similar grades are often assigned to the same classes and often become friends with each other. The grades of adolescents in our study were strongly related to teachers' ratings of their involvement and disruption, so processes of selection probably contributed to friends' similarity on these measures also. Adolescents' grades were less strongly related to their self-reported involvement and disruption. Their self-reports must partly reflect their attitudes toward school. Previous research suggests that friendship selection depends less on adolescents' attitudes than on their behavior, because attitudes are less observable (Kandel, 1978). Thus, it is not surprising that friends were less similar in self-reported adjustment than in grades and teacher-rated adjustment.

When processes of selection affect friends' similarity on some characteristic, similarity correlations overestimate their influence on one another. We therefore expected, and found, that regression analyses

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yielded lower estimates of friends' influence than did similarity correlations. Still, the regression analyses suggested that friends influenced three aspects of adolescents' adjustment.

First, teachers' ratings of the involvement of multiple friends predicted the changes during the year in adolescents' involvement as rated by teachers. Second, the grades of multiple friends predicted the changes in adolescents' grades. Third, the self-reports of a very-best-friend's and of multiple-friends' disruptive behavior predicted the changes in adolescents' self-reported disruption. Previous ethnographic studies had suggested that friends influence adolescents' disruption at school (Ball, 1981; Schwartz, 1981), but our study provides the first quantitative evidence in support of this hypothesis.

Friends did not seem to have a significant influence on adolescents' disruption as rated by teachers, but teachers' ratings were more stable over time than were students' self-reports. This contrast implies that teachers may have been insensitive to the changes in students' disruption. In addition, only two teachers rated each student's behavior. Students' self-reports presumably were based on their behavior in all their classes, not just two. Therefore, the evidence of friends' influence on self-reported disruption should be taken as theoretically and practically significant.

The regression coefficients that estimated friends' influence were not large, even when significant. However, these coefficients reflect the influence of friends on changes in students' adjustment over only 5 or 6 months. Extrapolated to a longer period, such as the 3 years of a traditional junior high school, friends' cumulative influence might be several times as large as the coefficients imply. Such extrapolation is difficult to do, but it seems fair to assume that regression coefficients in short-term longitudinal studies underestimate friends' influence. Their actual influence probably lies between the values suggested by the regression coefficients and the similarity correlations.

We also expected measures derived from adolescents' reports on friends to yield larger similarity correlations and regression coefficients than measures derived from the friends' self-reports. This hypothesis was only partly confirmed. Adolescents' reports showed that they perceived themselves as

more similar to their friends than they actually were. Moreover, the changes during the year in adolescents' self-reported involvement were predicted by their reports on their friends' involvement but not by the friends' self-reported involvement. These findings suggest that using adolescents' reports on friends leads to inflated estimates of friends' influence.

By contrast, the changes during the year in adolescents' self-reported disruption were predicted both by their reports on friends and by the friends' self-reports. These findings suggest that adolescents' reports on friends can yield valid estimates of friends' influence. The findings for involvement and disruption differ because the accuracy of adolescents' reports was greater, at least for girls, for disruption than for involvement. One task for future research is to identify conditions that affect the accuracy of adolescents' reports. Until those conditions are known, data based on adolescents' reports on friends must be interpreted cautiously but should not be dismissed entirely.

Finally, the similarity correlations for measures of a very-best-friend's adjustment were weaker than those for measures of multiple-friends' adjustment. In regression analyses, the very-best-friend measures predicted changes in adolescents' adjustment less often than did the multiple-friends' measures. These findings may be due partly to the greater number of items for the multiple-friends' measures, which is likely to increase their reliability. The multiple-friends' measures should also reflect the influence of an adolescent's friendship group more completely. Even so, further comparisons of these measures would be valuable, because they suggest different conclusions about friends' influence on boys and on girls.

### *Sex Differences in the Influence of Best Friends*

Perceived similarity to friends was generally comparable for boys and for girls, but friends' actual similarity was greater for girls than for boys. The regression analyses revealed no sex differences in the influence of multiple friends, but very best friends seemed to influence the self-reported disruption of girls more than boys.

The contrasting results for the two types of measures led us to reexamine the findings of previous studies. Most studies in which friends appeared to influence girls more than boys used measures of one friend's characteristics (Billy & Udry, 1985; Davies

& Kandel, 1981; Downs, 1985). Most studies in which sex differences were nonsignificant used measures of multiple friends' characteristics (Chassin et al., 1986; Graham et al., 1991; Keefe, 1994). This evidence suggests that small groups of friends may influence boys as much as girls, but girls may be more influenced by their closest friend. This statement should be treated as a hypothesis rather than a conclusion, because only our findings for self-reported disruption were consistent with it. On our other four measures of school adjustment, sex differences in the apparent influence of very best friends were absent.

The variations across measures could be a sign that sex differences in friends' influence are weak. Another possibility is that only certain behaviors of a very best friend affect girls more than boys. In more general terms, the idea is that best friends may have great influence on some behaviors but little influence on other behaviors. This idea is intuitively reasonable but has received almost no theoretical attention. Further exploration of sex differences in friends' influence could shed light on this question and promote the refinement of current theories.

#### *Effects of Friendship Features on School Adjustment*

The findings on the second theoretical perspective, the effects of friendship features, are partly consistent with hypotheses (Berndt, 1989; Sarason et al., 1990; Sullivan, 1953) about the benefits of intimate and supportive friendships. Adolescents who described their friendships as having more positive features were more involved in school. Moreover, adolescents who described their very best friendship more positively in the fall improved in their self-reported involvement during the year.

Adolescents whose friendships had more negative features were less involved in school and more disruptive. In addition, adolescents who described their friendships more negatively in the fall increased in their self-reported disruption during the year. The effects of negative features were magnified when adolescents also perceived their friendships as highly supportive. That is, adolescents' self-reported disruption increased most during the year when their friendships were high both in negative and in positive features. When adolescents had friendships with many positive features, their quarrels with friends were especially likely to lead to a negative style of social interaction with other peers and teachers.

On the other hand, our data suggest that the features of adolescents' friendships have only modest effects on their school adjustment. Even the significant correlations between the measures of friendship features and adjustment were less than .30. The effect of positive features on changes in involvement was significant only for the very-best-friend measure and only for self-reported rather than teacher-rated involvement. Replication of this effect is needed before firm conclusions are drawn.

The relation of negative features to changes in self-reported disruption can be interpreted more confidently, because it held for both types of friendship measures. Although the comparable analyses of teacher-rated disruption did not yield significant effects, the limitations of teacher ratings that were discussed earlier apply here as well. Our results are also consistent with other evidence (e.g., Vinokur & van Ryn, 1993) that individuals are affected more strongly by the negative than by the positive features of close relationships. Theories of adolescent friendship should, therefore, be revised to offer more balanced conclusions about the potential benefits and the potential costs of these relationships.

#### *Conclusions*

The two theoretical perspectives on friends' influence in adolescence differ in their focus. Stated informally, one perspective focuses on who an adolescent's friends are; the other focuses on what the adolescent's friendships are like. Our results suggest that the characteristics of adolescents' friends and the quality of their friendships both affect their school adjustment. Friends influence all aspects of school adjustment, but their influence on adolescents' disruptive behavior is strongest and most consistent. Adolescents become more disruptive at school when their friends are more disruptive, and they have more negative interactions with friends.

One limitation of our sample was the greater number of girls than boys. The imbalance raises a question about whether the sex differences in friends' influence were sample specific or representative of all adolescents. This question cannot be answered definitely, but the sex differences found in previous studies were similar to those in our study.

Another limitation of the sample was the high proportion of white students and the small representation of other ethnic groups.



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Scattered evidence suggests that friends have more influence on whites than on blacks (Billy & Udry, 1985). Such differences should be examined in future research. In one respect, however, our sample was more heterogeneous than in some previous studies. We included adolescents from three schools in two school districts which drew students from rural, suburban, and urban areas. This sample is more diverse than those in previous studies of adolescents from a single school district.

Finally, the use of multiple measures of school adjustment, of friends' adjustment, and of friendship features strengthened our study. Comparisons of the results for different measures were useful in judging the most valid procedures for estimating friends' influence. The comparisons also suggested directions for the refinement of theories and for future research on friends' influence.

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