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the analysis of adolescent friendships: Same-sex and crossSEX PATTERNS IN GRADES SEVEN, NINE, AND ELEVEN

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THE UNIVERSITY OF OKLAHOMA GRADUATE COLLEGE

## THE ANALYSIS OF ADOLESCENT FRIENDSHIPS: <br> SAME-SEX AND CROSS-SEX PATTERNS IN GRADES SEVEN, NINE, AND ELEVEN

A DISSERTATION
SUBMITTED TO THE GRADUATE FACULTY in partial fulfillment of the requirements for the degree of DOCTOR OF PHILOSOPHY

## By

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Norman, Oklahoma
1985

THE ANALYSIS OF ADOLESCENT FRIENDSHIPS:
SAME-SEX AND CROSS-SEX PATTERNS IN GRADES SEVEN, NINE, AND ELEVEN

## A DISSERTATION

APPROVED FOR THE COLLEGE OF EDUCATION


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#### Abstract

This research addressed the issue of developmental changes in intimacy among same-sex and cross-sex adolescent friendship dyads. Drawing on the theories of Sullivan (1953) and Selman (1971; 1980), the study was designed to compare a same-sex friend with a cross-sex friend on knowledge of and sensitivity to a third (target) person on five subscales: Academic Attitudes, Social Preferences, Individual Activities, Values, and Future Orientation. Subjects were 72 seventh graders, 60 ninth graders, and 66 eleventh graders. A 3 (grade) X 2 (sex of target) X 2 (sex of friend) multivariate analysis was performed, using a split-plot factorial design. Correlational analyses were also performed. Results indicate a developmental trend in intimacy, with older subjects having more accurate perceptions of their friends, but expected sex differences did not emerge consistently. Descriptive analyses of age and sex differences on the five subscales using a larger sample were also carried out. Discussion and interpretation of these results are included.


# THE ANALYSIS OF ADOLESCENT FRIENDSHIPS: <br> SAME-SEX AND CROSS-SEX PATTERNS <br> IN GRADES SEVEN, NINE, AND ELEVEN 

Both Sullivan (1953) and Selman (1971; 1980) have emphasized the importance of role-taking abilities in facilitating intimacy. It is the task of the researcher to explore this theoretical link. The purpose of the present study is to investigate the nature and amount of self-disclosure and intimate knowledge reported by close friends across the pre- to mid-adolescent years. Most other studies using a cross-sectional design to look for developmental change in friendships have either begun or ended with early adolescence. Consequently, there are relatively few examples of the same intimacy measure being employed on a group of subjects whose ages span the critical period described by Sullivan (1953). Similarly, there has been little direct scrutiny of different patterns of same and cross-sex intimacy between male and females in this age group (cf. Sharabany, Gershoni, \& Hofman, 1981). A second aim of this research, then, is to delineate gender differences in the timing and quality of the shift to cross-sex intimacy. It has been shown (for example Elkind, 1967; Selman \& Byrne, 1974) that a capacity for greater interpersonal closeness with both sexes emerges during adolescence, probably as a function of the individual's development of formal thought. For the purposes of this study, shared intimate knowledge will be defined as friends' congruence on a questionnaire measure of preferences, thoughts and feelings.

An additional goal of the present research is to look for developmental trends in subjects' attitudes toward some issues common to adolescence, with a view to building questions for future study. Thus, a section of the article is comprised of a discussion of descriptive data gathered via the friendship questionnaire from a large sample of adolescents.

## Review of Literature

The picture of early adolescence that emerges from studies of adolescent friendships is one of young people becoming increasingly less dependent on family and more reliant on peers for day-to-day interpersonal sustenance (Hunter \& Youniss, 1982; Montmayor, 1982). Friends become increasingly important as valued sources of social feedback, emotional support, and companionship (Berndt \& Hawkins, 1984; Hunter \& Youniss, 1982). There are differences, however, between boys and girls in the salience of certain aspects of friendship such as exclusivity and number of friends (Bukowski \& Newcomb, 1983; Crockett, et al., 1984; Sebald \& White, 1980; Spurgeon, et al., 1983).

## Intimacy in Adolescent Friendships

The newly-emergent closeness between friends that is found in early adolescence is generally termed "intimacy". According to Sullivan (1953), intimacy is a feature of dyad relationships that first appears during preadolescence. In the empirically based literature, intimacy is usually defined either as intimate knowledge (friends knowing the details of one another's personal lives to a degree surpassing the superficial knowledge that acquaintances might have) or as self-disclosure (friends telling each other about their private thoughts), a line of research pioneered by Jourard (1964). These two features of friendship are difficult to operationalize and even more difficult to measure. Some authors have used open-ended questions in an attempt to
determine how subjects define friendship (Bigelow, 1977; Douvan \& Adelson, 1966; Reisman \& Shorr, 1978). Friends' sharing of feelings and thoughts is a prominent theme. Other researchers have employed more structured means to assess the extent of this sharing (Diaz \& Berndt, 1982; La Gaipa, 1979; Sharabany, et al., 1981).

An extensive study of friendships among Soviet adolescents yielded results that differ from most U.S. findings. Kon and Losenkov (1978) found that girls' friendships were shallower and less intimate than boys', and that boys' friendships were of longer duration. Interestingly, subjects of both sexes in this study were more likely to describe an "ideal friend" as being male. In his classic comparative study of U.S. and Soviet education, Bronfenbrenner (1970) reported that girls in the USSR were far more adult-oriented than their male peers, or their American counterparts. Perhaps this feature of Soviet girlhood causes female adolescents to de-emphasize their friendships. If so, then the Kon and Losenkov results are more readily interpreted in terms of cultural differences.

Mark and Alper (1980) defined intimacy as "social penetration" through self-disclosure, and explored its relationship to sex role by means of a projective instrument. They found that women were more likely than men to write stories having intimacy imagery. The men who did write intimacy imagery stories, however, were less likely than other males to be masculine stereotyped.

Several authors have investigated self-disclosure among adolescents. Rivenbark (1971) found that girls are more disclosing than boys, especially to cross-sex friends. Both sexes, however, preferred same-sex friends over crosssex friends as targets of self-disclosure. Although there was no significant decrease in disclosure to parents among these adolescents, there was a sharp increase in disclosure to peers between grades 8 and 10 .

Davidson, Balswick, and Halverson (1980) argued that the sex differences in self-disclosure cited in the literature may be spurious, and dependent upon the types of questionnaire items used. Using a factor analytic procedure, these authors found four dimensions of self-disclosure, with sex differences related to 3 of the factors. Girls were more self-disclosing on Revealing General Information and Revealing Personal Information, while males were higher on Revealing Sexuality to Parents. No sex differences were found on Revealing Sexuality to Peers.

Peoples' expectations of appropriate dyad behavior and self-disclosure have been shown to vary with the closeness and gender of the pair (Rands \& Levinger, 1979). In close relationships, cross-sex pairs were perceived as more likely to engage in self-disclosure and physical contact than were same-sex dyads. Female pairs were expected to engage in greater self-disclosure, otherenhancement, and physical contact than were male friends. Furthermore, while females were perceived as being capable of intimacy with either sex, males were expected to obtain emotional gratification primarily from cross-sex relationships and were thus thought to be more dependent than females on heterosexual attachments.

Using a young sample (grades 6-8) and a longitudinal design, Crockett, et al. (1984) found that girls were more self-disclosing than boys, although there were no sex differences in reported satisfaction with best-friend relationships. Although all subjects said they had at least one good friend, only $5 \%$ of them volunteered a cross-sex peer as being a close friend. A developmental trend did emerge with regard to cross-sex relationships over grades 6-8, however, with both genders expressing an increasing interest in the opposite sex.

Further support for the notion of gender differences in the importance of cross-sex relationships may be found in the work of Wright and Keple (1981). In this study, girls reported both same-sex and cross-sex peer relationships to be strong, intense, and important. Boys, however, found their greatest rewards in cross-sex friendships, with male-male dyads being least rewarding.

Diaz and Berndt (1982) studied developmental changes in children's intimate and nonintimate knowledge of a best friend. Using actual friendship pairs from grades 4 and 8, they found that knowledge of external characteristics, such as a friend's birthdate or telephone number, is distinct from intimate knowledge, and that age changes occurred only for intimate knowledge. Female dyads reported friendships of longer duration, and a greater knowledge of external characteristics. No other sex differences were found in this study.

The best predictor of both external and intimate knowledge was the frequency of contact between friends. The only predictor of intimate knowledge that showed age changes, however, was level of cognitive maturity (as measured by the Raven's Standard Progressive Matrices test). This finding, coupled with the age change in intimate knowledge, was interpreted by the authors as evidence of a cognitive component to intimacy between close friends. The Diaz and Berndt results are important to the present study because they lend support to the author's use of Selman's model of social cognition as role taking.

One of the few studies designed primarily to compare same-sex and crosssex friendships in adolescence was conducted by Sharabany, et al. (1981). Using a large sample of Israeli students in grades 5, 7, 9, and 11, the authors looked at age and sex differences on eight dimensions of intimacy, as follows: (1) frankness and spontaneity, (2) sensitivity and knowing, (3) attachment, (4) exclusiveness, (5) giving and sharing, (6) imposing and taking, (7) common
activities, and (8) trust and loyalty. Several interesting results emerged. With regard to same-sex relationships, girls reported more intimacy than boys, although intimacy was fairly stable over time for both sexes, with only the "frankness and spontaneity" and "knowing and sensitivity" increasing with age. Also, girls were higher on "attachment", "giving and sharing", and "trust and loyalty" than were boys. Cross-sex intimacy was low for both sexes at grade 5, after which girls' scores increased more rapidly than boys'. By the upper grades, girls reported much greater "attachment" and "trust and loyalty" toward boys than vice versa. These authors concluded that same-sex intimacy is already "in process" by preadolescence, but that cross-sex intimacy is only in a very early stage. The age-related increases in "knowing and sensitivity" were interpreted as being a function of cognitive development and improved role-taking skills. A temporary drop in same-sex intimacy, observed at grade 7, may be due to the onset of cross-sex relations. Clearly, this line of research is worth pursuing further.

To summarize, the following may be concluded from the foregoing review:
(1) Intimacy among friends increases from middle childhood to early adolescence.
(2) Female dyads are more intimate than male dyads. The one clear exception to this (Kon \& Losenkov, 1978) may be explained in terms of cultural differences.
(3) Cross-sex intimacy occurs earlier among females than males, and develops more rapidly.
(4) Increased intimacy across adolescence may be a function of increasing cognitive maturity.

## Social Cognition

If, as has been briefly noted in the preceding section, an adolescent's capacity for intimacy is somehow related to his or her level of cognitive functioning, it becomes necessary for the researcher of intimacy to also understand the mental processes and structures associated with the adolescent years. More directly, it is essential for this research to be firmly anchored to the framework of social cognition.

Social cognition may be defined as the using of cognitive skills to understand and deal with social interactions in the real world (Muuss, 1982). More a synthesis than a theory in its own right, this area has been influenced by cognitive developmental psychology (e.g., Kohlberg, 1969; Piaget, 1932) and social psychology (e.g., Byrne, 1974; Mead, 1934). Social cognition occupies a conceptual ground between cognitive development and moral development.

Selman has advanced a model of social cognition ( 1971 ; 1980) that focuses on role taking as an attribute that increases with an individual's cognitive maturity. The model is based on a set of five stages that roughly parallel Piagetian levels of cognitive development.

In adolescence, according to Selman, individuals become increasingly able to step outside their own role in a friendship interaction and to view the dyad as a third person might. The result ought to be a clearer understanding of another's thoughts and feelings that goes beyond superficial knowledge. In other words, adolescents' maturing ability to take their friends' perspectives ought to facilitate the development of intimacy in their close personal relationships. It seems reasonable to assume, on the basis of empirical findings (Gurucharri \& Selman, 1982; Kurdek \& Krile, 1982), that a developmental change in cognitive
level will affect the quality of adolescent friendships. Whether or not intimacy itself increases with cognitive maturity is an issue open for study.

In sum, then, adolescence may be described as a time of considerable change in the realm of social interactions. Against a backdrop of social independence from the family, the adolescent is striving to form intimate relationships with same-sex friends, then later, with opposite sex friends. For girls, the development of intimacy seems to come earlier than for boys. Facilitating the growth of a capacity for intimacy is the adolescent's increased cognitive level, especially when manifest as ever-improving role-taking skills.

## Theoretical Rationale

Sullivan (1953) wrote at length on the critical importance of developing intimacy during the preadolescent years. It is at this time, according to Sullivan, that lifelong patterns of interpersonal relating are set in motion. The preadolescent child-by means of a close "chumship" and an intricate peer network--becomes newly capable of viewing the self through other people's eyes. This awakening ability to take another's role in an interaction is similar to Selman's Stage 3, or Mutual Perspective Taking (1980).

With the onset of puberty, the child, now classified by Sullivan as an "early adolescent", begins to shift intimacy needs from an isophilic (same-sex) object to a heterophilic (cross-sex) object. In other words, the young teenager strives to duplicate the intimacy of chumship in a new relationship with an opposite sex peer, using the interpersonal skills acquired during the preadolescent years. This shift in the object of intimacy takes several years to effect, and may not be complete until early adulthood.

## Hypotheses

Drawing on the literature and conceptual framework presented, the following hypotheses were tested:
(1) At every grade level, girls will have more accurate perceptions of their friends than will boys.
(2) There will be an increase with grade level in the accuracy of perceptions of same-sex friends.
(3) There will be a decrease with grade level in the discrepancy between accurate perceptions of same-sex friends and accurate perceptions of cross-sex friends.
(4) Female target subjects will be more accurately perceived by their friends of both sexes than will male target subjects.
(4a) At every grade level, girls will have more accurate perceptions of boyfriends than boys have of girlfriends.

Method

## Sample

Subjects for this investigation were all the 7 th, 9 th, and 11 th graders in a medium sized Oklahoma town. Access to the subjects was provided by the local superintendent of schools, with the support of the principals and counselors at the junior high and high school attended by the students. Two hundred twelve seventh graders, 166 ninth graders, and 173 eleventh graders were asked to participate in the project. A subsample of 72 seventh graders, 60 ninth graders, and 66 eleventh graders was selected for the main analyses. Inclusion in the subsample was based on individuals' having close, reciprocated friendships with both sexes. To ensure the adequacy of the subsample size, a power analysis was performed using Sample Calc, a microcomputer program (Anderson, 1982) based
on the work of Cohen (1977). Results showed ten targets of each sex from the three grade levels to be a sufficient sample size, assuming the following parameters: confidence level $=.95$, power $=.8$, and effect size $=.3$.

## Measures

Sociometric questionnaire. A one-page questionnaire, developed by the author, was given to each student in the subject pool (see Appendix B). Subjects were asked to name the three males and the three females to whom they felt closest, within their own grade level and school, and to indicate how long they have known each person listed. Data from these questionnaires were analyzed by means of a microprocessor program (Graves \& Manners, i984), which identified those persons (called "targets") who had reciprocated friendships with both a male and female classmate.

Self-report inventory. Each target subject was asked to complete a 25 item questionnaire designed to tap five areas which pilot studies have shown to be salient to adolescents (see Appendix C). The subscales and the number and type of questionnaire items pertaining to each are as follows:
(1) Social Preferences - 10 multiple choice items covering subjects' group activities (coefficient alpha = .38) .
(2) Individual Activities - 2 multiple choice items dealing with the amount and quality of time the subject spends alone. Two additional items probe the subject's likelihood to be self-disclosing about a range of personal concerns (coefficient alpha $=.39$ ).
(3) Academic Attitudes - 7 multiple choice items tapping feelings and preferences about school subject areas, purpose, and organization (coefficient alpha $=.01$ ).
(4) Future Orientation - one item consisting of a list of ten components of adult status. Subjects are asked to imagine that they are ten years older and then to rank the components in the expected order of importance to the subject at that future time (coefficient alpha $=.54$ ).
(5) Values - three items, each comprised of a dilemma vignette and several choices of action (coefficient alpha $=.12$ ).

In addition to the target subjects, those students not forming part of a friendship group identified by the sociogram completed this survey for the purpose of descriptive analyses.

Other-report. Students identified as reciprocated close friends of the targets filled out a questionnaire identical to the self-report, except that these students responded to the items as they thought their friend would respond.

Dependent measures. The outcome variable used in the main analysis was a measure of closeness derived from the number of items within each subscale answered identically by a target and a friend. On items having an ordinal rather than a nominal scale implied by their response alternatives (numbers 6, 7, 8, 9, $16,17,18,20, \& 21$ ), partial credit was given for nearness of answers. On all subscales, a higher score indicates greater closeness. The totals for each of the five subscales are the five dependent measures used in the analyses.

## Procedure

Data were collected through the school's regular English classes in two stages. First, all students completed the sociometric questionnaire, naming their three best male and three best female friends. Those responses were analyzed by means of a microprocessor program that generated all possible combinations of target, male friend and female friend for each grade level, as well as indicating the closeness of each set of overlapping dyads. Each person's three
male and three female choices were assigned weights of 1 to 3 , with 1 being the closest friend. When the dyads were identified, the weight assigned to each dyad member's ranking of the other member were summed to provide a measure of the closeness of the relationship. Dyad weights were combined to indicate the closeness of the targets' same and cross-sex relationships. Those overlapping dyads having the lowest combined weights were selected for the subsample first, followed by those with increasingly higher weights until a minimum of 10 groups had been chosen for each sex of target at every grade. To minimize subject loss due to absence or changing friendships, selection of the subsample was completed immediately after the sociometric data were collected.

The following day, those students identified as "targets" were asked to fill out the self-report inventory. Their male and female friends completed the other-report, answering as if they were the target person named on the questionnaire. All other students completed a self-report. When all the instruments had been returned to the author, the students were debriefed. A short explanation of the purpose of the study was given, and questions raised by the students were answered.

## Results

In order to present the findings from this research in the clearest possible manner, the "Results" section of this paper will be divided into two parts. First, results from the main analyses using the 3 -member friendship groups will be presented, along with discussion and interpretation of the findings. Next, analyses of the descriptive data gathered from the ungrouped subjects will be covered, and suggestions for interpretation of the results will be offered. The section will conclude with a summary discussion of all findings.

## Analyses of friendship groups

MANOVA. A 3 (grade) X 2 (sex of target) X 2 (sex of friend) multivariate analysis of variance was performed, using a split-plot factorial design. The dependent variables were the 5 subscales imbedded in the questionnaire: Academic Attitudes, Social Preferences, Individual Activities, Future Orientation, and Values. Preliminary analyses were conducted that included two other variables-duration of friends' acquaintance and duration of closeness of friends-as possible covariates. Neither of these variables was found to contribute significantly to the model, so they were dropped from subsequent analyses. A graphic representation of the design may be found in Appendix D. Individual comparisons were performed using the Least Squares Means procedure for unbalanced data. Table 3 contains the Least Squares Means by grade for all subscales.

Significant F-ratios emerged for two of the five subscales. A grade effect was found for the Academic Attitudes subscale ( $F=5.96, \mathrm{p}<.005$ ). On the Future Orientation subscale, main effects were found for grade ( $F=3.68$, $\mathrm{p}<.05$ ) and sex of friend ( $\mathrm{F}=22.45, \mathrm{p}<.05$ ) as well as two interaction effects: grade $X$ sex of friend ( $F=45.05, \mathrm{p}<.05$ ) and sex of friend $X$ sex of target $(F=$ 45.03, p <.05). No significant results emerged for Social Preferences or Individual Activities. A suggestive, though not statistically significant, trend was found on the Values subscale for the sex of friend ( $F=8.92, \mathrm{p}<.10$ ).

Insert Tables 1, 2, \& 3 about here

## Discussion

Some of the most interesting findings summarized in the preceding section are the nonsignificant results for the Social Preferences and Individual Activities subscales. Although friends' knowledge about both of these areas increased with grade level (see Table 1), the lack of statistically significant F-ratios seems to indicate that patterns of self-disclosure and sensitivity about social and individual pursuits are largely set by the end of the elementary school years.

The significant main effect for grade on the Academic Attitudes subscale strongly suggests that school-related issues become increasingly more important to friends as they progress through the secondary school years. Moreover, this effect is strongest after ninth grade. In the subjects' school district, ninth grade is the last year of junior high, which may contribute to the difference between seventh and ninth graders' scores on the one hand, and eleventh graders' scores on the other. Perhaps the experience of moving into high school together enhances friends' knowledge about each other's attitudes in this area.

Analysis of the subscale for Future Orientation produced two significant main effects and two interactions. Each result will be interpreted individually, then discussed more generally in terms of the overall salience of Future Orientation to friendship dyads.

Insert Tables 4, 5, 6, \& 7 about here

The grade effect on this variable seems to occur between the seventh and ninth grades (see Table 3). The most obvious explanation for this is the students' increased cognitive maturity-which facilitates their knowledge about one another-coupled with external pressure from parents and school personnel to
begin making life decisions as high school approaches. This grade effect is complicated, however, by the sex of the friend doing the reporting, as is evident from the sex of friend $X$ grade interaction effect. Seventh grade girls are the group least sensitive to their friends' feelings about the future, with seventh grade boys scoring slightly higher (see Table 4). At grade nine, both sexes scored the same. By eleventh grade, however, females scored far higher than their male classmates, whose mean sensitivity score was trivially higher than that of ninth graders. Females were more sensitive than males across all grades on this variable, as indicated by the significant F-ratio for sex of friend (see Table 6). Although these adolescent girls were apparently more in tune with their partners than were their male peers, the sex of the partner was also important to the closeness of the relationship on this subscale. No significant main effect was found for sex of target, but a sex of friend $X$ sex of target interaction did emerge. Same-sex dyads were closer on Future Orientation than were cross-sex pairs (see Table 7). The exception to this was for male dyads in the eleventh grade, whose closeness scores were lower than those of female dyads or crosssex pairs at the same grade level.

Tests of simple main effects for the two significant interactions were conducted. For the sex of friend X grade interaction significant F -ratios emerged for females ( $F(2,2)=222, p<.01$ ) and males ( $F(2,2)=41.77, p<.05$ ) across grades, and eleventh graders ( $F(1,2)=105.14, p<.01$ ) across sexes. For both sexes sensitivity to and knowledge of friends apparently increases up to the ninth grade. Thereafter girls' scores continue to rise, while boys' remain essentially the same (see Table 4). For the sex of friend $X$ sex of target interaction, female friends were equally sensitive to both male and female targets ( $F(1,2$ ) $=.09$, NS). Male friends, however, were more sensitive to male
targets than to female targets $(F(1,2)=104.86, p$ <.01). When rating male targets both sexes scored about the same ( $F(1,2)=2.00$, NS); however, when the target was female, female friends were apparently more sensitive to their future orientation than were male friends ( $\mathrm{F}(1,2)=62.57, \mathrm{p}^{<} .05$ ) (see Table 5).

Insert Figure 1 about here

Figure 1 contains a graphic representation of the closeness of same-sex and cross-sex dyads by grade on Future Orientation. Interpretation of the figure may be summarized as follows. Among cross-sex dyads, those having a male target showed greater closeness. One reason for this might be females' greater sensitivity to and intimate knowledge of their partners. That the discrepancy between the two types of cross-sex dyads decreases steadily with age suggests that boys' sensitivity to girls develops later and more rapidly than girls' sensitivity to boys. This is consistent with the findings of Sharabany, et al. (1981), who reported that girls indicated greater intimacy with boys than boys did with girls. The present results differ from those of Sharabany, et al. with regard to same-sex dyads. Those authors found that female pairs were more intimate at all ages than were male pairs. In contrast, the Future Orientation results from the present study show boys' friendships to be much closer than girls' at the seventh grade, while by eleventh grade the girls' friendships are much closer than those of their male classmates. One reason for the difference in the two studies may be the intimacy measure used. Perhaps "Future Orientation" does not coincide with the dimensions of intimacy discussed in Sharabany, et al. A more plausible explanation, however, is that the previous study involved asking questions of only one member of a dyad. It was impossible
to know how accurate a rater's responses were in relation to a particular friend because that friend did not respond to the same questionnaire. In other words, the greater intimacy of female friendships reported in Sharabany, et al. (1981) may be a function of the one-sidedness of the instrument used. The present results, on the other band, are derived from actual intimate knowledge shared between friends rather than on one friend's rating of the level of intimacy. On this subscale, boys begin adolescence more self-disclosing and sensitive to one another than are girls. While boys' closeness peaks at ninth grade and then drops, girls' intimacy continues to rise sharply throughout.

One problem area inherent in research of this kind is the suitability of questionnaires for measuring dyadic intimacy. A strong case for measuring intimate knowledge shared by friends was made by Diaz and Berndt (1982). They also differentiated "external" information from "internal" or "intimate" information, thus providing a basis for the present author's use of friends' knowledge of one another's thoughts and feelings as a measure of closeness or intimacy.

A correlational analysis was performed in order to assess associations among the five subscales. Although some significant correlations emerged, their values were quite low (see Table 8). It may be concluded, then, that these areas are largely unrelated to one another, and that exploration of them as distinct subscales is appropriate.

Insert Table 8 about here

## Summary Discussion of Analyses of Dyad Data

To conclude this section, the hypotheses tested will be discussed individually in the order in which they were presented previously.

Hypothesis I. At every grade level, girls will have more accurate perceptions of their friends than will boys.

This hypothesis was not fully supported. On the one subscale showing sex differences, Future Orientation, the results were complicated by the interactions among sex of target, grade, and sex of friend.

Hypothesis II. There will be an increase with grade level in the accuracy of perceptions of same-sex friends.

This hypothesis found support in the grade effects on the Academic Attitudes and Future Orientation subscales. One notable result to the contrary, however, is the drop in accuracy for eleventh grade male dyads for Future Orientation.

Hypothesis III. There will be a decrease with grade level in the discrepancy between accurate perceptions of same-sex friends and accurate perceptions of cross-sex friends.

Again, with the exception of the 11 th grade males' result on Future Orientation, this hypothesis may be said to have been supported. Furthermore, a decrease in the discrepancy between types of cross-sex dyads clearly emerged. While male-target pairs scored higher at all grades than did female-target pairs, the discrepancy became progressively smaller.

Hypothesis IV. Female target subjects will be more accurately perceived by their friends of both sexes than will male target subjects.

This hypothesis was not supported. In fact, it was the male subjects who were more accurately perceived, except for the 11th grade male dyads on the Future Orientation subscale.

Hypothesis IVa. At every grade level, girls will have more accurate perceptions of boyfriends than boys have of girlfriends.

This hypothesis received solid support from the Future Orientation subscale results. Of the two types of cross-sex dyads, those having male targets scored higher at every grade than did those having female targets, indicating more accurate perceptions by girls.

Considered collectively, the results of these analyses outline a model of adolescent friendship that is less affected by sex differences than had been previously thought. Although girls seem to be more heavily involved with their friends' thoughts and feelings, their perceptions of others are not necessarily more accurate than are those of their male classmates.

Friendships are apparently based on different issues at different ages within adolescence. As friends become older--and presumably more cognitively mature-the bases for their relationship shift from the superficial social concerns of young adolescents to the deeper, more personal issues of values and the future. The lack of a significant association between congruence and the duration of a friendship emphasizes the importance of cognitive maturity in facilitating closeness. Since scores increased at every grade level for each subscale, yet neither friends' duration of acquaintance nor their duration of closeness contributed significantly to the analyses, it must be concluded that cognitive maturity is a key component of developing intimacy. This finding is consistent with both Sullivan's and Selman's models.

Stereotypy. A post hoc analysis using a group of randomly assigned nonfriend dyads as a control was conducted. This procedure was undertaken in order to assess the extent to which congruence might occur between pairs' responses as a result of both individuals giving stereotypical answers, rather than because specific thoughts and feelings are shared. Two analyses were performed. First, the 5-factor MANOVA was repeated, substituting the non-friend sample for the close dyads. No significant F-ratios were found on any of the subscales, suggesting that the results of the first MANOVA, reported in the previous section, reflect actual age and gender differences. Second, a series of t-tests was performed comparing mean subscale scores of the real pairs to those of the non-friends at each grade level. Only three significant results emerged, indicating that the agreement among friends on the questionnaire may be largely a function of their common circumstances, rather than of actual shared knowledge. The three significant t's were on Social Preferences among ninth graders ( $t=2.59, p$ <.05) and eleventh graders ( $t=5.86, p<.05$ ); and on Academic Attitudes for eleventh graders ( $\mathrm{t}=3.68$, p <.05). Complete results are presented in Table 9. Although findings from these post hoc analyses are inconclusive, evidence for stereotypy as a confounding factor is strong enough to warrant caution in interpretation of the results reported here.

## Descriptive Analyses

All students who were not assigned to the main sample of friendship groups were asked to fill out a self-report questionnaire. These data, along with those of the target subjects from the main sample, were analyzed for descriptive purposes. A total of 420 questionnaires were included in the sample. The goal was to explore adolescents' attitudes and feelings on the five subscales, with the intention of generating future research questions. Analyses were conducted for
the group as a whole, as well as by grade and sex. Crosstabulation tables for all subscales may be found in Appendix F.

## Academic Attitudes

Among seventh graders, there were no sex differences on students' favorite school subjects. Math or physical education was the choice of almost 70\% of the students questioned. By ninth grade, fine arts courses were the first choice for girls, with math still a close second. Boys' preferences were unchanged, although percentages of males choosing math and gym were somewhat lower than in seventh grade. In the eleventh grade, the girls abandoned math as a first choice in favor of English courses. Fine arts remained the choice of $24 \%$ of the junior girls. A somewhat disheartening result emerged for eleventh grade boys. Among these subjects, the first choice was "None", which received over $24 \%$ of the votes. Second was physical education (17.74\%), and third was math (14.5\%). For some reason, these boys dislike academic subjects. A future study might explore this finding in greater depth.

When asked what they planned to do after graduating from high school, the largest percentage at all grade levels and of both sexes listed going to college as a first choice. Ninth graders were the most likely to pick college, with 73\% of the girls and $64 \%$ of the boys choosing college over other options. Eleventh graders were least likely to be college-bound, although 30\% of each sex named it as a first choice. Perhaps because these juniors were so near to graduating, they were more likely to make post-high school choices that were based on personal, social, and financial realities than were younger subjects. At any rate, $11 \%$ of the boys and $8 \%$ of the girls indicated that getting a job would be their first post-graduation plan, and marriage was the choice of $11 \%$ of the girls.

Across all three grade levels, subjects of both sexes named "getting more knowledge" as the most important thing about going to school. Among ninth grade males, "job skills" ranked a reasonable second, while "self-improvement" was important to eleventh grade girls. Even for junior boys, who previously denied liking any school subjects, gaining knowledge was the first choice, with 21\% of their total.

When asked how schools should be reorganized, the consensus was for fewer rules, more elective classes, and more free time. What was notable in this section were the exceptions to this trend. Seventh grade girls wanted no change in the school rules, and were evenly divided on the issue of elective classes.

Large majorities of each group indicated they would rather be smarter than more popular, if they could choose to be one or the other. This was especially true for eleventh grade boys, 77\% of whom wanted to be smarter. Again, this finding is even more interesting in light of their responses about academic classes.

The overall picture of these subjects' academic attitudes is one of seriousness and respect for the system. They want, for the most part, to be intelligent enough to gain the knowledge necessary to go to college. That they are largely indifferent to academic rigor does not, apparently, pose problems of inconsistency to them.

## Social Preferences

This subscale was designed to tap into subjects' everyday peer group activities. The items included questions about social gatherings, dating, and size of friendship group.

When asked to name the things they liked to do with other people, the girls in the sample expressed a wider range of interests than did the boys. At all
grade levels, girls listed "go to the movies", "talk", "attend a party", and "go shopping" as favorite pastimes. In addition, seventh grade girls named "exercise" as a preferred group activity. Boys, on the other hand, were more restricted in their responses. All ages of boys named "go to the movies" as their first choice. Seventh graders gave "exercise" as a second activity, while ninth and eleventh graders preferred to "attend a party". Club meetings and church activities were the least popular kinds of gatherings for all grade levels, while sports events and concerts were ranked second to parties by all groups. The most preferred kind of party to attend was a dance, ranked first by both sexes at all grade levels. Asked what kind of party they would like to give, "dance" and "surprise" were the top choices. In addition, junior boys named "small" party as a first choice.

For an expensive date, boys of all ages, as well as seventh grade girls, preferred to go to a "fancy restaurant" or to a "concert". Ninth and eleventh grade girls, however, named "an exotic place" as their first choice. When money is scarce, seventh graders chose to go on a "picnic" for a date, as did ninth grade boys. Girls in the ninth and eleventh grade listed "walk in the park" as a favorite inexpensive date. Junior boys were evenly divided between "walk in the park" and "fast food restaurant" with a sizable group (24\%) indicating that they would skip the date altogether if they were short of money.

All subjects reported that they spent at least an hour a day with their friends during the school week, and more than three hours a day on weekends. Eleventh graders spent the most weekday time with peers, with nearly $60 \%$ of both sexes reporting two or more hours a day with friends, just having fun. On weekends, seventh graders had the most time with friends. More than $40 \%$ of both boys and girls indicated that they spent in excess of 5 hours a day with their
friends. Most juniors (70\%) reported spending over 3 hours per weekend day with friends.

In response to the question "How many people are in your crowd," seventh and ninth grade girls gave the largest numbers. Over $40 \%$ of the seventh graders and $35 \%$ of ninth graders indicated a crowd size of $7-15$ people. An additional 32-36\% of the girls at both ages gave an answer of 4-6 crowd members. For ninth and eleventh grade boys, as well as eleventh grade girls, the most common crowd size was 4-6 people. Surprisingly, the smallest crowds were reported by seventh grade boys. Almost 70\% of this group numbered their crowd at between 2 and 6. At all grades and for both sexes, the most common number of "close friends" given was 3-5. Among junior girls, the second ranked number of friends was 1-2, with $40 \%$ of the reponses.

In sum, then, these adolescents have well-developed social lives, that include a variety of activities. Female subjects appear to have more friends than do boys, and to spend more time with them, at least through the ninth grade. Seventh grade boys seem to be the least socially mature group-not an unexpected result given the well-documented gender gap in development. The youngest boys studied here appear to be still involved with the "chumships" described by Sullivan.

Individual Activities
Items for this subscale probed subjects' solitary leisure pastimes, as well as the degree to which they kept certain aspects of their life private.

For both sexes at all grade levels, listening to music was the preferred individual activity. Among seventh graders, watching television was a popular second choice, along with "going shopping" (for girls) and "playing video games" (for boys). Patterns were similar for ninth grade subjects, except that a
moderate interest in reading (21\%) was indicated by ninth grade girls, as well. Juniors of both sexes shared the younger subjects' interest in music, but also listed "thinking" as something they liked to do when alone ( $41 \%$ of girls and 26\% of boys). Television was popular only among boys at the eleventh grade level, shopping was preferred only by girls, and neither sex expressed interest in playing video games.

Half of the seventh graders of both sexes described themselves as being "a fairly open person, with few secrets." Ninth and eleventh graders also reported being "open" more often than not. Only about $20 \%$ of the respondents at each grade level described themselves as having "a lot of things I don't tell anyone, even a close friend." These findings are consistent with the notion of adolescent friends providing emotional support for each other.

When asked to indicate potential areas of concern that they would prefer to keep private, all groups named "family matters" and "sex" as the two most personal concerns. "Money problems" ranked in the top four for each group, as did "problems with the law" for all groups except junior boys, who ranked it 6th out of 9 concerns. "Religion" and "school problems" were not considered highly personal by any group. Table 10 contains rankings of these areas by grade and sex.

Insert Table 10 about here

Two of the results reported in this section deserve extra comment. It is dismaying to discover the low value placed on reading as an individual activity by these subjects, especially in view of their previously stated desires to "get more knowledge" and be "smarter" in school. It would be worth the effort of educators
to explore ways of enhancing the importance of recreational reading, and to facilitate its integration into students' daily lives. A second, and unrelated, finding worth note is the high ranking given to sexual concerns as an area not to be discussed with friends. Popular thought has held that teenagers, especially boys, were very open with each other in talking about sex. Whether the reluctance to discuss sex reported here is a sign of greater sexual responsibility or of greater ignorance than might have been predicted is not clear.

## Future Orientation

For this subscale, subjects were asked to rank " 10 things about being an adult" in the order of importance they would have for the subject "ten years from now." Table 11 contains these rankings by grade and sex.

Insert Table 11 about here

Having a satisfying career was ranked first by all groups, while political activity was ranked last by all groups. "Being in love" was ranked slightly higher by girls than boys at each age, but "being married" was ranked higher by boys than girls, except in the eleventh grade. Interestingly, "having children" received its highest ranking from seventh grade boys, who placed it 5th, and its lowest ranking-8th--from seventh grade girls. The other groups gave it a rank of 6 .

Briefly, these subjects may be described as having rather conventional aspirations for their young adult years. The themes of work and love are dominant, and there is little apparent interest in the larger society, as demonstrated by the low rankings given to politics, travel, and being well-known.


#### Abstract

Values There were three items included in this subscale, each of which consisted of a dilemma vignette and 3 or 4 possible solutions. Subjects were asked to choose one solution for each item.

The first dilemma concerns going away to a university versus staying home to help the family business while attending a local college. Among seventh graders, $80 \%$ indicated they would go away to the university, as did $80 \%$ of juniors and almost $90 \%$ of ninth graders. There were differences, however, in the reasons given for going away. Seventh graders were more likely to go to the university for academic reasons, whereas eleventh graders gave the need for independence as a reason to leave home. Ninth graders were slightly more concerned with independence than with education as a prime factor.

The second item on this subscale deals with the conflict between personal accomplishment at a price-in this case, olympic swimming-and the need for a social life. Three options are offered: concentrate on training for the team, concentrate on building friendships, or try to find a balance. All groups indicated that they would sacrifice their social life in order for a chance to be on the olympic team. This result was strongest among juniors, with $80 \%$ of both sexes "going for the gold." The lowest percentage choosing competition was among seventh grade boys (57\%). Of those subjects choosing not to concentrate on swimming, very few expressed willingness to give it up entirely.

The thiro item in the "Values" area asks the subjects to handle a case of conflicting loyalties. Specifically, they must decide whether to break a confidence in order to forestall a cousin's teenage elopement. On this item, only seventh graders were willing to break the cousin's confidence by telling the couple's parents of the elopement. An almost equal percentage of this group


(35\%) chose to try to talk the couple out of their plan. Among ninth graders, 62\% of the girls said they would try dissuading the cousin, but wouldn't tell any parents. Boys, although also favoring dissuasion, were almost as likely to take a hands-off approach to the problem, with $24 \%$ stating that the elopement was none of their business. Sixty percent of both males and females in the eleventh grade indicated that an attempt to dissuade the couple was the best response.

Taken together, the responses to these items point to a values system that emphasizes personal accomplishment and independence, as well as personal responsibility.

## Conclusions

The picture of adolescence that emerges from these descriptive analyses is consistent with current developmental theory. The girls were slightly more socially mature than the boys, and seemed to regard relationships more highly. Overall, though, sex differences were not outstanding. The shift in primary allegiance from parents to peers is apparent, yet family loyalty remained strong at all ages. In short, traditional middle class values are alive and well, at least in one Oklahoma town.

These results might best be used as a springboard for future research. It would be interesting to explore the problem areas for boys highlighted by the Academic Attitudes subscale, for example. Another worthwhile study might come from the sex differences--or lack of them-in Future Orientation. These and other issues will be pursued in subsequent investigations.

## Closing Remarks

Although the results of the research described here are not entirely conclusive, they lend empirical support to both Selman's and Sullivan's theories of adolescent social development. There is, clearly, an increasing ability to
understand others' thoughts and feelings that becomes obvious during adolescence. This is consistent with Selman's Mutual Perspective-Taking stage. At the same time, the convergence of intimacy scores between same-sex and cross-sex dyads over adolescence provides evidence of the isophilic to heterophilic shift described by Sullivan. This study has been worth the effort, then, in terms of clarifying theoretical links between the two models. Sex differences did not emerge as expected, in either the dyad analysis or the descriptive data. This is in line with some previous findings (cf. Berndt, 1982; Davidson, et al., 1980; Diaz \& Berndt, 1982), suggesting that long-held notions of different kinds of friendship among males and females may need to be revised.

These findings must be interpreted cautiously, with two specific caveats in order. First, the internal consistency of the questionnaire items is weak enough--especially on the Values and Academic Attitudes subscales-to cast suspicion on any significant results. Fortunately, most of the significant F-ratios emerged from Future Orientation, the subscale having the highest coefficient alpha. A goal for subsequent studies will be to improve this instrument. Second, there is sufficient evidence of stereotypy to warrant caution on all subscales. Using a measure of stereotypy as a covariate might be advisable in future research of this type, a technique employed by Diaz and Berndt (1982).

In an applied sense, this investigation was valuable to educators, youth service workers, and even to those concerned with the juvenile justice system. Professionals who interact with adolescents are certainly aware of the salience of the teenage friendship system, although they may lack the specific skills and information to use their knowledge optimally. Building on this line of research, more effective interventions into troubled peer relationships may be planned. Similarly, educational strategies may be devised that more closely follow the
affective development of the students. Finally, a variety of social policy issues might be more properly addressed using results like those from this study. In short, any situation involving adolescents in groups is better understood and dealt with once the interpersonal dynamics typical of such settings have been outlined. It is hoped that the present investigation will be valuable in this regard.

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Figure 1
Future Orientation Mean Scores: Same and Cross-Sex Dyads by Grade


Table 1
Means for all Subscales

| $\overline{\mathrm{X}}$ | Academic | Social | Individual |  | Future |
| :--- | :---: | :---: | :---: | :---: | :---: |
| (SD) | Attitudes | Preferences | Activities | Values | Orientation |
| 7th | 3.48 | 7.89 | 7.48 | 1.23 | 4.71 |
| grade | $(1.06)$ | $(1.78)$ | $(2.08)$ | $(.86)$ | $(1.70)$ |
| 9th | 3.74 | 8.57 | 8.06 | 1.30 | 5.35 |
| grade | $(1.03)$ | $(1.86)$ | $(1.72)$ | $(.82)$ | $(1.72)$ |
| 11th | 4.28 | 8.88 | 8.20 | 1.36 | 5.86 |
| grade | $(1.08)$ | $(2.25)$ | $(2.20)$ | $(.97)$ | $(1.76)$ |

Table 2
F-Ratios for ail Subscales

|  |  | Academic <br> Attitudes |  | Social <br> Preferences |  | Individual <br> Activitles |  | Values |  | Future <br> Orientation |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Source | df | SS | F | SS | F | SS | F | SS | F | SS | F |
| Grade | 2 | 15.32 | 5.96** | 23.47 | 2.30 | 13.58 | 1.21 | . 42 | . 23 | 30.86 | 3.68* |
| Sex of Target | 1 | 1.37 | 1.07 | 3.9 | . 76 | 6.36 | 1.13 | 1.38 | 1.52 | 4.01 | . 96 |
| Grade X Sex |  |  |  |  |  |  |  |  |  |  |  |
| of Target | 2 | 1.55 | . 60 | 12.07 | 1.18 | . 78 | . 07 | 1.83 | 1.01 | 12.41 | 1.48 |
| Sex of Friend ${ }^{\dagger}$ | 1 | . 04 | . 04 | 2.16 | 3.51 | 1.43 | . 22 | 2.18 | 8.92 | 1.55 | 22.45* |
| $\text { Sex of Friend } X^{+}$ |  |  |  |  |  |  |  |  |  |  |  |
| Grade | 2 | . 51 | . 23 | 6.50 | 5.28 | 10.14 | . 78 | . 10 | . 19 | 6.21 | 45.05* |
| Sex of Friend $\mathrm{X}^{+}$ |  |  |  |  |  |  |  |  |  |  |  |
| Sex of Target | 1 | . 0002 | . 00 | 7.82 | 12.70 | 5.86 | . 91 | . 20 | . 82 | 3.10 | 45.03* |

${ }^{\dagger}$ These tests used Type III MS for Sex of Friend X Grade X Sex of Target as an error term.

* p < . $05 \quad$ **p $<.01$

Table 3
Least Squares Means by Grade

|  |  | Least Squares | Standard |
| :--- | :---: | :---: | :---: |
|  | Grade | Means | Error |
|  |  |  |  |
| Academic Attitudes | 7 | 3.48 | .15 |
| Social Preferences | 9 | 3.74 | .16 |
|  | 11 | 4.28 | .15 |
| Irdividual Activities | 7 | 7.89 | .24 |
|  | 9 | 8.57 | .26 |
|  | 11 | 8.88 | .25 |
| Values | 7 | 7.48 | .23 |
|  | 9 | 8.06 | .25 |
|  | 11 | 8.20 | .24 |
|  | 7 | 1.23 | .12 |

Table 4
Means for Future Orientation by Sex of Friend and Grade

|  | Female Friends | Male Friends |  |  |
| :--- | :---: | :---: | :---: | :---: |
|  | $\bar{X}$ | S.D. | $\bar{X}$ | S.D. |
| 7th Grade | 4.63 | 1.72 | 4.80 | 1.57 |
| 9th Grade | 5.35 | 1.77 | 5.35 | 1.69 |
| 11th Grade | 6.28 | 1.78 | 5.46 | 1.72 |
|  |  |  |  |  |

Table 5
Means for Future Orientation by Sex of Friend and Sex of Target

|  | $\bar{x}$ <br> (SD) | Sex of Target |  |
| :---: | :---: | :---: | :---: |
|  |  | Female | Male |
| O <br> $\substack{0 \\ -7 \\ =1 \\ \hline 1}$ | $\begin{aligned} & \underset{H}{\mathscr{H}} \\ & \underset{\tilde{\sigma}}{\underset{\sim}{\Xi}} \end{aligned}$ | $\begin{gathered} 5.4 \\ (1.71) \end{gathered}$ | $\begin{aligned} & 5.44 \\ & (1.8) \end{aligned}$ |
| $\begin{aligned} & \mathbf{u} \\ & \underset{\sim}{*} \\ & \dot{\sim} \end{aligned}$ | $\begin{aligned} & \stackrel{0}{7} \\ & \underset{\Sigma}{\pi} \end{aligned}$ | $\begin{gathered} 4.87 \\ (1.82) \end{gathered}$ | $\begin{array}{r} 5.53 \\ (1.51) \end{array}$ |

Table 6
Means for Future Orientation by Sex of Friend

|  | $\overline{\mathbf{x}}$ | S.D. |
| :--- | :--- | :--- |
| Female Friends | 5.42 | 1.76 |
| Male Friends | 5.20 | 1.66 |

Table 7
Means for Future Orientation: Same-Sex and Cross-Sex Dyads

|  | $\bar{x}$ | S.D. |
| :--- | :---: | :--- |
| Same-Sex Dyads | 5.41 | 1.61 |
| Cross-Sex Dyads | 5.15 | 1.81 |

Table 8
Correlations Among Subscales

|  | Academic <br> Attitudes | Social <br> Preferences | Individual <br> Activities | Values | Future Orientation |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Academic |  |  |  |  |  |
| Attitudes |  |  |  |  |  |
| Social |  |  |  |  |  |
| Preferences | .25* |  |  |  |  |
| Individual |  |  |  |  |  |
| Activities | .27* | .19* |  |  |  |
| Values | . 06 | -.25* | . 04 |  |  |
| Future |  |  |  |  |  |
| Orientation | .20* | . 09 | . 03 | .184* |  |
| *p < . 05 |  |  |  |  |  |

Table 9
Friendship Dyads vs. Non-friend Pairs: t-tests by Grade

|  | t | 7th grade | 9th grade |
| :--- | :---: | :---: | :---: |
|  |  | 11th grade |  |
| Academic Attitudes | 1.53 | -.45 | $3.68^{*}$ |
| Social Preferences | 1.48 | $2.59 *$ | $5.86 *$ |
| Individual Activities | .22 | .33 | 1.4 |
| Values | .17 | -.95 | .45 |
| Future Orientation | .34 | .65 | 1.22 |
| ${ }^{*} \mathrm{P}<.05$ |  |  |  |

Table 10
Areas of Privacy Ranked by Grade and Sex

| Area of Concern | Rank |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 7th Grade |  | 9th Grade |  | 11 th Grade |  |
|  | Females | Males | Females | Males | Females | Males |
| Social life |  | 6 |  | 3 | 7 | 5 |
| Money problems | 3 | 4 |  | 4 | 4 | 4 |
| Family matters | 1 | 1 |  | 1 | 2 | 1 |
| School problems | 7 | 8 | 9 | 6-7 | 9 | 9 |
| Personal hygiene/ health |  | 7 |  | 6-7 | 5 | 3 |
| Feelings toward others | 8 | 5 |  | 8 | 6 | 7 |
| Sex | 2 | 2 | 2 | 2 | 1 | 2 |
| Religion | 9 | 9 | 8 | 9 | 8 | 8 |
| Problems with the law |  | 3 |  | 5 | 3 | 6 |

Table 11
Future Orientation: Rankings by Grade and Sex

| Issue | Rank |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 7th Grade |  | 9th Grade |  | 11th Grade |  |
|  | Females | Males | Females | Males | Females | Males |
| A satisfying career | 1 | 1 | 1 | 1 | 1 | 1 |
| Earning a lot more money | $2$ | 2 | $3$ | 2 | 4 | 2 |
| Having children | 8 | 5 | 6 | 6 | 6 | 6 |
| Being active in politics | 10 | 10 | $10$ | 10 | 10 | 10 |
| Being married | 4 | 3 |  | 4 | 3 | 4 |
| Doing volunteer work in the community | 7 | 8 | 9 | 9 | 9 | 9 |
| Travelling to other countries | 9 | 9 | 8 | 8 | 7 | 8 |
| Being well-known | 6 | 7 | 7 | 7 | 8 | 7 |
| Spending time with friends | 5 | 6 |  | 5 | 5 | 5 |
| Being in love |  | 4 |  | 3 | 2 | 3 |

APPENDIX A
PROSPECTUS

# THE ANALYSIS OF ADOLESCENT FRIENDSHIPS: <br> SAME-SEX AND CROSS-SEX PATTERNS <br> IN GRADES SEVEN, NINE, AND ELEVEN 

One of the most enduring themes of adolescence-among both popular and scholarly writers-is the shift in interpersonal relationships from the same-sex clique of late childhood to the intimate cross-sex dyad of adulthood. Although it is commonly agreed that such a transition occurs, there has been surprisingly little scientific scrutiny of the processes involved. Dunphy (1963) described changing friendship patterns across adolescence in his classic cliques-and-crowds study, but the interpersonal and intrapersonal factors behind the behaviors he reported were not explored.

The move to cross-sex intimacy during adolescence may be related to other physiological and psychological changes. It is reasonable to assume, for instance, that one's awakening sexuality would contribute to a desire for companionship with peers of the opposite gender. There is more at work, however, than merely increased sexual attraction. It has been shown (for example Elkind, 1967; Selman \& Byrne, 1974) that a capacity for greater interpersonal closeness with both sexes emerges during adolescence, probably as a function of the individual's development of formal thought.

It is the purpose of this research to explore the world of adolescent peer relationships from a social cognitive perspective. More narrowly, the goal is to determine whether there are developmental differences among same-sex and
cross-sex friendship dyads in friends' sensitivity and self-disclosure to one another. Stated concretely, does an individual's same-sex friend know him or her as well as a cross-sex friend does? Do same-sex and cross-sex friends know different things about a person? Are there changes at different ages in the patterns of the ways friends know about each other?

In the following chapters, two relevant theory bases will be discussed. Specifically, Sullivan's (1953) theory of preadolescent chumships and the subsequent shift to heterosexual intimacy will be addressed, followed by an overview of Selman's (1971; 1980) model of adolescent role taking. Supporting empirical literature will also be reviewed. Then, a proposed study will be described that seeks to answer the questions listed above.

## Review of Literature

For the purposes of this review, literature pertaining to the present area of investigation will be discussed under three headings. First, a summary of research dealing with adolescent friendships in general will be presented. This section of the review is intended to provide a broad context for the present study, as well as a firm conceptual anchor for the remainder of the related literature. Features and functions of close peer relations will be emphasized, and a brief overview of the most frequently studied variables will be offered. In support of Sullivan's theory, the next section will include a more extensive review of research and theory relating to intimacy in friendships, including age and sex differences. In the final section, Selman's model of role taking will be presented, along with a representative sampling from the social cognition literature.

## Adolescent Friendships

Early adolescence is characterized by major affectional shifts away from parents and to the peer group (Montmayor, 1982), with some sex differences in the pattern of the shifts apparent. O'Donnell (1979) found that 8th grade males had greater positive affect toward parents than for friends, but that llth grade subjects showed the same affection for parents and peers. All subjects--8th and Uth grade males and females-reported more positive affect for their female friends than for their male friends, even though their male and female parents were regarded approximately equally.

Hunter and Youniss (1982) found that intimacy between friends was lower than in parent-child relationships at 4th grade, but had surpassed it by 10th grade. These authors further reported that nurturance increased between friends with age, and that female friendships are more intimate than male.

Crockett, Losoff, and Peterson (1984) conducted one of the few longitudinal studies of school peer groups and individual friendships over grades 6-8. Findings were that cliques develop during the 7th grade, with popularity being the most salient dimension of clique membership. The authors found no sex differences in the relative frequency of friendship dyads to cliques. In an investigation of adolescents' orientation to parents and peers across a range of topics, Sebald and White (1980) found that females were more parent-oriented than males, especially in areas concerning opposite-sex relationships. Both sexes were likely to consult their parents about long-term concerns (e.g., college, careers), but to follow their friends' advice when the issue was one of more immediate importance (e.g., hobbies, social activities, casual dating).

A number of authors have studied the role of friendship in other aspects of adolescent development. Bukowski and Newcomb (1983) investigated the
multidimensional nature of self-concept and the role of peer relations in identity formation in early adolescence. They found perceived social competence to be the best predictor of self-worth, with some gender differences. For boys there was a strong association between self-perceptions of social and physical competence, a finding that may explain the play-based, group oriented friendship patterns typical of young teenage males. For girls, the strongest link was between perceived social competence and actual popularity, suggesting that girls are more sensitive and have a more realistic notion of their social skills.

Youniss (1982) argued in a position paper that friendship is an important vehicle for enhancing moral development. According to Youniss, the egalitarian nature of the relationship (as compared to parent-child interactions) fosters respect and consideration of others' feelings, opinions, and rights. In a similar vein, Wright and Keple (1981) defined friendship as "a relationship characterized by voluntary interdependence in which the individuals respond to one another personalistically or as persons-qua-persons" (p. 560). These authors also delineated four values of friendship: (1) ego-support value, (2) self-affirmation value, (3) stimulazion value, and (4) utility value.

In a content analysis of children's descriptions of peers, Honess (1980) found that 13 -year-olds (the oldest group studied) were more likely to include self-references when describing peers. Rather than interpreting this finding as evidence of increased self-centeredness, Honess concluded that it provided empirical support for Sullivan's notion of a "preadolescent" period of development when chumships hinge on collaboration in satisfying each child's needs.

Spurgeon, Hicks, and Terry (1983) looked at sex differences in the determinants of friendships among 11 and 12-year-olds. Their findings further
strengthen the idea that girls' peer relations are closer and more exclusive, while boys are oriented more to shared group activities. Furthermore, girls perceived their very best friends differently from their second and third best friends, while boys perceived all three levels of friendship as the same. In a similar connection, boys cited equal numbers of internal/psychological and contractual reasons for friendship, whereas girls cited many more internal/psychological bases for their close same-sex relationships.

In a study of the effects of having a close friendship on adjustment to a new school, Berndt and Hawkins (1984) found that for both sexes, the transition to junior high school was easier for subjects who had a close same-sex relationship. In this study, "adjustment" was operationalized as self-esteem and positive attitudes toward the new school. The results were reported as correlations, with the usual caveats about causality. Nevertheless, the authors pointed to their findings as further substantiating the notion of early adolescent friendships as an important source of emotional support.

In sum, then, the picture of early adolescence that emerges from the foregoing studies is one of young people becoming increasingly less dependent on family and more reliant on peers for day-to-day interpersonal sustenance. Friends supercede parents as valued sources of social feedback, emotional support, and companionship. There are differences, however, between boys and girls in the salience of certain friendship functions.

## Intimacy in Adolescent Friendships

The newly-emergent closeness between friends that is found in early adolescence is generally termed "intimacy". According to Sullivan (1953), intimacy is a feature of dyad relationships that first appears during preadolescence. In the empirically based literature, intimacy is usually defined
either as intimate knowledge (friends knowing the details of one another's personal lives to a degree surpassing the superficial knowledge that acquaintances might have) or as self-disclosure (friends telling each other about their private thoughts).

An extensive study of friendships among Soviet adolescents yielded results that differ from most U.S. findings. Kon and Losenkov (1978) found that girls' friendships were shallower and less intimate than boys', and that boys' friendships were of longer duration. Interestingly, subjects of both sexes in this study were more likely to describe an "ideal friend" as being male. In his classic comparative study of U.S. and Soviet education, Bronfenbrenner (1970) reported that girls in the USSR were far more adult-oriented than their male peers, or their American counterparts. Perhaps this feature of Soviet girlhood causes female adolescents to de-emphasize their friendships. If so, then the Kon and Losenkov results are more readily interpreted in terms of cultural differences.

Mark and Alper (1980) defined intimacy as "social penetration" through self-disclosure, and explored its relationship to sex role by means of a projective instrument. They found that women were more likely than men to write stories having intimacy imagery. The men who did write intimacy imagery stories, however, were less likely than other males to be masculine stereotyped.

Several authors have investigated self-disclosure among adolescents. Rivenbark (1971) found that girls are more disclosing than boys, especially to cross-sex friends. Both sexes, however, preferred same-sex friends over crosssex friends as targets of self-disclosure. Although there was no significant decrease in disclosure to parents among these adolescents, there was a sharp increase in disclosure to peers between grades 8 and 10.

Davidson, Balswick, and Halverson (1980) argued that the sex differences in self-disclosure cited in the literature may be spurious, and dependent upon the types of questionnaire items used. Using a factor analytic procedure, these authors found four dimensions of self-disclosure, with sex differences related to 3 of the factors. Girls were more self-disclosing on Revealing General Information and Revealing Personal Information, while males were higher on Revealing Sexuality to parents. No sex differences were found on Revealing Sexuality to Peers.

Peoples' expectations of appropriate dyad behavior and self-disclosure has been shown to vary with the closeness and gender of the pair (Rands \& Levinger, 1979). In close relationships, cross-sex pairs were perceived as more likely to engage in self-disclosure and physical contact than were same-sex dyads. Female pairs were expected to engage in greater self-disclosure, otherenhancement, and physical contact than were male friends. Furthermore, while females were perceived as being capable of intimacy with either sex, males were expected to obtain emotional gratification primarily from cross-sex relationships and were thus thought to be more dependent than females on heterosexual attachments.

Using a young sample (grades 6-8) and a longitudinal design, Crockett, et al. (1984) found that girls were more self-disclosing than boys, although there were no sex differences in reported satisfaction with best-friend relationships. Although all subjects said they had at least one good friend, only $5 \%$ of them volunteered a cross-sex peer as being a close friend. A developmental trend did emerge with regard to cross-sex relationships over grades 6-8, however, with both genders expressing an increasing interest in the opposite sex.

Further support for the notion of gender differences in the importance of cross-sex relationships may be found in the work of Wright and Keple (1981). In this study, girls reported both same-sex and cross-sex peer relationships to be strong, intense, and important. Boys, however, found their greatest rewards in cross-sex friendships, with male-male dyads being least rewarding.

In an effort to determine the role of sexual maturation in the development of cross-sex friendships and dating behavior, Dornbusch, et al. (1981) subjected a variety of data from a nationwide probability sample to a series of regression analyses with "dating" as the outcome variable. The authors found age to be a better predictor of dating than was sexual maturation, there being a 1 to 2 year interval between pubescence and the onset of dating behavior.

Diaz and Berndt (1982) studied developmental changes in children's intimate and nonintimate knowledge of a best friend. Using actual friendship pairs from grades 4 and 8, the authors found that knowledge of external characteristics, such as a friend's birthdate or telephone number, is distinct from intimate knowledge, and that age changes occurred only for intimate knowledge. Female dyads reported friendships of longer duration, and a greater knowledge of external characteristics. No other sex differences were found in this study.

The best predictor of both external and intimate knowledge was the frequency of contact between friends. The only predictor of intimate knowledge that showed age changes, however, was level of cognitive maturity (as measured by the Raven's Standard Progressive Matrices test). This finding, coupled with the age change in intimate knowledge, was interpreted by the authors as evidence of a cognitive component to intimacy between close friends. The Diaz and Berndt results are important to the present study because they lend support
to the author's use of Selman's model of social cognition as role taking. This model will be discussed in the following section.

One of the few studies designed primarily to compare same-sex and crosssex friendships in adolescence was conducted by Sharabany, Gershoni, and Hofman (1981). Using a large sample of Israeli students in grades 5, 7, 9, and 11, the authors looked at age and sex differences on eight dimensions of intimacy, as follows: (1) frankness and spontaneity, (2) sensitivity and knowing, (3) attachment, (4) exclusiveness, (5) giving and sharing, (6) imposing and taking, (7) common activities, and (8) trust and loyalty. Several interesting results emerged. With regard to same-sex relationships, girls reported more intimacy than boys, although intimacy was fairly stable over time for both sexes, with only the "frankness and spontaneity" and "knowing and sensitivity" increasing with age. Also, girls were higher on "attachment", "giving and sharing", and "trust and loyalty" than were boys. Cross-sex intimacy was low for both sexes at grade 5, after which girls' scores increased more rapidly than boys'. By the upper grades, girls reported much greater "attachment" and "trust and loyalty" toward boys than vice versa. These authors concluded that same-sex intimacy is already "in process" by preadolescence, but that cross-sex intimacy is only in a very early stage. The age-related increases in "knowing and sensitivity" were interpreted as being a function of cognitive development and improved roletaking skills. A temporary drop in same-sex intimacy, observed at grade 7, may be due to the onset of cross-sex relations. Clearly, this line of research is worth pursuing further.

To summarize, the following may be concluded from the foregoing review:
(1) Intimacy among friends increases from middle childhood to early adolescence.
(2) Female dyads are more intimate than male dyads. The one clear exception to this (Kon \& Losenkov, 1978) may be explained by cultural factors.
(3) The onset of cross-sex intimacy occurs earlier among females than males, and develops more rapidly.
(4) Increased intimacy across adolescence may be a function of increasing cognitive maturity.

## Social Cognition

If, as has been briefly noted in the preceding section, an adolescent's capacity for intimacy is somehow related to his or her level of cognitive functioning, it becomes necessary for the researcher of intimacy to also understand the mental processes and structures associated with the adolescent years. More directly, it is essential for this research to be firmly anchored to the framework of social cognition.

Social cognition may be defined as the using of cognitive skills to understand and deal with social interactions in the real world (Muuss, 1982). More a synthesis than a theory in its own right, this area has been influenced by cognitive developmental psychology (e.g., Kohlberg, 1969; Piaget, 1932) and social psychology (e.g., Byrne, 1974; Mead, 1934). Social cognition occupies a conceptual ground between cognitive development and moral development.

Selman has advanced a model of social cognition ( 1971 ; 1980) that focuses on role taking as an attribute that increases with an individual's cognitive maturity. The model is based on a set of five stages that roughly parallel Piagetian levels of cognitive development. Briefly, Selman's stages and sequence are as follows:

Stage 0 - Egocentric. Preoperational, very little decentering (age 3 to 6)

Stage 1 - Subjective perspective-taking. The transition to concrete operations (age 5 to 9)

Stage 2 - Reciprocal perspective-taking. Concrete operations (age 7 to 12)
Stage 3 - Mutual perspective-taking. Transition to formal operations (age 10 to 15)

Stage 4 - Societal perspective-taking. Adult functioning (age 12 to adulthood)

The present research draws largely on stages 3 and 4 of Selman's model. It is at these stages that adolescents become increasingly able to step outside their own role in a friendship interaction and to view the dyad as a third person might. The result ought to be a clearer understanding of another's thoughts and feelings that goes beyond superficial knowledge. In other words, adolescents' maturing ability to take their friends' perspectives ought to facilitate the development of intimacy in their close personal relationships.

The invariant sequence of Selman's stages has been substantiated in a longitudinal follow-up study (Gurucharri \& Selman, 1982) of his original sample of young male subjects. Only one case of regression was found among the 41 subjects who were re-interviewed. More important, the amount of change over the 5 year span of the study was roughly equivalent for all subjects, regardless of their initial age or developmental level.

Kurdek and Krile (1982) developed a written instrument as an alternative to Selman's more time-consuming interview. Using it in an empirical study of 3rd through 8th graders, these authors found a significant developmental trend in interpersonal understanding, with girls scoring higher than boys overall. More important for the present research, Kurdek and Krile reported higher interpersonal understanding among popular children. Also, an age trend emerged
linking peer acceptance to level of interpersonal understanding in older children more than among the younger subjects.

It seems reasonable to assume, on the basis of these empirical findings, that a developmental change in cognitive level will affect the quality of adolescent friendships. Whether or not intimacy itself increases with cognitive maturity is an issue open for study.

## Summary

In sum, the research results presented in the preceding sections describe adolescence as a time of considerable change in the realm of social interactions. The family is challenged by peers as the adolescent's primary reference group. Against this backdrop of social independence from the family, the adolescent is striving to form intimate relationships with same-sex friends, then later, with opposite sex friends. For girls, the development of intimacy seems to come earlier than for boys. Facilitating the growth of a capacity for intimacy is the adolescent's increased cognitive level, especially when manifest as everimproving role-taking skills.

## Theoretical Rationale

Sullivan (1953) wrote at length on the critical importance of developing intimacy during the preadolescent years. It is at this time, according to Sullivan, that lifelong patterns of interpersonal relating are set in motion. The preadolescent child-by means of a close "chumship" and an intricate peer network-becomes newly capable of viewing the self through other people's eyes. This awakening ability to take another's role in an interaction is similar to Selman's Stage 3, or Mutual Perspective Taking (1980).

With the onset of puberty, the child, now classified by Sullivan as an "early adolescent", begins to shift intimacy needs from an isophilic (same-sex) object to
a heterophilic (cross-sex) object. In other words, the young teenager strives to duplicate the intimacy of chumship in a new relationship with an opposite sex peer, using the interpersonal skills acquired during the preadolescent years. This shift in the object of intimacy takes several years to effect, and may not be complete until early adulthood.

## Problem Statement

Both Sullivan and Selman have emphasized the importance of role-taking abilities in facilitating intimacy. It is the task of the researcher to explore this theoretical link. The purpose of the present study is to investigate the nature and amount of self-disclosure and intimate knowledge reported by close friends across the pre- to mid-adolescent years. Most other studies using a crosssectional design to look for developmental change in friendships have either begun or ended with early adolescence. Consequently, there are relatively few examples of the same intimacy measure being employed on a group of subjects whose ages span the critical period described by Sullivan (1953). Similarly, there has been little direct scrutiny of different patterns of same and cross-sex intimacy between male and females in this age group (cf. Sharabany, et al., 1981). A second purpose of the present study, then, is to delineate gender differences in the timing and quality of the shift to cross-sex intimacy.

## Hypotheses

Drawing on the literature and conceptual framework presented, the following hypotheses will be tested:
(1) At every grade level, girls will have more accurate perceptions of their friends than will boys.
(2) There will be an increase with grade level in the accuracy of perceptions of same-sex friends.
(3) There will be a decrease with grade level in the discrepancy between accurate perceptions of same-sex friends and accurate perceptions of cross-sex friends.
(4) Female target subjects will be more accurately perceived by their friends of both sexes than will male target subjects.
(4a) At every grade level, girls will have more accurate perceptions of boyfriends than boys have of girlfriends.

> Method

## Sample

Subjects for this investigation are all the 7th, 9th, and lith graders in a medium sized Oklahoma town. The community is predominately working and middle class, with a racial mix that is mostly white but also contains numbers of Native American or black residents. The town is a county seat and a commercial center, with an economy largely based on agriculture. Access to the subjects was provided by the local superintendent of schools, with the support of the principals and counselors at the junior high and high school attended by the students. Around 200 students from each grade level-seventh, ninth, and eleventh-will be asked to participate in the project. A subsample of 72 students from each grade level will be selected for the main analyses. Inclusion in the subsample is to be based on individuals' having close, reciprocated friendships with both sexes.

To ensure the adequacy of the subsample size, a power analysis was performed using Sample Calc, a microcomputer program (Anderson, 1982) based on the work of Cohen (1977). Results showed that 10 targets of each sex from the three grade levels is a sufficient sample size, assuming the following parameters: confidence level $=.95$, power $=.8$, and effect size $=.5$. The present
study will include 12 male and female targets, along with their same-sex and cross-sex friends, from the 7th, 9th, and IIth grades.

## Measures

Sociometric questionnaire. A one-page questionnaire, developed by the author, will be given to each student in the subject pool. Subjects will be asked to name the three males and the three females to whom they feel closest, within their own grade level and school, and to indicate how long they have known each person listed. Data from these questionnaires will be analyzed by means of a microprocessor program (Graves \& Manners, 1984), which will identify those persons (called "targets") who have reciprocated friendships with both a male and female classmate.

Self-report inventory. Each target subject will be asked to complete a 25 item questionnaire designed to tap five areas which pilot studies have shown to be salient to adolescents. The first pilot study consisted of asking open ended questions to 40 eighth graders from a big-city school district. The items were similar to those used in the present inventory. Multiple choice alternatives were formulated from these pilot subjects' responses. The second version of the questionnaire was administered to 70 eighth, tenth, and twelfth graders from a rural school district. Minor editorial changes were made based on this larger group's responses. For the final form of the inventory, the subscales and the number and type of questionnaire items pertaining to each are as follows:
(1) Social Preferences - 10 multiple choice items covering subjects' group activities.
(2) Individual Activities - 2 multiple choice items dealing with the amount and quality of time the subject spends alone. Two additional items
probe subject's likelihood to be self-disclosing about a range of personal concerns.
(3) Academic Attitudes - 7 multiple choice items tapping feelings and preferences about school subject areas, purpose, and organization.
(4) Future Orientation - one item consisting of a list of ten components of adult status. Subjects are asked to imagine that they are ten years older and then to rank the components in the expected order of importance to the subject at that future time.
(5) Values - three items, each comprised of a dilemma vignette and several choices of action.

In addition to the target subjects, those students not forming part of a friendship group identified by the sociogram will complete this survey for the purpose of descriptive analyses. These analyses will provide a picture of the developmental processes, as well as any sex differences, at work in the five interest/attitude areas probed in the questionnaire. Future research may be generated from the results. A copy of the questionnaire may be found in the appendix.

Other-report. Students identified as reciprocated close friends of the targets will fill out a questionnaire identical to the self-report, except that these students will respond to the items as they think their friend would respond.

Duration of friendship. In order to control for differences in depth of knowledge of a friend caused by the length of time the individuals have known each other, subjects will be asked to report the duration of their same-sex and cross-sex friendships. This value will be used as a covariate.

Dependent measures. The outcome variable used in the main analyses will be the absolute difference derived by subtracting each target's self-report score from the other-report scores of the same and cross-sex friends. An overall
difference score for each dyad will be obtained, as well as separate difference scores for each of the five subscales.

## Procedure

Data are to be collected through the school's regular English classes in two stages. First, all students will complete the sociometric questionnaire, naming their three best male and female friends. These responses will be analyzed by means of a microprocessor program that will generate all possible combinations of target male friend/female friend for each grade level, as well as indicating the closeness of each set of overlapping dyads. Each person's three male and three female choices will be assigned weights of 1 to 3 , with 1 being the closest friend. When the dyads are identified by the microprocessor program, the weight assigned to each dyad members ranking of the other member will be summed to provide a measure of the closeness of the relationship. For example, if two people rank each other first on the sociometric questionnaire, their dyad weight will be 2-the closest possible friendship. If they rank each other third, their weight will be 6. Dyad weights will be combined to indicate the closeness of the targets' same and cross-sex relationships. Thus, a target having a same-sex dyad weight of 4 and a cross-sex dyad weight of 3 would be assigned a total weight of 7, to indicate overall closeness. Those overlapping dyads having the lowest combined weights will be selected for the subsample first, followed by those with increasingly higher weights until 12 groups have been chosen for each sex of target. To minimize subject loss due to absence or changing friendships, selection of the subsample will be completed immediately after the sociometric data are collected.

The following day, those students identified as "targets" will be asked to fill out the self-report inventory. Their male and female friends will complete
the other-report, answering as if they were the target person named on the questionnaire. All other students will complete a self-report. When all the instruments have been returned to the author, the students will be debriefed. A short explanation of tise purpose of the study will be given, and any questions raised by the students will be answered.

## Analyses

MANCOVA. A 3 (grade of subject) X 2 (sex of target) X 2 (sex of friend) nested design will be used. Analysis will be by means of a 6 -factor MANCOVA, using duration of friendships as the covariate.

The degree of association between target's same-sex and cross-sex friends' knowledge will be determined on several levels: (1) the correlation between male and female friends' knowledge of male targets, overall and for the 5 subscales and at the 3 ages; (2) the correlation between male and female friends' knowledge of female targets, overall and for the 5 subscales and at the 3 ages.

Descriptive analyses. Age and sex differences in self-reports will be reported, using those students not part of a dyad, as well as target subjects.

## Significance of the Study

The results of this investigation will be useful both conceptually and in application. If the hypotheses are supported, the findings from this research will add clarification to Selman's model of social cognition through demonstrating adolescents' increased competence with age in knowing another's thoughts. At the same time, Sullivan's theory can be further illuminated, particularly with regard to the isophilic to heterophilic shift during early adolescence. Finally, the rudiments of a direct theoretical link between the two models may be established.

In an applied sense, this investigation will be valuable to educators, youth service workers, and even to those concerned with the juvenile justice system. Professionals who interact with adolescents are certainly aware of the salience of the teenage friendship system, although they may lack the specific skills and information to use their knowledge optimally. Building on this line of research, more effective interventions into troubled peer relationships may be planned. Similarly, educational strategies may be devised that more closely follow the affective development of the students. Finally, a variety of social policy issues might be more properly addressed using results like those anticipated from this study. In short, any situation involving adolescents in groups is better understood and dealt with once the interpersonal dynamics typical of such settings have been outlined. It is hoped that the present investigation will be valuable in this regard.

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APPENDIX B
Sociogram

## Friendship Survey

Your name $\qquad$
Grade in school $\qquad$
Circle one: Male Female
For the following questions, please list only people who are in your grade at this school. Be sure to write the first and last names of everyone you list.

Name the three boys you feel the closest to.
Boy 1.
How long have you known each other? $\qquad$
How long have you been close friends? $\qquad$
Boy 2.
How long have you known each other? $\qquad$
How long have you been close friends? $\qquad$
Boy 3.
How long have you known each other? $\qquad$
How long have you been close friends? $\qquad$
Name the three girls you feel the closest to.

## Girl 1.

How long have you known each other? $\qquad$
How long have you been close friends? $\qquad$

## Girl 2.

How long have you known each other? $\qquad$
How long have you been close friends? $\qquad$
Girl 3.
How long have you known each other? $\qquad$
How long have you been close friends? $\qquad$

## APPENDIX C

Self Report

On the next few pages are some questions about things common to people in your age group. Please answer them, as honestly as possible. You may decline to answer any questions you choose. You will be asked to make some choices from a list. Please pick your choice or choices of those that are on the list even if your most favorite is not listed.
1.Check the two (2) things on the following list you most like to do with other people.
A. Go to movies
—— B. Talk

- C. Go to video arcade
- D. Exercise (skating, horseback riding, bowling, swimming, - etc.)
E. Attend a party
F. Go shopping

2. Pick one (1) kind of party you would most like to attend.
A. Dancing
B. Birthday
C. Costume
D. Small
E. Surprise
F. Dinner
3. What kind of party would you most like to give? Pick one.
A. Dancing
B. Birthday
C. Costume
D. Small
E. Surprise
F. Dinner
4. If you had lots of money to spend, where would you most like to go on a date? Pick one.
A. Fancy restaurant
B. Movies
C. Concert
D. An exotic place
5. If you had very little money to spend, where would you most like to go on a date? Pick one.
A. Fast food restaurant

- B. Home cooked meal
- C. Picnic
- D. Go to the park for a walk
- E. Don't go on the date

6. On the average, how much time do you spend with your friends, outside of school hours, just having fun?
$\qquad$ A. Less than $1 \mathrm{hr} /$ day
B. 1-2 hrs/day
C. 2-3 hrs/day
D. More than $3 \mathrm{hrs} /$ day
7. On the average weekend, how much time do you spend with your friends, just having fun?
=
A. Less than $1 \mathrm{hr} /$ day
B. 1-2 hrs/day
C. 2-3 hrs/day
D. 3-5 hrs/day
8. How many people are in your crowd, including yourself?

|  | A. 1 <br> B. $2-3$ <br> C. <br> $\square$C. <br> D. <br> D. 15 <br> E. 16 or more |
| :--- | :--- |

9. How many close friends do you have right now?

10. Put a check by each kind of gathering where you like to be with other teenagers?

|  | A. | Parties |
| :--- | :--- | :--- |
| B. | Sports events |  |
| $-\quad$ | C. | Church activities |
| D. | Club meetings |  |
| E. | Concerts |  |

11. Pick the two (2) things you most like to do just by yourself.
A. Listen to music
—— B. Read
C. Watch TV
D. Sleep
E. Think
F. Do homework
G. Write
H. Do something artistic
I. Go shopping
J. Play video games
K. Clean your room
L. Cook
12. If you had an entire day to spend alone, doing anything you wanted, what would you do with the time? Pick two (2).
二
$=$
$=$
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$=$
A. Listen to music
B. Read
C. Watch TV
D. Sleep
E. Think
F. Do homework
G. Write
H. Do something artistic
13. Go shopping
J. Play video games
K. Clean your room
L. Cook
14. What is your favorite subject in school? Pick one (1).

15. What do you plan to do after finishing high school? Pick one (1).

|  | A. | Go to college |
| :--- | :--- | :--- |
| B. | Get a job |  |
| C. | Travel |  |
| D. | Get married |  |
| E. | Join the military |  |

15. What is the most important thing about going to school? Pick one (1).
__ A. Being with friends
—— B. Learning job skills

- C. Pleasing parents \& relatives
- D. Self-improvement
- E. Getting more knowledge

On the next three questions, imagine you are in charge of reorganizing schools. What changes would you make? Check one choice on each line.
16.
A. Tighter security $\qquad$ B. no change
C. fewer rules
17.
A. More electives
B. no change
C. more basics
18. $\qquad$ A. More free time $\qquad$ B. no change
C. more classes
19. If you had the choice of being a little smarter or a little more popular, which would you choose?
A. Smarter
B. More popular
20. Here are 10 things about being an adult we want you to rank. Imagine that it is ten years from now. Put the numbers 1 through 10 on these in the order of importance they will have for you then. Use a (1) for the most important, (2) for next most important, and so forth, and put a (10) by the one that will be least important.
A. A satisfying career
$=$
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$=$
B. Earning a lot more money
C. Having children
D. Being active in politics
E. Being married
F. Doing volunteer work in the community
G. Travelling to other countries
H. Being well-known
I. Spending time with friends
J. Being in love
21. How private a person are you? Check one (1).
A. There are a lot of things I don't tell anyone, even a close friend.
B. There are some things I won't tell a close friend.
C. There are some things I won't tell an acquaintance
D. I am a fairly open person, with few secrets
22. Teenagers often have problems or concerns in one or more of the following areas of life. Some people are private about these things-they don't discuss them with others. If you had problems like these, which ones would you prefer to keep to yourself? Put check marks by all of these that you would not talk about.
A. Social life
B. Money problems
C. Family matters
D. School problems
E. Personal hygiene/health
F. Feelings towards others
G. Sex
H. Religion
I. Problems with the law
23. You and your parents have always been very close, and have worked together to make your family strong spiritually and economically. You are a senior now, and you're trying to make the right decision about college. You have been offered a full scholarship at an excellent university 500 miles away. Your parents, however, are worried about your being so far from home. Besides, they say they really need your help with the family business. There is a small community college in town that you could attend while living at home. Your parents want you to turn down the scholarship and stay with them while you attend the community college.

How would you handle this situation?
$\qquad$ A. I would go the the university because I would be getting a much better education, and it would save my family the tuition money. I can stay in close touch with my family by telephone, writing and visiting.
B. I would go to the university. I love my parents, but I also need my independence. It will be better for all of us if I spend some time away from home.
C. I would stay in my community and work in the family business to help out. I would enroll in the community college and get the best education they have to offer.
24. You have always been the best swimmer in your school. You love to swim, feeling as natural in water as you do on dry land. Two years ago, you began to swim in races, and found that you really enjoyed the pressure of competition and the thrill of winning.

Your coach and your parents have been very supportive, encouraging you and helping you right along. Lately, though, you are not as close to your friends as you once were. It seems that you are spending all your time either training or competing, at the expense of your social life.

You realize it's time to make a choice. You know you have a chance at the Olympic team, if you concentrate on swimming for the next year. However, you're afraid that by then you will have completely lost touch with your friends, and you wonder if it's worth it.

How would you handle this situation?
A. I would concentrate on my potential as a swimmer, and try to make the Olympic team. My real friends will support me in this decision.
B. I would cut back my travel and competition, but not eliminate it because I enjoy it too much. I would give up my hopes for the Olympic team in order to spend some time with my friends.
C. I would swim for recreation only in order to make time for developing the kind of social life someone my age wants.
25. Your cousin Pat has been dating Chris for over a year. They are both 16. One day after school, they swear you to secrecy, then tell you that they are running away together that night, and plan to be married within a few days. They don't ask you for help or advice - they just want to share their secret with someone they trust.

You have grown up with both of them and the parents of all of you are very close. Although you don't want to cause trouble for Pat or Chris, you think they are making a mistake by running away, and you aren't sure whether keeping their secret is the best thing to do.

How would you handle this situation?
A. I would tell Pat's and Chris' parents of their plan because they are too young to get married and their parents have a right to know. I hope they will forgive me later when they realize what a mistake I saved them from.
B. I would try to talk them out of their plan. I would advise them to at least delay leaving until they have a chance to really think it over. I would tell them to discuss it with their parents, minister or school counselor.
C. I think this is their business, and I have no right to interfere in it. I won't try to tell them what to do, nor will I break my vow of secrecy.
D. I would figure out a way to make sure they get caught without actually telling on them. I may call and wake their parents with a wrong number as they are getting ready to sneak out.

APPENDIX D
Other Report

On the next few pages are some questions about things common to people in your age group. Please answer them as honestly as possible, about your friend whose name is below. You may decline to answer any questions you choose. You will be asked to make some choices from a list. Please pick the choice or choices you think your friend would pick of those that are on the list even if his or her most favorite is not listed.

Name of Friend

1. Check the two (2) things on the following list your friend most likes to do with other people.
$\qquad$ A. Go to movies
B. Talk
C. Go to video arcade
D. Exercise (skating, horseback riding, bowling, swimming, etc.)
E. Attend a party
—— F. Go shopping
2. Pick one (1) kind of party your friend would most like to attend.
=
$=$
$=$
A. Dancing
$=$
$=$
B. Birthday
C. Costume
D. Small
E. Surprise
F. Dinner
3. What kind of party would your friend most like to give? Pick one.

| $\square$ | A. <br> B. | Dancing |
| :--- | :--- | :--- |
| Birthday |  |  |
| C. | Costume |  |
| $\square$ | D. | Small |
| E. | Surprise |  |
| F. | Dinner |  |

4. If your friend had lots of money to spend, where would he/she most like to go on a date? Pick one.

- A. Fancy restaurant
- B. Movies
C. Concert
D. An exotic place

5. If your friend had very little money to spend, where would he/she most like to go on a date? Pick one.
A. Fast food restaurant
B. Home cooked meal
C. Picnic
—— D. Go to the park for a walk

- E. Don't go on the date

6. On the average, how much time does this person spend with his/her friends (including you), outside of school hours, just having fun?
A. Less than $1 \mathrm{hr} / \mathrm{day}$
——B. 1-2 hrs/day
C. 2-3 hrs/day
D. More than $3 \mathrm{hrs} / \mathrm{day}$
7. On the average weekend, how much time does this person spend with his/her friends (including you), just having fun?
$\qquad$ A. Less than $1 \mathrm{hr} /$ day
—— B. 1-2 hrs/day
$\square$
C. 2-3 hrs/day
D. 3-5 hrs/day
E. More than $5 \mathrm{hrs} /$ day
8. How many people are in your friend's crowd, including himself/herself?
A. 1
— B. $\quad$ 2-3
—— C. ${ }^{4-6}$
—— D. 7-15

- E. 16 or more

9. How many close friends does this person have right now?
_ A. 0

- B. 1-2
— C. 3-5
— D. 6-10
- E. 11 or more

10. Put a check by each kind of gathering where your friend likes to be with other teenagers?

- A. Parties
B. Sports events
C. Church activities
D. Club meetings
E. Concerts

11. Pick the two (2) things your friend most likes to do just by himself/herself?
A. Listen to music
——B. Read
— C. Watch TV
—— D. Sleep

- E. Think
—— F. Do homework
G. Write
H. Do something artistic
I. Go shopping
J. Play video games
K. Clean your room
L. Cook

12. If your friend had an entire day to spend alone, doing anything he/she wanted, what would he/she do with the time? Pick two (2).
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$=$
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$=$
$=$
A. Listen to music
B. Read
C. Watch TV
D. Sleep
E. Think
F. Do homework
G. Write
H. Do something artistic
I. Go shopping
J. Play video games
K. Clean his/her room
L. Cook
13. What is your friend's favorite subject in school? Pick one (1).
A. Language Arts/English

- B. Social Studies/History
- C. Mathematics
— D. Science
—— E. Gym/Physical Ed.
_— G. $\quad$ Grama/Art/Music
- H. None
- I. All

14. What does your friend plan to do after finishing high school? Pick one (1).
A. Go to college
——B. Get a job
— C. Travel
_ D. Get married

- E. Join the military

15. What does your friend think is the most important thing about going to school? Pick one (1).
_ A. Being with friends

- B. Learning job skills
——. Pleasing parents \& relatives
D. Self-improvement
E. Getting more knowledge

On the next three questions, imagine your friend is in charge of reorganizing schools. What changes would he/she make? Check one choice on each line.
16. $\qquad$ A. Tighter security $\qquad$ B. no change
C. fewer rules

## 17.

$\qquad$ A. More electives $\qquad$ B. no change
C. more basics
18. $\qquad$ A. More free time $\qquad$ B. no change $\qquad$ C. more classes
19. If your friend had the choice of being a little smarter or a little more popular, which would he/she choose?
A. Smarter

- B. More popular

20. Here are 10 things about being an adult we want you to rank pretending to be your friend. Imagine that it is ten years from now. Put the numbers 1 through 10 on these in the order of importance they will have for your friend then. Use a (1) for the most important, (2) for next most important, and so forth, and put a (10) by the one that will be least important.
U
$\square$
$\square$
A. A satisfying career
B. Earning a lot more money
C. Having children
D. Being active in politics
E. Being married
F. Doing volunteer work in the community
G. Travelling to other countries
H. Being well-known
I. Spending time with friends
J. Being in love
21. How private a person is your friend? Check one (1).
A. There are a lot of things he/she doesn't tell anyone, even a close friend.
B. There are some things he/she won't tell a close friend.
C. There are some things he/she won't tell an acquaintance
D. My friend is a fairly open person, with few secrets
22. Teenagers often have problems or concerns in one or more of the following areas of life. Some people are private about these things--they don't discuss them with others. If your friend had problems like these, which ones would he/she prefer to keep private? Put check marks by all of these that your friend would not talk about.
Z
$=$
$=$
$=$
A. Social life
B. Money problems
C. Family matters
D. School problems
E. Personal hygiene/health
F. Feelings towards others
G. Sex
H. Religion
I. Problems with the law

For the following 3 stories, put yourself in your friend's place. As you read each one, imagine that the "you" in the story is your friend. Answer the questions as he/she would.
23. You and your parents have always been very close, and have worked together to make your family strong spiritually and economically. You are a senior now, and you're trying to make the right decision about college. You have been offered a full scholarship at an excellent university 500 miles away. Your parents, however, are worried about your being so far from home. Besides, they say they really need your help with the family business. There is a small community college in town that you could attend while living at home. Your parents want you to turn down the scholarship and stay with them while you attend the community college.

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B. I would go to the university. I love my parents, but I also need my independence. It will be better for all of us if I spend some time away from hom.
C. I would stay in my community and work in the family business to help out. I would enroll in the community college and get the best education they have to offer.
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Your coach and your parents have been very supportive, encouraging you and helping you right along. Lately, though, you are not as close to your friends as you once were. It seems that you are spending all your time either training or competing, at the expense of your social life.

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B. I would cut back my travel and competition, but not eliminate it because I enjoy it too much. I would give up my hopes for the Olympic team in order to spend some time with my friends.
C. I would swim for recreation only in order to make time for developing the kind of social life someone my age wants.
25. Your cousin Pat has been dating Chris for over a year. They are both 16. One day after school, they swear you to secrecy, then tell you that they are running away together that night, and plan to be married within a few days. They don't ask you for help or advice - they just want to share their secret with someone they trust.

You have grown up with both of them and the parents of all of you are very close. Although you don't want to cause trouble for Pat or Chris, you think they are making a mistake by running away, and you aren't sure whether keeping their secret is the best thing to do.

How would your friend handle this situation?
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B. I would try to talk them out of their plan. I would advise them to at least delay leaving until they have a chance to really think it over. I would tell them to discuss it with their parents, minister or school counselor.
C. I think this is their business, and I have no right to interfere in it. I won't try to tell them what to do, nor will I break my vow of secrecy.
D. I would figure out a way to make sure they get caught without actually telling on them. I may call and wake their parents with a wrong number as they are getting ready to sneak out.

APPENDIX E
Design

Design

|  |  | $\begin{array}{l}\text { Rating of target by } \\ \text { female friend }\end{array}$ | $\begin{array}{l}\text { Rating of target by } \\ \text { male friend }\end{array}$ |
| :--- | :--- | :--- | :--- |
|  | female |  |  |
| O. | target |  |  |$]$

3 factor split-plot design.

## APPENDIX F

## Cross Tabulation Tables

FFEQUENCY CEUNTS FQF ITEMSO EY GRADE $\varepsilon S E X$ GFADE=7

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114
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116
FFEQUENCY CCUNTS FOR ITEMS, EY GRADE E SEX GFACE=7

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FREQUENCY COUNTS FCF ITENS, EY GRADE E SEX GR $A D E=7$

## TABLE CF 24 EY TAFSEX

424 SPORT VALUE TARSEX TARGET SEX


FFEOUENCY CCUNTS FGF ITEMS. EY GRADE $\varepsilon$ SEX GFACE=7

TABLE OF AZS BY TARSEX

| A25 | FRIENDStIF | value | TAFSEX | TARGET SEX |
| :---: | :---: | :---: | :---: | :---: |
| FREQUENCYI |  |  |  |  |
| COL FCT | IF IM |  | tetal |  |
|  | 01 | 3 | - |  |
|  | $1-1$ | - |  |  |
| A | 321 | 31 | $\boldsymbol{\epsilon}$ |  |
|  | 41.561 | 36. 90 |  |  |
| E | 281 | 25 | 57 |  |
|  | 36.361 | 34.52 |  |  |
| c | 121 | 11 | 24 |  |
|  | 16.88 1 | 12.10 |  |  |
| c | 41 | 13 | 17 |  |
|  | 5.19 1 | 15.48 |  |  |
| total | 77 | 84 | 161 |  |

frequency counts fof itens, by grade $\varepsilon$ sex GRADE $=7$
table cf jo ey tarsex

frequency ccunts fce itens, ey grade e sex GR $A D E=7$



```
frequency ccunts fcF itens, ey GRade \varepsilon sex
GRADE=7
TARLE CF JG BY TARSEX
J9 PCLITICS TAFSEX TAFEET SEX
```



FREQUENCY CCUNTS FCF ITENS. EY GFADE E SEX GRADE=7

TABLE CF JII EY TARSEX

310 MAFFIAGE TARSEX TAFEET SEX


FREQUENCY CCUNTS FEF ITENS, EY GRADE E SEX GRADE=7

Talle CF J11 ey tarsex

| J11 | vclunteef | tarsex | TAGCET SEX |
| :---: | :---: | :---: | :---: |
| FRECUEACYI |  |  |  |
| COL PCT | IF in | 1 | TCTAL |
| - 115 |  |  |  |
|  |  |  |  |
| 1 | 21 | 31 | $\leq$ |
|  | 2.781 | 3.701 |  |
| 2 | 101 | 41 | 14 |
|  | 13.89 \| | 4.941 |  |
| 3 | 31 | 51 | ع |
|  | 4.171 | 6.171 |  |
| 4 | 101 | 61 | $1 \in$ |
|  | 13.891 | 7.411 |  |
| 5 | 61 | 51 | 11 |
|  | 8.331 | 6.171 |  |
| 6 | 61 | 71 | 12 |
|  | e.33 1 | E.64 \| |  |
| 7 | 61 | 141 | 2 C |
|  | 18.33 \| | 17.281 |  |
| 8 | 91 | 11 \| | 20 |
|  | 12.501 | 13.58 1 |  |
| 9 | 151 | 17 1 | $3 \overline{1}$ |
|  | 2c.83 \| | 20.991 |  |
| 10 | 51 | 91 | 14 |
|  | 16.94 \| | 11.11 |  |
| TCTAL | 72 | 81 | 15 I |



FREQUENCY CCUNTS FCF ITENS EY GRADE $\varepsilon$ SEX
GRADE=7
TAELE CF JII Ey TARSEX


## FREQUENCY COUNTS FOR ITEMS, BY GRADE $\varepsilon$ SEX GRACE=7

TABLE CF JI4 EY TAFSEX
114 TIME W/FRIENDS TARSEX TARGET SEX


FREQUENCY COUNTS FOR ITEMS. BY GRADE $\varepsilon$ SEX GRACE=7

TABLE CF dIS EY TAFSEX
315 LOVE TARSEX TARGET SEX


FPEQUENCY CQUNTS FOR ITEMS. BY GRADE $\varepsilon$ SEX GFACE=9

TABLE CF AI By TARSEX
A1 SOCIAL PREF. 1 TARSEX TARGET SEX


frequency ccunts fef itens. ey grade e sex GFACE=9
table cf ab ey tarsex
a3 $\quad$ attend party tarsex tafget sex


FFEQUENCY COUNTS FOR ITEMS. BY GRADE $\varepsilon$ SEX GFACE=9

TABLE CF A4 BY TARSEX

A4
GIVE PARTY TARSEX
TARGET SEX
FREQUENCY|



```
frequency counts fcF ITENS, by GFADE E SEX
                        GRADE=S
    TABLE CF AG BY TAFSEX
    A6 CHEAF DATE TARSEX TARGET SEX
```




FREQUENCY COUNTS FOR ITEMS. BY GRADE E SEX GRAEE=9

TABLE CF AB BY TARSEX
AS TIME W/FRIENDS_WEEKENDS TARSEX TARGET SEX

frequency ccunts fch itense ey gfade e sex GRADE=S


FREQUENCY CCUNTS FCF ITENS, EY GRADE E SEX GRACE=S

## table cf alo ey tafsex•

## A10 CLDSEFRIENDS TARSEX TARGET SEX




FREQUENCY COUNTS FOR ITEMS, BY GRADE $\varepsilon$ SEX GRACE=9
table cF alz ey tarsex, Continued

| 412 | SOlitafy pref. \#e | tarsex | tapget sex |
| :---: | :---: | :---: | :---: |
| FREQLENCY |  |  |  |
| COL PCT I | F IM 1 | total |  |
| 1 | c ! 1 l 1 | - |  |
| 1 | -1 -1 |  |  |
| $3 \quad 1$ | 21 31 | 5 |  |
| 1 |  |  |  |
| C $\quad 1$ | 1E 1 2e | 41 |  |
| 1 | 21.13 \| 48.15 1 |  |  |
| c | ¢ 1 ¢ | 15 |  |
|  | 12.68 1 11.11 i |  |  |
| E | 13 \| 41 | 17 | - |
|  | 18.31 \| 7.41 | |  |  |
| F $\quad 1$ | 31001 | $\geq$ |  |
|  | 14.23 1 0.001 |  |  |
| TOTAL | 71 ¢4 | 125 |  |



FREQUENCY CCUNTS FCF ITENS. EY GRADE $\varepsilon$ SEX GRADE= $\subseteq$
tarle ef al3 ey tarsex


FREQUEACY CCUNTS FCF ITENS, EY GRADE E SEX GRADE=S

TAELE CF 114 Ey TARSEX, Continued



FREQUENCY COUNTS FCF ITEMS EY GRADE E SEX
GRACE=G

frequency ccunts fef itens, ey crade e sex GRADE=S
table Cf alb ey tarsex
A18 RECRG. SECUF. TAFSEX

TAFGET SEX
freclericy I



FREQUENCY CCUNTS FCE ITENS, EY GFACE E SEX GRADE=S
taele cf 20 ey tarsex


FREQUENCY COUNTS FOR ITEMS, BY GRADE $\varepsilon$ SEX GFACE=9
table cf azi ey tafsex
A21 SMART/PCPULAR TARSEX TARGET SEX


152
frequency ceunts fcf itens. ey gfade e sex GR ADE =
tarle cf a22 ey tarsex

| A22 | PRIVACY | tarsex | TARGET SEX |
| :---: | :---: | :---: | :---: |
| FREGUENCY! |  |  |  |
| COL PCT | IF | 1N | tctal |
| A | 11 | 19 | 20 |
|  | 115.45 | \| 16.36 |  |
| E | 127 | 111 | 3E |
|  | 1 3e.03 | 120.00 |  |
| $c$ | 113 | 17 | 20 |
|  | 18.31 | \| 12.73 |  |
| D | $20$ | $128$ | 4 E |
|  | 128.17 | $\text { i } 50.91$ |  |
| TCTAL | 71 | 55 | 126 |



## frequency ceunts fef itens, ey grace e sex

GRADE=S
TABLE CF e24 Ey TARSEX
A24 SPQRT VALLE TARSEX TARGET SEX


FREQUENCY COUNTS FCF ITENS, gY GFADE E SEX GR $A D E=5$

TABLE CF 25 EY TAFSEX

| A25 | FRIENDSHIP | value | TAFSEX | TARGET SEX |
| :---: | :---: | :---: | :---: | :---: |
| FREQLENCYI |  |  |  |  |
| COL PCT I | IF IN |  | tctal |  |
| I | 01 | 1 | - |  |
| 1 | 1 -1 | - |  |  |
| A \| | 1121 | 10 | 22 |  |
| , | 16.sc I | 1E.52 |  |  |
| B | 144 1 | 21 | 65 |  |
|  | E1.97 \| | ミع.es |  |  |
| c | 1111 | 13 | 24 |  |
|  | 15.4S | 24.07 |  |  |
| D 1 | 141 | 19 | 14 |  |
| 1 | - ¢E 1 | 1E.52 |  |  |
| total | 71 | 54 | 125 |  |



FREQUENCY CCUNTS FCF ITENS, EY GRADE $\mathcal{E}$ SEX GR ADE=C

TAELE CF J7•ey TARSEX
17 EARA MCAEY TARSEX TAFGET SEX


FREQUENCY CCUNTS FCF ITENS. EY EFALE E SEX GRADE=S

TABLE CF JE EY TARSEX

18 CHILDREN TAFSEX TAFCET SEX



FREQUEACY CCUNTS fCF ITENS, ey cgade $\varepsilon$ sex GR ADE $=5$



FREQUENCY COUNTS FCF ITENS. BY GRADE E SEX GRADE=S

TABLE CF J12 EY TAFSEX


FREQUENCY CCUNTS FCF ITENS, EY GRADE $\varepsilon$ SEX GRADE $=$ S

TABLE CF dIZ EY TAFSEX
J13 FANE tAFSEX tafget sex


## FREQUENCY COUNTS FCF ITENS. EY GRADE E SEX

 GR ADE $=9$TASLE CF 114 EY TAFSEX


FREQUENCY COUNTS FCF ITENS, EY GFADE $\varepsilon$ SEX GR ADE $=\boldsymbol{S}$

TABLE CF J15 Ey tafsex
JI5 LCVE tafSex tafget sex


FREQUENCY COUNTS FCF ITENS, BY GFADE $\varepsilon$ SEX GFADE=11

## taele cf al ey tarsex

A1 SCCIAL PREF. 1 TAFSEX TAFGET SEX


```
FREQUENCY CQUNTS FOR ITEMS. BY GRADE & SEX
                        GFACE=11
    TABLE CF A2 BY TARSEX
```

    A2 SCCIAL FREF. 2 TARSEX TARGET SEX
    

FFEQUENCY CEUNTS FRF ITEMS. EY GRADE $\varepsilon$ SEX GRADE=11

TABLE OF AS by tarsex
A3 ATTEAD FAFTY TAESEX TARGET SEX

frequency ceunts fef itens. ey graje e sex GRADE=11

## TABLE CF 84 EY TARSEX

A4 GIVE PAFTY TARSEX TARGET SEX


```
FPEQUENCY COUNTS FOR ITEMS, BY GFADE E SEX
                        GFAEE=1!
    TABLE CF AS BY TARSEX
```



## frequency ciunts for itens. ey grade $\varepsilon$ sex

 $G R A D E=11$tarle cf as ey tarsex
46 Cheaf oate tarsex tafget sex

| FREGLENCY | IN 1 | tctal |
| :---: | :---: | :---: |
| A | 101171 | 27 |
| 1 | 14.93 \| EE.se | |  |
| 8 | 12161 | 18 |
| 1 | 17.91 \| 5.52 | |  |
| c | 1518 | 27 |
| 1 | 2E.36 \| 12.70 | |  |
| D 1 | 241171 | 41 |
| 1 | 3E.ع2 \| 2t.sel |  |
| E | 21151 | 17 |
| , | $2.95 \mid$ E3.el \| |  |
| total | 6763 | 130 |

FFEQUENCY COUNTS FOF ITEMS. EY GRADE $\varepsilon$ SEX GFADE=11

TABLE OF AT BY TARSEX


FREQUEACY CCUNTS FOF ITENS, RY GFADE $\varepsilon$ SEX GRADE= 11

TAELE CF AB EY TAFSEX
AB TIVE W/FRIEADS_WEEKENES
tafsex
TARGET SEX


## FREQUENCY COUNTS FDF ITEMS. EY GRADE $\varepsilon$ SEX GFACE=11

TABLE CF AS BY TARSEX
A9 CFCWE SIZE TARSEX TARGET SEX


FREQUEACY CCUNTS FCF ITENS. EY GFADE E SEX GRADE=11

## TARLE CF 10 EY TARSEX

## A10 CLCSE FRIENDS TARSEX TAFGET SEX



FREQUENCY CCLNTS FEF ITENS, EY GRADE E SEX GRACE=11

TABLE CF 211 Ey TAFSEX
A11 SOLITARYPREF. \#1 TARSEX TARGET SEX


FREQUENCY CCUNTS FCF ITEMS, EY GRADE $\varepsilon$ SEX GFACE=11
table of ale ey tarsex, Continued
412 SOLITAFY PREF. W2 TARSEX TARGET SEX


```
FREQUENCY COUNTS FOR ITEMS. BY GRADE E SEX
                                    GFACE=11
\begin{tabular}{|c|c|c|c|c|}
\hline A12 & SOLITARY & PREF. \(\overline{\text { E }}\) & TARSEX & TARGET SEX \\
\hline \multicolumn{5}{|l|}{FREQUENCY \({ }^{\text {I }}\)} \\
\hline COL FCT & |F | & |M | & TCTAL & \\
\hline \multirow[t]{2}{*}{G} & \(\leq 1\) & 101 & 5 & \\
\hline & 7.581 & 12.001 & & \\
\hline \multirow[t]{2}{*}{H} & 31 & \(1 \geq 1\) & \(\epsilon\) & \\
\hline & 4.5E 1 & 14.841 & & \\
\hline \multirow[t]{2}{*}{1} & 31 & 101 & 3 & \\
\hline & 4.551 & 12.091 & & \\
\hline \multirow[t]{2}{*}{J} & c 1 & 121 & 2 & \\
\hline & 0.001 & 1 ミ.23 1 & & \\
\hline \multirow[t]{2}{*}{K} & 151 & 141 & c & \\
\hline & 17.581 & 16.451 & & \\
\hline \multirow[t]{2}{*}{\(L\)} & 01 & 131 & 三 & \\
\hline & 0.001 & 14.841 & & \\
\hline TOTAL & 66 & 62 & 128 & \\
\hline
\end{tabular}
```



FREQUENCY CCUNTS FCF ITENS, Ey GFADE E SEX GR ADE=11
table cf 114 ey tarsex
AI4 INDIVACTIVAB2 TAFSEX TAFGET SEX


FREQUEACY CCUNTS FCF ITENS. ey GRADE E SEX GRADE $=11$

TABLE CF als ey tarsex

| A15 | FAVCFITE | SUEJECT | TAFSEX | TARGET SEX |
| :---: | :---: | :---: | :---: | :---: |
| FRECUENCY |  |  |  |  |
| COL PCT 1 | IF | IN | TCTAL |  |
|  | 0 | $1$ | - |  |
|  | - |  |  |  |
| A | 18 | 15 | $2 \Xi$ |  |
|  | 26.87 | 18.06 |  |  |
| E | 7 | 18 | 15 |  |
|  | 1 C .45 | 112.90 |  |  |
| $C$ | 10 | 19 | 15 |  |
|  | 14.93 | 114.52 |  |  |
| D | 3 | 12 | E |  |
|  | 4.48 | 13.23 |  |  |
| E | 1 | 111 | 12 |  |
|  | 1.45 | 117.74 |  |  |
| $F$ | 16 | 13 | 19 |  |
|  | 23.88 | 14.84 |  |  |
| G | 4 | 17 | 11 |  |
|  | 5.97 | 111.29 |  |  |
| H | 7 | 115 | 22 |  |
|  | 10.45 | 124.19 |  |  |
| 1 | 1 | 12 | 三 |  |
|  | 1.45 | 13.23 |  |  |
| TCTAL | 67 | 62 | 125 |  |

frequency ccunts fef itens, ey grade e sex $G R A D E=12$
taele cf ale ey tarsex
A16 AFTER H.S. TARSEX TAFGET SEX

| FREGUENCYI COL PCT |  | IN \| | tctal |
| :---: | :---: | :---: | :---: |
| A | 39 | 401 | 75 |
|  | $5 \varepsilon \cdot 21$ | E3.49 1 |  |
| E | 10 | 1141 | 24 |
|  | 14.93 | $122.22 \mid$ |  |
| C | 1 | 101 | 1 |
|  | 1.45 | 10.021 |  |
| D | 14 | 11 | 1 E |
|  | 2C.90 | 11.591 |  |
| $E$ | 3 | 1 a 1 | 21 |
|  | 4.48 | 12.701 |  |
| TOTAL | 67 | E | 130 |

frequency ccunts faf itens, ey gfade e sex GRADE=11
tarle cf alt ey tafsex


FFEQUENCY COUNTS FOR ITEMS, BY GRADE \& SEX
GFACE=11
table cf ale ey tafsex
A18 FECFE. SECUR. TARSEX TARGET SEX

| FREQUENCYI COL PCT IF |  | 1 m \| | tctal |
| :---: | :---: | :---: | :---: |
| 4 | 10 | 11 | 11 |
| - | 14.93 | 11.551 |  |
| E | 25 | 241 | £ミ |
| - 1 | 43.28 | \| 38.10 | |  |
| $c$ | 28 | 381 | $\boldsymbol{\epsilon} \boldsymbol{\epsilon}$ |
| I | 41.79 | 160.321 |  |
| total | 67 | $E 3$ | 13 c |

```
FREQUENCY COUNTS FOF ITENS, EY GFADE E SEX
                GRACE=1!
    TABLE CF 119 Ey TAFSEX
A19 PEORG. CURP ICULUM TARSEX TARGET SEX
```




FREQUENCY COLNTS FQF ITENS: EY GPADE E SEX GRACE=11


FGEQUEACY CCUNTS FOF ITEMS. EY GRADE $\varepsilon$ SEX GRACE=11

TABLE OF A2E ey TARSEX
A22 PFIVACY TAFSEX TARGET SEX

| FREQUENCY COL PCT |  | 1N | TCTAL |
| :---: | :---: | :---: | :---: |
| A | 16 | 10 | EE |
|  | 23.82 | \| 15.87 |  |
| B | 18 | 20 | $\geq \varepsilon$ |
|  | 26.87 | 131.75 |  |
| $c$ | 10 | 5 | 25 |
|  | 24.93 | 17.94 |  |
| D | 23 | 128 | 51 |
|  | 34.33 | 144.44 |  |
| tctal | 67 | 63 | 130 |


frequency colnts fef itens, ey grade e sex $G R A D E=11$
table cF 24 ey tafsex


FFEQUENCY CEUNTS FOF ITEMS, EY GRADE $\varepsilon$ SEX GFADE=:1

TABLE OF AZE BY TARSEX

| 425 | FRIENDStIF | value | TAFSEX | TARGET SEX |
| :---: | :---: | :---: | :---: | :---: |
| FREQUENCY1 |  |  |  |  |
| CCL FCT | IF IN |  | tetal |  |
|  | 101 | 1 | - |  |
|  | - 1 | - |  |  |
| A | 101 | $\epsilon$ | $1 \in$ |  |
|  | 14.931 | 9.68 |  |  |
| E | 411 | 36 | 77 |  |
|  | 61.191 | 58.06 |  |  |
| c | 1111 | 15 | Et |  |
|  | 116.421 | 24.19 |  |  |
| C | 51 | 5 | 1 C |  |
|  | 17.461 | 8.06 |  |  |
| total | 67 | 62 | 125 |  |

frequency ccunts fer itens, ey grade $\varepsilon$ sex $G R A D E=11$



FREQUENCY CQUNTS FOR ITEMS. BY GRADE $\varepsilon$ SEX GFACE=11

TABLE CF JE By TARSEX
38 CHILEREN TARSEX TAREET SEX



FREQUENCY COUNTS FOR ITEMS. BY GRADE $\mathcal{S E X}$ GFACE=11

TABLE CF JIC EY TAFSEX
J10 MAFFIACE TARSEX TAREET SEX


FFEQUENCY CCUNTS FCF ITEMS, EY CRADE E SEX GFACE=11

## TABLE OF J11 BY TARSEX

JI 1 VOLUATEER TARSEX TARGET SEX


FFEQUEACY CCUNTS FOR ITEMS, EY CRADE E SEX GRADE=11

TABLE OF JIE EY TARSEX



FREQUEACY CCUNTS FCF ITENS. EY GFADE E SEX GRADE=11

TAELE CF Ji4 Ey TARSEX
JI4 TINE W/FRIENDS TAFSEX TAFGET SEX


FREQUENCY CCUNTS FCF ITENS, EY GFADE E SEX
GRADE=I1


