CHANGES IN GIRLS' SCHOOL PERFORMANCE AND ATTITUDES TOWARD ACHIEVEMENT DURING THE YEARS SPANNING ADOLESCENCE

by

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A dissertation submitted to the Graduate Faculty in Psychology in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York

1974

This manuscript has been read and accepted for the Graduate Faculty in Psychology in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

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Foreword

As is true of every dissertation, this one reflects the help and encouragement of several people whom I wish to thank publicly.

I am particularly grateful to my advisor and chairman of my dissertation committee, Barbara S. Dohrenwend for unlimited time, patience, and interest throughout the planning, pilot testing, revisions, and final project. I also appreciate the help of my other committee members Ann Haberle Rees for valuable suggestions about developmental processes and Leonard Kogan for advice on organization and statistics. Helpful suggestions were also made by Herbert Nechin, Florence L. Denmark, Charles P. Smith, Phyllis A. Katz, and Marion S. Blank. A special debt is owed to Bradford S. Doane who came to my rescue during a crisis which developed when I "lost" my intended subject population.

None of this would have been possible without the enthusiasm and moral support of my husband. His constant encouragement sustained me from the time I returned to college for my undergraduate degree until the final revision of this dissertation.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

INTRODUCTION

Although it is traditional in this culture for men and women to devote their efforts to different areas of competence and interest, it is also traditional to apply one criterion, usually masculine, to their performance and achievements. Outside the home men are drawn to more competitive areas which are endowed, because of the masculine criteria employed, with greater prestige. The rules about what is valued are made with men as models and then applied to men and women alike.

Sex differences in achievement behavior and underlying achievement needs have baffled researchers, who have looked widely, and often in vain, for reasons for the differences uniformly found. Psychologists engaged in research on achievement needs have concluded that instruments suitable for measuring and manipulating need achievement in male subjects are not suitable for females. (Atkinson & Litwin, 1960; Weiner & Kukla, 1970). Nevertheless, the search continues, with some promising leads as more psychologists have turned their attention to the social psychology of women.

It has long been known that boys and girls of comparable ability during the school years tread widely different paths as adults. Terman's (1947) follow-up study of gifted youngsters shows that fewer girls than boys finished college and made career commitments. In fact, adult level of occupational achievement was substantially correlated with I.Q. for boys but not for girls. Figures on education show that as recently as 1968-9 women earned 42% of the bachelor's degrees awarded in the U.S. but only 37% of the master's degrees, and 13% of the Ph. D.'s (American Council on Education, 1969). Figures on work patterns show that although women made up 30% of the full time labor force in 1969, only 2% of the women so employed had incomes over $15,000 (Galbraith, Kuh, & Thurow, 1971), and the 1970 Census showed that less than 10% of the doctors, lawyers, and judges in the United States were women.

The explanations for women's failure to fulfill their potential are many. Hoffman (1972) asserts that women have an alternative to success in the professional or business worlds and can retire permanently or temporarily when the going gets rough. The facts of American family life cause many women to retire temporarily for child bearing and child rearing, causing them to lose out on professional advancement. Some women compromise by working part time. In a recent poll (American Institute of Public Opinion, 1970) a majority of women of all educational levels who

would like to work said they wanted a part time job. However, a current view is that in addition to these reality factors, many women have been held back by internal factors (Greer, 1971; Horner, 1968, 1969). Many women feel that their femininity is sacrificed by academic, professional, or business success, and that their love relationships with men are thereby threatened. Hoffman (1972) states that "academic and professional women frequently allow their concern with affective relationships to interfere with the full use of their cognitive capacity. In group discussions and in intellectual arguments women often seem to sacrifice brilliance for rapport."

In a study of the reactions of college students of both sexes to competitive situations, Horner (1968) found that 62% of the women, but only 8% of the men anticipated negative consequences such as social rejection as a result of succes. It is likely that the "motive to avoid success" constitutes a powerful barrier to achievement in women. The idea that femininity and achievement are incompatible is a theme that pervades the thinking of both adults and young people and is especially noticeable during adolescence.

In a nationwide study of 3000 14 to 16 year old high school students it was found that only 10% of the girls, but 47% of the boys, were aiming for careers involving a strong commitment in terms of educational requirements and

length of preparation. More boys than girls pointed to personal achievement as a source of self esteem. Boys saw their future success as dependent on their own efforts, whereas, girls' future success was seen as dependent on the man they hoped to marry (Douvan & Adelson, 1966). For some girls, what seems like educational ambition may really be a means of participating in a certain level of social activity. High school senior girls may be attracted to college as a way of meeting a college boy whose later career will reflect this educational advantage (Turner, 1964). The husband's occupation, rather than the wife's, when they are both working, is the key to the status of their nuclear family.

Other studies on the social life of teenagers have brought forth similar findings. At an age when the attentions of the opposite sex are very important, girls find that academic achievement is less useful as a stepping stone to social success than boys do. For instance, when high school students were asked which one of three things they would like to be remembered for at school, boys placed academic brilliance second to athletic prowess, but girls placed it last, after popularity and leadership in activities. (Coleman, 1961). Furthermore, attractiveness and charm are related to social mobility for girls the way achievement is for boys. (Elder, 1968). Coleman (1961) found that beauty gains more status for girls than brains,, for the best looking girl was rated a more desirable date

than the brilliant girl. Not only do peers devalue academic achievement for girls, but parental values also stress academic achievement more for sons than for daughters; 95% of boys' parents indicated a primary desire for their son to be a brilliant student while only 55% of girls' parents put that value in first place.

Adolescence has a particular developmental importance because it brings the individual to the threshold of adulthood. It is a time of profound psychological change. Blos (1962) characterizes adolescence as the psychological counterpart of the biological event of puberty. Erikson (1968) has pinpointed the adolescent years as the developmental stage in which the young person begins to crystallize his unique adult role. In our culture assuming the identity of either <u>man</u> or <u>woman</u> forces the young person to regard certain kinds of behavior and feelings as suitable and others as unsuitable to his new status. A change in outlook and behavior are noticeable at this stage, foreshadowing the assumption of future masculine and feminine roles.

Angrist (1969) says an overstress on being eligible for marriage causes many late adolescent girls to be passive, cooperative, and non-intellectual. Academic underachievement in bright girls has been found to coincide with the onset of puberty (Shaw & McCuen, 1960). Girls'

achievement needs seem to be directed toward marriage, and boys' achievement strivings toward occupational goals. At adolescence, peer group pressure causes a narrowing of what is seen as appropriate masculine and feminine behavior (Freeman, 1970). Entwisle and Greenberger (1972) found that ninth grade boys held a much more conservative view of women's roles than their female classmates. Standards of feminine sex role behavior devalue school achievement and equate competition for grades with aggressiveness.

While we can point to the decrements in achievement caused by adolescent girls' and women's needs for approval and affiliation, achievement striving in younger girls has been found to be enhanced by their affiliative motives. (Bardwick, 1971; Crandall, 1963; Garai & Scheinfeld, 1968). During the preschool and early school years girls' achievement behavior is motivated by a desire for love rather than for mastery, for during these years girls get approval for achievement from parents, teachers, and peers. In college and the professions, love is less frequently the reward for top performance, for success may indeed require the subordination of affiliative needs. In such circumstances, combined needs for affiliation and for achievement may block achievement behavior (Hoffman, 1972).

French and Lesser (1964) have also pointed to the fact that women have conflicting goals. The primary goal for a

man in our society is career success which brings with it satisfaction and recognition for doing a man's job well. He need prove himself no further. If a woman does well in a career she still has to prove herself as a woman by also being a wife and mother. Being an exemplary mother, a fine housekeeper, a gourmet cook and a scintillating companion are achievements indeed, in fact, Stein and Bailey (1973) have made the point that women are likely to express their achievement motivation in areas culturally defined as part of their traditional role, particularly in areas of social skill and interpersonal relationships. Since achievement motivation concerns the expectation of deriving pleasure and pride from competent performance, the attainment of excellence in the interpersonal relationships of popularity, social leadership, marriage, and motherhood are to be considered achievement behavior. However, the focus of this research is not the different areas in which men and women find pleasure in meeting standards of excellence, but sex differences in one particular area of achievement. One way to do this is to focus on girls and boys within the school setting and to look for the emergence of differences in the task they have in common during the school years - academic achievement.

Achievement motivation has been well studied in children and in college students, but there is a gap to be filled in

which may offer some explanation of what happens to turn the eager, achieving little girl into an underachieving adolescent or adult. It is the purpose of the proposed research to examine the hypothesis that during adolescence girls' achievement strivings are sacrificed because of societal pressures which have been accepted and internalized by girls. The needs which make elementary school girls conscientious students may interfere with their performance during the high school years. The assumption underlying this research is that between the ages of 12 and 18, girls' needs for achievement and approval, which were compatible during the earlier years, begin to conflict. The two main reasons are first, that peers become an increasingly important source of approval during the adolescent years, and second, that peers are viewed as withholding unqualified approval for academic success. These assumptions have been well documented (Angrist, 1969; Bardwick, 1971; Bowerman & Kinch, 1959; Coleman, 1961; Douvan & Adelson, 1966; Sutton-Smith & Rosenberg, 1965; Wagner, 1971).

Review of the Literature

Need for Achievement

According to Atkinson (1966) a theory of achievement motivation is a miniature system applied in the context of

achievement oriented activities in which academic and career success are certainly included. The achievement motive is conceived of as a relatively stable disposition to strive for achievement or success. It is presumed to be latent until aroused by situational cues, but once aroused is a tendency to approach situations involving standards of excellence and pride in accomplishment. This goal-oriented tendency is a multiplicative function of the underlying disposition to strive for achievement, the incentive value or relative attractiveness of success, and the expectancy of goal attainment. It is assumed that success is attractive and failure unattractive to the individual (Atkinson, 1964). This assumption deserves further scrutiny along with the question of the applicability of the need achievement paradigm to female subjects and will be discussed in greater detail after a review of some of the need achievement research which has been done with girls and women as subjects.

Veroff, Wilcox, & Atkinson (1953) found with high school and college age subjects that manipulation of the situational context from neutral to motivating did not change girls' n-Ach scores, although boys' scores were enhanced. They suggest that any testing situation raises the level of girls' n-Ach because girls are more highly motivated in the classroom than boys are. Of more critical interest to the current study is their finding that both boys and

girls scored higher on n-Ach when they wrote stories to picture cues of men than of women. While the boys responded with higher n-Ach scores to male cues than to female cues during the arousal condition, girls' n-Ach scores to male cues were higher than to female cues under both relaxed and achievement conditions. The implication is that both sexes see achievement themes as being more suitable for males than for females.

This attitude is not true for all girls, for when eleventh and twelfth grade girls were divided into high achievers and underachievers matched for ability level, high achieving girls got increased n-Ach scores to pictures of women but not to pictures of men in the achievement arousal condition. In the same condition, underachieving Ss responded with increased n-Ach scores to pictures of men (Lesser, Krawitz, & Packard, 1963). However, it should be noted that the men were pictured in a career achievement situation, whereas the women were engaged in homemaking activities.

Using a measure of attitude toward achievement rather than a projective technique, other research has found greater school achievement in tenth grade girls who like to compete with boys and who see women's role as including professional, business, and political activity than in girls who prefer not to compete and who have a more restricted view of the female role (Houts & Entwisle, 1968).

Among college women a similar phenomenon was found when instructions manipulated the salience of intellectual or domestic role interests. N-Ach scores were higher to pictures of males after the performance of intellectual tasks and to pictures of females after a test stressing social skills (French & Lesser, 1964).

A recent sociological study indicates that college educated women with a "contemporary" view of their role have higher educational aspirations and are more interested in personal achievement than are those with a "traditional" view of women's role (Lipman-Blumen, 1972). Those with the "traditional" ideology believe that under ordinary circumstances women belong at home caring for children and household while the man provides financial support for the family; proponents of the "contemporary" viewpoint believe that husbands and wives should share both domestic and financial responsibilities.

It may be that what is reflected in these studies is a general ambivalence about a woman's role on the part of girls and women. This in turn reflects a kind of cultural ambivalence in which a man's role always includes career achievement and financial responsibility for the family, but a woman's role is variously perceived. Since boys and girls grow up in a family with parents as models, role learning starts very early, and a cultural definition of male and

female roles is probably firmly entrenched quite early. Looft (1971) found that first and second grade boys and girls made very distinctive career choices. Boys' choices showed greater variety and none choose "father" as a career, whereas several girls chose "mother."

Need for Approval

Hoffman (1972) cites findings from developmental research on the different socialization practices of parents and teachers with girls and boys to draw the conclusion that affective relationships are paramount in females. Appropriate role behavior is learned through interaction with others who hold normative beliefs about what is appropriate and who are able to reward and punish correct and incorrect actions. In a study in which teachers rated children on a list of 58 traits, males were rated higher on instrumental and females on social-emotional roles (Brim, 1958).

Crandall and Rabson (1960) found that girls from three to nine years of age sought approval from adults for achievement behavior more often than boys did and withdrew more often from situations they interpreted as being threatening. Carlson (1965) found that girls increased in "social orientation" from twelve to eighteen, the years spanning adolescence. This orientation implied a vulnerability to social appraisals in interpersonal situations. During the same time span boys were found to place more emphasis on autonomy

and independence for themselves. Girls' rewards at adolescence seem to come more from personal and social skills than from academic ones (Coleman, 1961; Douvan & Adelson, 1966).

Crowne and Marlowe (1964) devised a scale to tap individual differences in the need for approval. The testing situation was designed to be seen as similar to other socially evaluative situations, and as such would be expected to identify subjects dependent on the favorable evaluation of other people. The scale itself is composed half of culturally acceptable but probably untrue statements and half of true but undesirable statements. The authors say "the set to respond in a socially desirable manner specifically reflects a need for social approval." When this scale was administered to college students, women were found to score consistently higher than men in the need for social approval.

Fear of Success

Having reviewed the relevant research on the needs for achievement and approval it is necessary to return for another look at Atkinson's need achievement paradigm (1964, 1966) in which the motive to achieve implies a capacity for satisfaction and pleasure from success. In this paradigm the possibility of success will evoke a disposition to approach

success and the possibility of failure will evoke a disposition to avoid failure. There are very few studies which compare need achievement in boys and girls. Atkinson and Litwin (1960) explain their analysis of the data from male Ss only (although they had gathered data from female Ss also) by saying there are unresolved questions about the validity of such measures with female Ss. Weiner and Kukla (1970) state that studies of achievement motivation have been hampered because instruments adequate for males have proven inadequate for females. They do, however, offer a possible explanation. They suggest that the effects of socialization result in the discouragement of achievement strivings in girls - an effect first noticeable at the onset of puberty. This seems to confirm the previous finding that academic underachievement in intellectually capable girls coincides with the onset of puberty (Shaw & McCuen, 1960).

Previously cited research on n-Ach in girls points to social and cultural factors which cause girls to turn away from achievement during adolescence. Although Atkinson (1964) says the probability of success is expected to evoke approach tendencies, Horner (1968, 1969) asserts that the possibility of success evokes avoidance mechanisms in many women. Individual differences in motive strength combine with expectancies about the consequences of achievement

behavior. Horner found 62% of the women of college age that she tested anticipated negative consequences as a result of success in situations involving competition. To be more specific, their fears centered on social rejection and loss of femininity. Less than 10% of the males subjects showed any fear of success in competition. Horner scored "fear of success" if one or more of the following were present in stories Ss produced to complete verbal stems:

a. negative consequences
b. anticipation of negative consequences
c. negative affect
d. instrumental activity away from present or future success
e. direct expression of conflict about success
f. denial of the situation
g. bizarre, unrealistic, inappropriate, or non-adaptive response

Horner says the motive to avoid success is a stable motive, acquired early in life as a result of sex-role standards in which competitiveness is associated with aggressiveness. She asserts that a bright woman in our society is caught in a powerful conflict situation: if she fails she does not live up to her internalized standards of performance, but if she succeeds she is not living up to societal expectations about her role.

Anxiety

Anxiety is viewed by Atkinson (1966) as a motive to avoid failure and represents a fear of failing in situations

involving performance that is evaluated against standards of excellence. When activated, this motive leads to avoidance behavior. The subject will leave the field if he can, or if constrained to stay and perform he will suffer a performance decrement.

Anxiety has been measured by means of paper and pencil tests measuring general anxiety like Taylor's Manifest Anxiety Scale (MAS) or anxiety specific to the classroom situation, like Sarason's Test Anxiety Scale for Children (TASC). The latter test and variations based on it have been found to be most suitable for research in the field of achievement motivation which deals with approach tendencies toward intellectual, academic, and mastery situations.

There is general agreement that girls show a higher anxiety level than boys. Loughlin, O'Connor, Powell, & Parsley (1965) tested more than 5000 boys and girls from grades four to eight on tests of general and test anxiety and found girls to score significantly higher on both types of anxiety. This was found also by Feldhusen & Denny (1965) for boys and girls in grades seven, eight, and nine on a general anxiety scale. Knights (1963) found both normal and retarded girls higher in test anxiety than boys. Feld & Lewis (1969) reveal that white girls scored significantly higher than white boys on the factors of test anxiety, remote school concerns, and somatic signs of anxiety drawn

from the TASC, as well as on total TASC score. Hill & Sarason (1966) found that girls got increasingly higher TASC scores than boys from first to sixth grades.

Sarason, Davidson, Lighthall, Waite, & Ruebush (1960) who devised the TASC speak of the anxious child as one whose problem-solving efficiency is unusually dependent on the nature of the interpersonal context in which he finds himself. Such a child is more dependent, one whose dependency behavior has been encouraged and rewarded by his parents. This description points to a difference in the socialization of girls and boys as a possible reason for girls' higher anxiety scores.

Socialization Differences

There seems to be overwhelming agreement that parents treat boys and girls differently from the beginning (Clausen & Williams, 1963: McCandless, 1961: Mead, 1949: Terman & Tyler, 1966). One of the most important differences in parental treatment of sons and daughters is that boys are encouraged to become independent earlier and more consistently than girls, who get inconsistent encouragement for independence strivings. Hoffman (1972) suggests that dependency is encouraged in girls. Their mothers intervene in conflicts more often, with the result that girls do not learn to cope with frustration and give up more easily when they are blocked (McCandless, 1961).

Veroff (1969) states that mastery of autonomous achievement motivation requires freedom of access to the environment, exposure to situations requiring mastery, and support for autonomous actions during the early years of childhood. All these things are more readily accessible to boys, since the mothers of boys seem to pace their autonomy strivings more appropriately than do the mothers of girls. Parental inconsistency with girls is likely to lead to general dependency and anxiety over achievement.

Schools and parents are both involved in the socialization of children. Our educational system pretends to prepare all students for the same occupational roles, but both boys and girls know that is not so. The socialization practices of both school and family lead to large differences in boys' and girls' conceptions of the adult female role. Epstein (1971, p. 4) writes, "Women do not view work as central to their life, as an avenue for self-expression and stimulation" and she asserts that while men plan a career in order to be a success, women's career plans are to fill this gap between school and marriage or in case the real goal of marriage fails. Since this society generally considers feminine roles and professional roles as mutually exclusive, most women feel they have to choose between these alternatives.

Bardwick (1971) asserts that there is a cultural discontinuity for girls, for whom the role sources of self

esteem change over time. Girls are encouraged to succeed in school and in sports until early adolescence at which time they become aware of the lack of clarity in the definition of their role. Bardwick says that "achieving affectively" becomes a new preoccupation during adolescence when heterosexual affiliation becomes the dominant source of self esteem.

Relationship between Measures of Fantasy n-Ach and Achievement Behavior

Studies of the relationship between projective measures of need-Achievement and performance have produced ambiguous, and sometimes contradictory, results. The majority of the studies with college students were conducted in the laboratory with fantasy n-Ach score the independent variable and achievement behavior the dependent variable. In most cases achievement behavior was the score on some task like the number of problems or puzzles solved or the number of words derived from a longer word.

In contrast, the dependent variable in the present research is the academic performance of girls and boys within their accustomed school setting as measured by their grade point average. The results of research correlating projective n-Ach and grade point average have been inconsistent. Klinger (1966) found a significant relationship between projective n-Ach and performance measures in studies of boys of high school age or younger, but an overwhelming

lack of relationship for girls. In explanation of this sex difference he posited that the relationship between fantasy n-Ach scores and school performance is affected by factors other than achievement motivation.

Many researchers have found evidence that affiliative and social needs play a role in girls' achievement strivings that a need for personal mastery occupies in boys' achievement behavior (Bardwick, 1971; Coleman, 1961; Crandall, 1963; Garai & Scheinfeld, 1968; Hoffman, 1972). Girls' school achievement seems to be related to getting praise from others, whereas boys' school achievement may be more related to their satisfaction in task performance.

Research Design

The rationale underlying this research is that during elementary school both girls and boys get approval from parents, teachers, and peers for achievement, and that, therefore, both these needs are compatible in a setting where achievement is salient. However, while this remains true for boys from elementary school through high school, the situation changes for girls. During the high school years girls' peers are more apt to give approval for social than for intellectual activities, and even teachers and

parents reflect the cultural ambivalence about girls' achievement. This change in the behavioral object of approval comes at a time when the most important source of approval is changing also as peers become increasingly important. Adolescence is a time when heterosexual contacts are particularly salient, and an assumption underlying this research is that many girls believe intellectual strivings will jeopardize their chances for social success. Adolescence is also a time when young people are looking ahead to assuming an adult identity in which career success is much more important for boys than it is for girls. The major assumption underlying the hypotheses which follow is that conflict in girls will be most intense at the point of development where the drive for popularity is greatest.

Because the hypotheses concern changes during the years spanning adolescence, a decision was made to use the measuring instruments on pre-adolescent and adolescent Ss. Measures were selected or devised which were suitable for use with both elementary and high school Ss because it was felt to be more desirable to use the same measures on all Ss rather than have to justify the comparability of different measuring instruments.

Ten year old Ss (fifth grade) would have been ideal for the youngest group, but pilot testing made it clear that there would be a better chance of obtaining valid results with slightly older Ss who would be better able to understand

and complete the questionnaire and other measures: therefore sixth grade (mean CA 11) was selected as the pre or early adolescent age group. Three grade levels were chosen in order to assess whether the anticipated changes were linear, and the logical choices for the other levels were grade nine (mean CA 14) when Ss had recently entered the high school, and grade twelve (mean CA 17) at which time as high school seniors Ss would be making college and career plans.

The needs which are important to assess for the purpose of testing the stated hypotheses are the needs for achievement and approval. Therefore, the hypotheses are concerned with Ss who have these needs in different degrees and combinations. Measures of the needs for achievement and approval were administered to all subjects. Scores on these needs were divided at the median as will be described more fully in the section on scoring. The four groups thereby created were as follows:

Achievement	Approval	
High	High	HH
High	Low	HL
Low	High	LH
Low	Low	LL

Hypotheses

The hypotheses are derived from the underlying model which is that high needs for achievement and approval lead

to academic striving in girls and boys in the elementary school. While this remains true for boys during high school also, high needs for achievement and approval begin to conflict for girls as they reach high school. The reasons for this are that peers have become increasingly important for both girls and boys, and most girls believe that academic striving will ruin their chances for social success with their opposite sex peers. This expectation is either absent or nearly so in adolescent boys.

The conflict is expected to increase with length of time in the high school because of increasing heterosexual socializing from ninth to twelfth grades. There is expected to be a concomitant increase in test anxiety and the appearance of fear of success in girls with high scores on both achievement and approval needs. Test anxiety and fear of success are considered to reflect this conflict.

If approval from significant others is gained through school achievement, the student who has a low motive to achieve but who desires that approval will be in a state of conflict. Therefore, test anxiety is hypothesized to be present in elementary school girls and in all boys with a low need for achievement and a high need for approval. Conflict is expected to lead to a decline in achievement striving and a consequent drop in GPA.

Because of previous findings that achievement is related

to social needs in girls and to mastery needs in boys it is expected that within the school setting girls will see social needs as more important for them than instrumental ones, whereas boys will have more instrumental values.

Test Anxiety

Girls:

1. HH girls will have rising test anxiety from grades six to twelve.
2. LH girls will have falling test anxiety from grades six to twelve.
3. HL and LL girls will have relatively low test anxiety at all three grade levels.

Boys:

4. At all grade levels, LH boys will have higher test anxiety than boys in the other three groups.

Fear of Success

Girls:

5. HH girls will have rising fear of success from grades six to twelve.
6. In all other groups of girls, fear of success will be relatively low at all grade levels.

Boys:

7. Fear of success will be relatively low in all boys.

Grade Point Average (GPA)

Girls:

8. HH girls will have a high GPA in grade six, and this will drop from grade six to twelve.
9. HL girls will have a higher GPA at all grade levels than LH girls.
10. LH girls will have a higher GPA at all grade levels than LL girls.

Boys:

11. HH and HL boys will have a higher GPA at all grade levels than LH boys.
12. LH boys will have a higher GPA at all grade levels than LL boys.

Social vs. Instrumental Orientation

13. Girls will have a higher Social Score than boys at all grade levels.
14. Teachers will consider a social orientation more important for girls than for boys at all grade levels.

METHOD

Subjects

Student Ss were 136 girls and 115 boys who attend public school in a middle-class, predominantly white suburb of New York City. There were 80 Ss from sixth grade, 92 from ninth grade, and 79 from twelfth grade. The data from an additional 18 Ss (11 boys and 7 girls) were discarded because of incompleteness.

There were 107 teacher Ss, 40 male and 67 female, who teach at all levels, from kindergarten through twelfth grade.

Materials

All the measures used were pre-tested on Ss in the appropriate grades in another suburban school district.

The following measures were administered to each student S in this order: (See Appendix for all materials.)

1. Questionnaire
2. Verbal stems. There were six stems, the first four

of which were used for scoring need achievement (Atkinson, 1958, chapter 12). The last two were scored for attitude toward competition (Horner, 1968) called fear of success. There were two forms of the stems, one for girls and one for boys, each of which had four same-sex stems and two with no gender. All the stems had been used before or were adapted from those used elsewhere (Horner, 1968; McMahon, 1972).

3. The Social Desirability Scale (Crowne & Marlowe, 1964). This 33-item scale designed by its authors for use with college students was adapted for the present study. It was shortened to a 30-item scale with simplified wording.

4. Trait Rating Scale. This measure was designed for this study by taking four each of the "social" and "instrumental" adjectives employed by Carlson & Levy (1968) which they found to differentiate between the orientation of boys and girls. These last eight trait adjectives were selected from a longer list which was presented to twenty teachers who were asked to judge whether the adjectives measured social or instrumental qualities, and only those adjectives on which more than 80% of the teachers agreed were included in the final scale. A Social Score was derived from the ratings of the eight traits.

5. The Test Anxiety Scale for Children (TASC) in a version adapted by McMahon (1970) from the original one

by Sarason et al. (1960). The adaptation involved a change in language to make the test suitable for high school as well as elementary school Ss.

A possible problem arises in the measurement of test anxiety with this instrument: that of response set posed by the fact that the TASC is scored by counting the number of "yes" responses. Feld and Lewis (1969) assessed the effect of this on more than 7000 Ss and concluded that response set is not a major source of variance in the TASC.

In addition to the above measures which were administered to Ss during one or two testing sessions, a grade point average (GPA) and I.Q. score were obtained for each student from the school records. GPA was computed from the students' first semester grades for academic courses during the year in which they were tested. GPA was derived from the grades by a system assigning numerical weights to letter grades in which an A = 32, B = 26, C = 20, and D = 14. Plusses and minuses add or subtract two points from each score (e.g. B^{+} = 28), grades in honors courses were worth two extra points each, and grades in B level courses were worth two points less. The latter are geared for less able students.

The I.Q. scores were also obtained from school records, for in the school district in which the data were collected

the Otis I.Q. test is administered to all students at the end of grades four, eight, and eleven. For each student, the most recent I.Q. score was used.

Teacher Ss were given two Trait Rating Scales, one for boys and one for girls, half the Ss receiving them in one order and half in the reversed order. This scale is identical to the Trait Rating Scale for student Ss with slightly different instructions.

Scoring

All scoring of the materials was done by the author. For the n-Ach stems rank order correlation with the expert scoring of the manual (Atkinson, 1958) was .93 (n = 30.) A check on E's re-test reliability was made by re-scoring 30 randomly selected stories (10 from each grade level) a week after the scoring was completed, which produced a rank order correlation of .97.

The standard scoring for n-Ach assigns negative scores to stories which contain themes unrelated to achievement and zero scores to stories concerned with doubtful achievement imagery. In order to eliminate negative and zero scores for the purpose of coding and data analysis, a constant of 1 was added to the score for each story and another 1 was added to the total score from the four stories written by each S. The resulting range for girls was 1 to 23, with a

median of 8.32. The range for boys was 1 to 23 with a median of 5.36. Within each sex the variation of means by grade level was less than 1 for boys and less than 1.25 for girls. For hypothesis testing, n-Ach scores were dichotomized at the median for girls and boys separately.

The range of n-Approval scores was 1 to 24 for girls with a median of 11.43; for boys the range was 3 to 24, with a median of 11.60. The expected sex difference was not found. N-Approval scores were dichotomized for both girls and boys at 11.50.

On the basis of the dichotomized need Achievement and need Approval scores, Ss were placed in four groups, as previously described: HH, HL, LH, LL. The number of Ss in each of these groups by grade and sex is to be found in Table 1.

TABLE 1

Number of Ss by Sex, Grade, and Group

		Girls			Boys		
		Grade Level			Grade Level		
N-Ach	M-App	6	9	12	6	9	12
H	H	9	9	14	5	12	9
H	L	13	15	6	12	9	6
L	H	10	12	12	10	11	10
L	L	11	15	10	10	9	12

Each of the Fear of Success cues was scored separately, because it is possible to tease out two separate aspects of the fear of success: fear of success in a general classroom situation and fear of success in a situation in which cross-sex competition is salient. Horner (1968, 1969) used a present/absent scoring system, but it was decided for this study to score one point for the presence of each of the following indications of fear of success, making it possible to have a socre of 0 to 7 for each cue;

negative consequences
anticipation of negative consequences
negative affect
instrumental activity away from present or future success
direct expression of conflict about success
denial of the situation
bizarre, unrealistic, inappropriate, or non-adaptive response

This permits statistical analyses for this variable that are comparable to those performed on the other intervening and dependent variables. It was also possible to extract from the data present/absent percentages for the purpose of comparison with Horner's data.

A Social Score was assigned to each Trait Rating Scale whether completed by a student or a teacher S. The score was derived for each S by totalling the ratings of the four "social" traits (considerate, friendly, likeable, generous) and subtracting the total of the four "instrumental" traits (ambitious, efficient, independent, creative). To eliminate

negative scores for the purpose of analysis a constant of 16 was added to each score, leaving a possible range of 0 to 32. Within this range 0 to 15 is instrumental, 16 is the neutral point, and 17 to 32 indicates a social orientation. The actual range of student scores was 9 to 26.

Procedure

All student Ss were tested in groups of 15 to 40 in their regular classrooms during school hours by the author who served as E for all groups. E was introduced by the classroom teacher as a graduate student who was doing some research; then the teacher left the room. E then said, "I am doing some research on imagination in sixth (ninth, twelfth) grade students. What you are going to do today has nothing to do with your class work, and your teacher will not see the things you are going to do for me. Nobody will see them except me."

Standard written instructions were used for the verbal cues with E announcing the end of each minute. Standard written instructions were also used for the TASC and the Social Desirability Scale. E remained in the room throughout the tests to answer questions.

Twelfth grade Ss were tested in one session, and sixth and ninth graders in two sessions with the break between the Social Desirability Scale and the Trait Rating Scale.

Teacher Ss received the Trait Rating Scales either in their mailboxes or in the Teachers Room where they were given out by E. In both instances they had a short note attached asking for help with some research.

RESULTS

Preliminary Data

Desire for Popularity

Before getting to the results of the major hypotheses it seems expedient to assess the validity of some assumptions underlying those hypotheses. The questionnaire was designed to do that, and while it failed to elicit any information in some areas, it did produce some unexpected results. It was expected that with increasing age the approval of peers would become more important than the approval of parents, but the results of this question were equivocal. Peers did become more important to the older Ss as a source of approval, but parents' approval continued to rank first.

One question asked S to choose where he would rather be thought of by his classmates as popular or a good student.

The expectation was that with increasing age more girls than boys would choose to be thought of as popular. The results of this question are summarized in Table 2 which

Table 2

Percentage of Ss Preferring to be Thought of as Popular

	Grade Level		
Sex	6	9	12
Girls	71	90	51
Boys	62	71	69

shows that the desire to be popular peaked at ninth grade for both girls and boys, but more sharply for the former. However, by twelfth grade, when it was expected to be at its height for girls, it had unexpectedly dropped. A chi square analysis of these percentages is not significant for boys ($X^2 = .33$, df = 2) but for girls it is highly significant ($X^2 = 14.62$, df = 2, $p < .001$). Comparing grade six and grade nine girls using Castellan's (1965) method of partitioning chi squares the difference is significant ($X^2 = 3.78$, 1 df, $p < .05$.) Grades six and nine were not compared with grade twelve because results were in the opposite direction from the prediction.

A possible explanation of the peak in girls' desire to be thought of as popular in ninth grade rather than at

twelfth grade where it was expected may be that older girls were able to "see through" the question and/or that they have been exposed to women's liberation themes in the mass media and were making a conscious effort not to respond in a sex-stereotyped way. However, it may be necessary to re-examine the assumption that the conflict between achievement and approval needs in girls reaches its height when they are seniors in high school and making choices about continued schooling and future careers. From the data it is logical to conclude that the conflict in girls is more intense in early than in late adolescence. Whether this is universal or specific to the population tested cannot be ascertained from this research. However, since anxiety and fear of success were hypothesized to be greatest at the point where the conflict was greatest, the hypotheses regarding these measures should be revised in line with this preliminary finding.

Achievement Stories

Of the four stories scored for n-Ach, two of the verbal stems started with the name of a person the same sex as S and two stems started with "A student." No formal hypothesis was made about what S would do with those ambiguous stems, but it was expected that there would be some cross-sex stories, i.e. girls would give the student

a boy's name and vice versa. The results far outstripped the modest expectations. There was a highly significant correlation between sex and cross-sex stories (r = .75, n = 251, p <.001). As shown in Table 3, the percentage of girls at each grade level who produced at least one cross-sex story is far greater than the number of boys who did so.

Table 3

Percentage of Ss Producing "Cross-Sex Stories"

	Grade Level		
Sex	6	9	12
Girls	84	75	76
Boys	3	3	11

One problem arose in connection with this finding. If a girl produces a story but attributes the achievement in the story to "John" is it permissible to count that in a score measuring her need to achieve? One point of view is that any story that is produced reflects Ss' need even if that is projected on to a character of a different sex. Because previous research (Veroff et al., 1953) found girls' n-Ach scores were higher to male than to female pictures, it was decided to compare the same-sex and cross-sex n-Ach scores received by those girls who had written both kinds of stories. Although the scores were in the direction

previously found by Veroff et al. a test on the difference between the means for these stories was not significant ($t = 1.46$, $df = 106$, $p < .20$).

In order to determine what other variable(s) might be associated with the writing of cross-sex stories, the scores on n-Achievement, n-Approval, and Fear of Success were determined for the writers of both same and cross-sex stories. The conclusion reached was that cross-sex stories are not related in any systematic or significant way to these other variables. It would seem that for both girls and boys in the absence of a sex clue, an achievement situation is seen as more suitable or relevant for boys.

Test Anxiety

There was no support for the hypotheses about levels of anxiety or change in those levels for Ss in the groups based on different patterns of needs for achievement and approval. Mean anxiety scores for all Ss by sex, group, and grade are in Table 4.

Table 4

Mean TASC Score by Sex, Grade, & Group

	Girls Grade Level			Boys Grade Level		
Needs	6	9	12	6	9	12
HH	14.11	7.33	10.71	9.40	11.42	8.67
HL	15.00	13.60	13.17	15.33	8.56	7.17
LH	13.90	14.58	9.67	9.80	8.55	9.00
LL	18.28	14.47	10.20	12.70	8.22	8.92

Hypothesis 1 stated that girls with high needs for achievement and approval (HH) would have rising anxiety from grades six to twelve. Instead, the data show a drop in TASC scores from 14.11 at grade six to 10.71 at grade twelve, with a dip to 7.33 at grade nine.

There was no support for hypothesis 3 that girls with low need for approval, whether with a high or low need for achievement (HL and LL) would have relatively low anxiety at all grade levels or for hypothesis 4 that boys with a low need for achievement and a high need for approval (LH) would have higher anxiety than other groups of boys.

The only hypothesis about anxiety that was even partially supported was hypothesis 2, that girls with low need for achievement and high need for approval (LH) would have a falling level of anxiety from grades six to twelve. While the mean TASC score for girls in this group dropped from 13.90 at grade six to 9.67 at grade twelve, that drop was typical of all groups of Ss, both girls and boys. Since this was a general pattern, the support forthis hypothesis loses its particular importance.

The result of a 2x3x4 analysis of variance on TASC scores as presented in Table 5 shows a highly significant main effect for both sex and grade and a significant three way interaction. Significance of results was tested by three-way unweighted means, fixed effects analysis of variance (Winer, 1962).

Table 5

Analysis of Variance on TASC Score

Source	df	F	Probability
Sex	1	17.78	<.001
Grade	2	9.73	<.001
Group	3	1.58	ns
Sex X Grade	2	.17	ns
Sex X Group	3	1.06	ns
Grade X Group	6	.82	ns
Sex X Grade X Group	6	2.32	<.05

The mean TASC score for all girls was 13.02 and for boys 10.05. The higher score for test anxiety in girls was expected and confirms the sex differences found by previous researchers. (Feld & Lewis, 1969; Feldhusen & Denny, 1965; Knights, 1963; Loughlin et al., 1965; Sarason et al., 1960)

Mean TASC scores by grade were 13.98 at grade six, 11.39 at grade nine, and 9.68 at grade twelve. The drop in TASC scores was unexpected. Nevertheless it is important to look for the kinds of differences which produced a significant three-way interaction between sex, grade, and group. An examination of the cell means (in Table 4) shows that girls and boys in both groups of Ss low in need for approval (HL and LL) had TASC scores which dropped with increasing age. However, Ss with high needs for approval scored a mixture of rises and drops in TASC scores. The difference between girls and boys was particularly dramatic

in Ss with high needs for achievement and approval (HH). Girls in this group had sharply lower TASC scores at grade nine which then rose by grade twelve. HH boys had the opposite pattern: higher TASC scores at grade nine and lower scores by twelfth grade.

Fear of Success

As explained previously, the use of two cues to be scored for fear of success made it possible to separate a generalized fear of success from a fear of success in cross-sex competition. The general fear of success is comparable to Horner's (1968) formulation, because although this research uses two cues adapted drom those Horner used in her study, she scored only the one which taps a generalized fear of success. A scoring system of 0 to 7 was used in the present study. Girls' scores had a range of 0 to 3 (mean = .46) and 0 to 4 (mean = 1.01) on the general and cross-sex cues. Boys' scores ranged from 0 to 2 on each cue (with means of .30 and .44). Results have been analyzed for both numerical scores and present/absent percentages, but since the results are the same the discussion will focus on the analysis performed on the numerical scores.

Hypothesis 5, that fear of success will rise from grades six to twelve for girls with high needs for achievement and approval (HH) was not supported for general fear of success.

Girls in this group had a mean score which remained at .33 for grades six and nine and then dropped to a mean score of .21 at grade twelve. Hypothesis 6, that fear of success wouldbe lower in all other groups of girls was also unsupported for general fear of success. General fear of success was relatively low in all groups of boys, lending support to hypothesis 7. Mean scores of general fear of success by sex, grade, and group are in Table 6.

Table 6

Mean Scores of General Fear of Success by Sex, Grade, & Group

	Girls Grade Level			Boys Grade Level		
Needs	6	9	12	6	9	12
HH	.33	.33	.21	.00	.08	.22
HL	.77	.73	.50	.08	.78	.33
LH	.40	.83	.16	.00	.45	.10
LL	.09	.60	.40	.30	.44	.66

An analysis of variance on general fear of succes is presented in Table 7 which shows significant effects for sex, grade, and group.

Table 7

Analysis of Variance on General Fear of Success

Source	df	F	Probability
Sex	1	4.37	<.05
Grade	2	5.00	<.01
Group	3	3.47	<.05
Sex x Grade	2	1.43	ns
Sex x Group	3	1.42	ns
Grade x Group	6	1.24	ns
Sex x Grade x Group	6	.76	ns

General fear of success is higher in girls than in boys. The mean score for girls was .46 and for boys it was .30. This sex difference was expected and corroborates Horner's findings in direction but not in degree.

The significant results for grade are interesting in that fear of general success reached a peak for both girls and boys in grade nine. The mean scores by grade are .28 at grade six, .55 at grade nine, and .32 at grade twelve. While mean scores were higher for girls at grade six and nine, they were slightly higher for boys at grade twelve. Unpublished results cited by Horner (1968) indicate that fear of success imagery increased markedly for girls from junior to senior high school which was not the finding with the present sample.

The significant means by group are summarized in Table 8 which gives these data for the four groups of

Table 8

Mean General Fear of Success Score by Group

	Group: Needs for Achievement and Approval			
	HH	HL	LH	LL
Girls	.27	.70	.47	.39
Boys	.11	.37	.19	.48
All subjects	.20	.56	.34	.43

need combinations by sex and for all subjects. From this table we can discern a relationship in boys between general fear of success and a low need for approval.

Fear of success in cross-sex competition was elicited by one of the verbal cues, and the hypotheses about fear of success will be re-analyzed for this type of motive to avoid success. Hypothesis 5 which stated that girls with high needs for achievement and approval would have a rising fear of success from elementary to high school was not supported. The mean score for fear of success in cross-sex competition was .67 for HH girls at grades six and nine, and 1.26 at grade twelve. A one-way analysis of variance on these scores is not significant. Hypothesis 6, that all other groups of girls would have a relatively low fear of success is not supported. Hypothesis 7, that fear of success would be relatively low in all boys is supported.

The mean scores for fear of success in cross-sex competition by sex, grade, and group are presented in Table 9.

Table 9

Mean Scores of Fear of Success in Cross-Sex Competition

	Girls			Boys		
	Grade Level					
Needs	6	9	12	6	9	12
HH	.67	.67	1.36	.00	.67	.56
HL	.92	1.47	1.33	.59	.56	1.00
LH	.20	1.08	1.33	.10	.55	.50
LL	.45	1.27	1.00	.00	.44	.33

An analysis of variance performed on these data is presented in Table 10 which shows significant results for the main effects of sex, grade, and group.

Table 10

Analysis of Variance on Fear of Success in Cross-Sex Competition

Source	df	F	Probability
Sex	1	30.73	$<.001$
Grade	2	12.79	$<.001$
Group	3	3.44	$<.05$
Sex x Grade	2	.65	ns
Sex x Group	3	.14	ns
Grade x Group	6	.64	ns
Sex x Grade x Group	6	1.14	ns

The difference between girls' and boys' scores is much greater for fear of success in cross-sex competition than it was for general fear of success. Mean scores by sex were 1.01 for girls and .44 for boys.

The mean by grade is also larger and does not show the peak at grade nine. Instead there is a flattening out from grades nine to twelve. The means by grade for all Ss were .41 for grade six, .91 for grade nine, and .92 for grade twelve. The rise from grades six to twelve is much steeper for girls (.58, 1.18, and 1.26 at grades six, nine, and twelve) compared with boys (.22, .56, .54 for grades six, nine, and twelve). As with general fear of success, the greatest increase in score occurs between grades six and nine. The only exception to this is among girls with high needs for achievement and approval. For these, as mentioned previously, the mean scores were the same for grades six and nine, and then were sharply higher at grade twelve.

The means by group are summarized in Table 11 which shows

Table 11

Fear of Success in Cross-Sex Competition by Sex and Group

	Group			
	Needs For AChievement and Approval			
	HH	HL	LH	LL
Girls	.97	1.24	.91	.94
Boys	.50	.67	.37	.26
All subjects	.76	.99	.66	.62

that the pattern of scores is the same for both boys and girls, with the highest scores on fear of success in

cross-sex competition in Ss with a high need for achievement and a low need for approval (HL), an unexpected finding for which an explanation is not readily available.

In summary, of the two kinds of fear of success measured in this research, the one that elicited results most like those of Horner (1968) is the one indicating fear of success in cross-sex competition. It is this kind of competition that is more salient at adolescence, especially for girls. The percentages of girls and boys who show fear of success imagery at each grade level to each of the cues is presented in Table 12.

Table 12

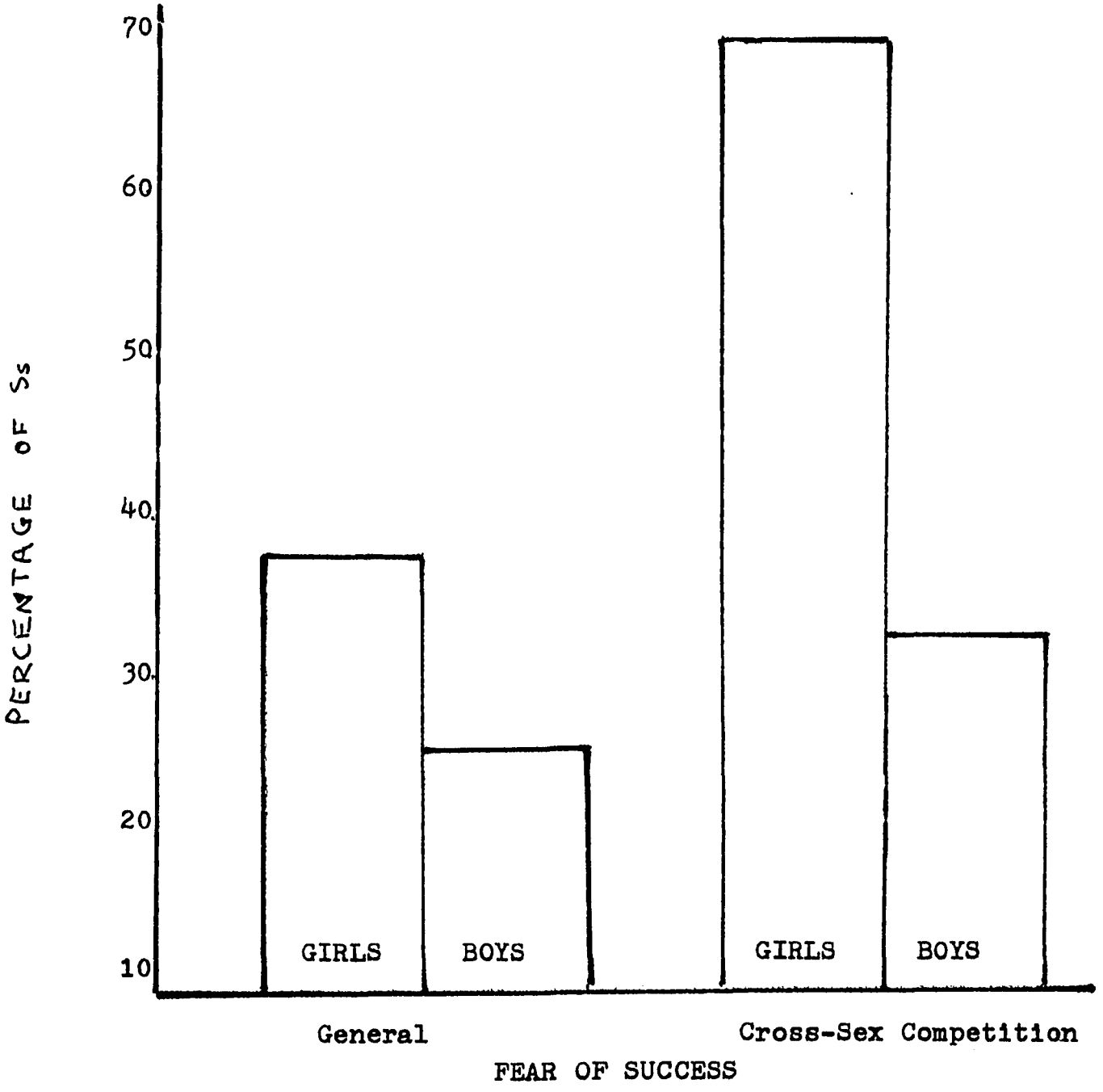
Percentage of Girls and Boys with Fear of Success Scores to Two Kinds of Cues

Sex	Grade Level	General Cue	Cross-Sex Cue
Girls	6	35	49
	9	52	73
	12	26	86
Boys	6	11	16
	9	39	41
	12	26	39
Girls across grades		38	69
Boys across grades		25	32

The same data are presented in graph form in Figure 1, p. 54.

FIGURE 1

Percentages of Ss with Fear of Success Scores to Two Kinds of Cues



Grade Point Average (GPA)

Tables 13 and 14 contain mean GPA for Ss in this sample by sex, grade and group. An analysis of variance

Table 13

Mean GPA

	Girls			Boys		
	Grade Level					
Group	6	9	12	6	9	12
HH	30.00	26.22	27.14	27.60	26.00	27.44
HL	28.62	29.87	27.33	27.00	27.44	26.67
LH	28.90	23.67	28.53	24.30	26.91	22.60
LL	26.00	26.07	26.80	26.00	20.89	23.25

Table 14

Analysis of Variance on GPA

Source	df	F	Probability
Sex	1	12.05	<.001
Grade	2	2.37	ns
Group	3	6.27	<.001
Sex x grade	2	.52	ns
Sex x group	3	.73	ns
Grade x group	6	.86	ns
Sex x grade x group	6	2.95	< .01

on those data, shows highly significant main effects for sex and for group. However, it is possible that needs like those for achievement or approval, which develop early in life, are influenced by level of intelligence. The question must be asked whether membership in the different groups is

related to I.Q., for if so the group differences in GPA might be attributable to I.Q. alone. The correlation showed I.Q. to be significantly related to GPA ($r = .50$, $n = 251$, $p < .001$). Therefore, it is necessary to analyze the effect of group on GPA with the effect of intelligence removed. Table 15 presents an analysis of variance on these data. It shows that there is a very strong main

Table 15

Analysis of Covariance on GPA with I.Q. Removal

Source	df	F	Probability
Sex	1	26.13	<.001
Grade	2	.87	ns
Group	3	4.64	<.01
Sex x Grade	2	2.19	ns
Sex x Group	3	.24	ns
Grade x Group	6	1.29	ns
Sex x Grade x Group	6	1.80	ns

effect of sex on GPA, the means being 27.35 for girls and 25.93 for boys. It is well known that girls get higher school marks than boys, for they are rewarded during elementary and high school with good grades for their school work and their conforming behavior in the classroom. (Bardwick, 1971; Garai & Scheinfeld, 1968; Lavin, 1965). In the present study of 251 Ss many more girls than boys had a GPA above the mean for all Ss as shown in Table 16. The

Table 16

Ss with GPA Above and Below the Mean

Sex	Above Mean	Below Mean
Girls	94	43
Boys	45	69

difference is significantly greater than would be expected by chance. (X^2 = 21.38, 1 df, p <.001).

Table 17 with mean GPA by sex, group and grade level

Table 17

Mean GPA with the Effect of I.Q. Removed

		Grade Level			
Sex	Group	6	9	12	Across Grades
Girls	HH	29.24	27.41	27.51	27.96
	HL	28.11	29.54	27.97	28.72
	LH	29.29	24.82	28.66	27.49
	LL	26.68	25.25	26.89	26.14
Boys	HH	25.18	26.20	27.52	26.46
	HL	26.13	27.44	23.87	26.06
	LH	24.53	26.16	23.67	24.83
	LL	25.50	23.04	22.67	23.50

is presented as an aid in understanding the significant group differences.

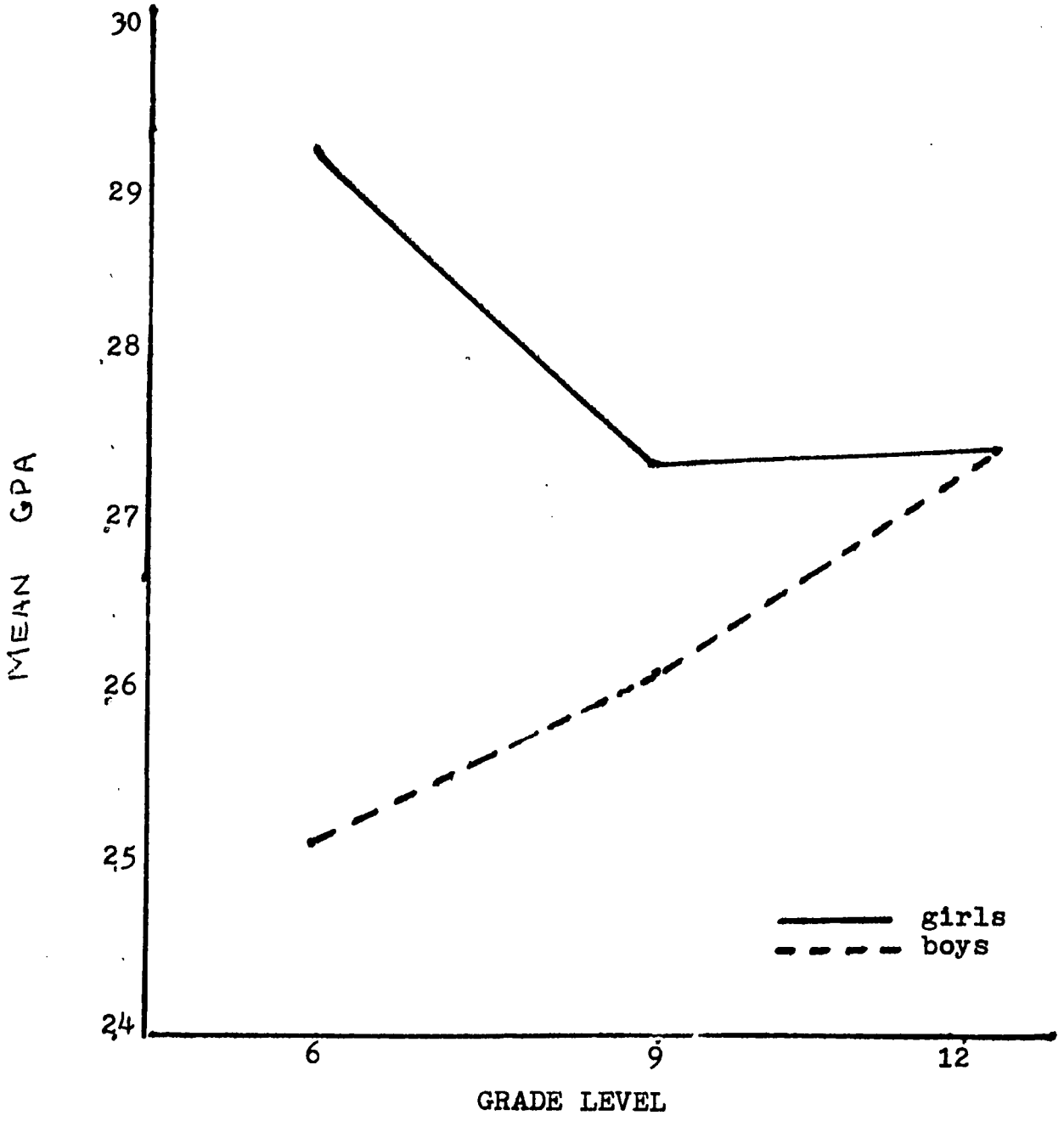
These data support hypothesis 8, that girls with high needs for achievement and approval would have a drop in GPA from grades six to twelve. In fact, this group of girls had the greatest drop in GPA for the time period tested.

However, the results of the analysis of the students' attitudes toward popularity vs. academic achievement suggested that the drop in GPA for this group should be greatest between grades six and nine, the point of greatest conflict. A t- test on the difference between the means of HH girls at grades six and nine is significant ($t = 4.14$, 16 df, $p < .001$). Since both HH and HL girls have high needs for achievement and differed only in the strength of their need for approval a t- test was also done on the difference between the ninth grade means for HH and HL girls. This difference is significant ($t = 5.76$, 22df, $p < .001$), suggesting that at that particular point in their adolescent development a high need for approval can affect adversely the school performance of girls with high achievement needs.

In the absence of a significant interaction between sex and group there is no support for hypotheses 9, 10, 11, or 12. However, there are some trends which are interesting. Figure 2, page 59 presents the mean GPA at each of three grade levels for girls and boys with high needs for achievement and approval. The divergent pattern of achievement behavior suggests that a high need for approval coupled with a high need for achievement may be an interfering factor for adolescent girls or an enhancing factor for adolescent boys.

FIGURE 2

Mean GPA for HH Girls and Boys at Three Grade Levels



Social vs. Instrumental Orientation

Student Data

The mean Social Scores for girls and boys were just above the neutral point on the social end of the range, with the mean for girls 17.87 and the mean for boys 16.97. Although the numerical difference is small, girls have a significantly higher Social Score than boys ($t = 2.50$, $df = 250$, $p < .01$) offering support for hypothesis 13.

Teacher Data

Each teacher rated the personality traits in terms of desirability for girls and boys in the classroom. An examination of the results shows that almost all teachers believe the social traits are more important for girls than for boys; only 5 teachers out of 107 rated social traits more important for boys. The mean scores for all teachers hover around the neutral point, with the mean Social Score 16.46 for girls and 15.50 for boys. This difference is significant ($t = 4.38$, $df = 105$, $p < .001$). Thus hypothesis 14 is supported, that teachers consider a social orientation more important for girls.

Clearly, both students and their teachers deem the social traits more desirable for girls than for boys. Teachers' scores for both sexes were more instrumental than were the students' scores for themselves, which might be interpreted to mean that teachers see their pupils primarily

as students, while the students see themselves as people.

Each teacher rated the traits for both girls and boys. At the primary and middle school level the majority of the teachers made identical ratings for girls and boys (60% in the primary school; 59% in the middle school). In the high school the situation was reversed, with 58% of the high school teachers rating the traits differently for girls and boys. A chi square analysis of these proportions was not significant ($X^2 = 1.96$, 1 df, $p < .20$).

We have only teachers' own reports for this, however, and one can only speculate on whether the other 42% of the teachers do, indeed, treat girls and boys the same even when they say they do.

There is a feeling among educators that you <u>should</u> have the same expectations from girls and boys. One teacher (male, high school level) left a note on the ratings he turned in. He wrote, "I've always tried to treat boys and girls as equals and within this framework I honestly feel the qualities are equally good for each sex. But that does not get at the subtle fact that I treat boys and girls differently just as boys and girls treat me differently."

If a greater proportion of high school teachers do have different expectations from girls and boys, this would suggest that teachers (and other adults) do begin to respond differentially as the students' secondary sexual characteristics become apparent.

It is also possible to look at the traits that make up this Social Score and how they were ranked by students and teachers. Although Ss rated the traits from 1 to 5, ranks can be derived from the summary statistics. When this was done it was found that teachers' rankings were quite similar for girls and for boys, but the differences that did exist were rather interesting. At the middle school level ambitious was ranked second for both girls and boys, but high school teachers ranked it fourth for boys and in sixth place for girls. On the other hand, friendly was ranked as increasingly important for girls and less important for boys as they grew older. The complete rankings are in Table 18.

Table 18

Teachers' Rankings of the Traits for Girls and Boys

	Girls		Boys	
Trait	m.s.	h.s.	m.s.	h.s.
considerable	1	1	1	1
ambitious	2	6	2	4
efficient	5	5	5	5
friendly	3.5	3	4	6
independent	3.5	2	3	2
likeable	7	7	7	7
generous	8	8	8	8
creative	6	4	6	3

m.s. = middle school
h.s. = high school

Girls' and boys' rankings for themselves are shown in Table 19. The differences seem to be that girls ranked

Table 19

Students' Rankings of Traits

Trait	Girls' Ranking	Boys' Ranking
considerate	3	4
ambitious	6	5
efficient	8	6
friendly	1	1
independent	4	2
likeable	2	3
generous	5	7
creative	7	8

efficient less important and boys ranked it more important as they got older. Across grades, only one trait (friendly) was ranked the same by both girls and boys. Girls ranked the other three social traits more highly than boys and ranked all four instrumental traits as being less important for themselves than boys did.

Comparing the results of the rankings that teachers gave to the traits for students and those the students gave themselves, it seems that the significant difference for the teachers' ratings was due principally to the differential rankings of the trait ambitious as being more important for male students than for female students. This suggests that even in the school setting those adults

who are most concerned with the achievement of girls and boys believe ambition is more important for boys. They are, therefore, likely to reinforce this behavior more strongly in male students. The student rankings show more consistent preferences in line with the hypothesis that girls will rank social traits more highly for themselves, and boys will rank instrumental traits higher. These results suggest the acceptance among students of cultural sex-role stereotypes.

DISCUSSION

The theoretical model underlying this research posits that a conflict based on achievement and approval needs would have certain noticeable effects on adolescent girls' school performance, as measured by grade point average. The intervening variables of test anxiety and fear of success are expected to provide evidence of this conflict.

Analysis of the responses concerning the conflict between academic achievement and social success indicated that the highest level of conflict was at ninth grade, not in grade twelve as originally expected.

The expection had been that the desire for popularity would continue to increase from grades nine to twelve. Why did ninth grade emerge as the point of seemingly greatest conflict? There are a few things that we can point to as possible reasons. First, in the school district from which the Ss were drawn, all students enter a new school setting at the beginning of ninth grade. Here, surrounded by students older than they, with much freedom in choosing their academic programs, they suddenly see themselves

as grown up. The halls of the high school are filled with couples holding hands as they walk to class, and the corridors are lined with lockers against which clusters of girls and boys lounge and talk between classes. The "dining commons" is a large area suitable for socializing and is filled, during the lunch hours at least, with the sounds of rock music. Students pursue independent study projects alone, in pairs, or in small groups. The ninth grader is suddenly confronted with a social world which is very different from that of the middle school housing grades five through eight. This new social milieu is one that would arouse latent anxieties about social life in girls and boys at this developmental stage.

In addition to the changed social situation in the school these Ss attend, there are other internal factors. Within a psychoanalytic frame of reference Blos (1962) interprets the specific task of early adolescence as being the resolution of conflicts of bisexuality. This can be extended to encompass thoughts about typically feminine and masculine goals and future occupational roles.

It is no wonder, then, that desire to be thought of as popular rather than a good student should emerge so forcefully at ninth grade, particularly for girls. Baumrind (1969) asserts that both girls and boys begin to date and go steady between 14 and 15 years of age, while they are in ninth and tenth grades. Bardwick (1971)

characterizes early adolescence as the first critical identity period for girls because of the inconsistency and discontinuity which forces upon them at that point the realization that even agents of the culture are ambivalent about the female role. This ambiguity does not exist for boys, for whom role expectations are more clearly defined. Therefore, hypotheses which dealt with the effect of the conflict have been re-stated as follows:

1. HH girls will have rising test anxiety from grades six to nine, with a leveling off thereafter.
2. LH girls will have falling test anxiety from grades six to nine, with a leveling off thereafter.
5. HH girls will have rising fear of success from grades six to nine with a leveling off thereafter.
8. HH girls will have a high GPA in grade six, and this will drop by grade nine and remain level through grade twelve.

Three hypothesis were directly confirmed by statistically significant findings: that fear of success would be relatively low in all boys, and that both students and teachers would consider social traits more important for girls than for boys.

Evidence consistent with the model was also provided by the statistically significant difference at ninth grade

between the academic achievement of high n-Ach girls who have high and low needs for approval. This finding suggests that at that particular point in their adolescence a high need for approval can affect adversely the school performance of girls with high achievement needs.

The other important comparison is that between HH girls and HH boys. Here too, the difference as presented in Figure 2, page 59 is striking, with a rising trend for boys and a falling trend for girls with this combination of needs.

However, the proposed model does not fare as well when considering the intervening variable anxiety, as measured by the TASC. These scores generally dropped with age, showing a mixture of peaks and drops at ninth grade for girls and boys with different needs. This was unexpected, and no explanation is readily available.

Another finding which was somewhat unexpected and about which no hypothesis was made was the sex difference in level of n-Ach scored on stories written to the verbal stems. The median score for girls was 8.32 and for boys 5.36. A comparison with previous research is difficult to make for a number of reasons. Most studies have used male Ss only. Some research with both male and female Ss does not give actual n-Ach scores but uses instead the designations "high" and "low" for scores divided at the median. Other studies have used resultant n-Ach score, which is fantasy

n-Ach minus test anxiety. Even if male and female Ss were both given these measures it would be impossible to know the original n-Ach scores, since girls' test anxiety is higher.

Horner (1968) did compare male and female scores but got results in the opposite direction from those obtained in this study. However her Ss were college students. She found men to have median n-Ach of 8.5 compared with 7.3 for women.

Concerning fear of success, there was a significant sex difference in general fear of success, but this difference was highly significant for fear of success in cross-sex competition. Girls' scores soared on the latter measure, starting at a higher level in sixth grade and continuing to increase through twelfth grade. Therefore, the kind of success girls are afraid of seems to be success in competition that pits them against the boys they are interested in socially. This lends support to the underlying assumption that the conflict in girls is aroused by their interest in heterosexual social contacts during adolescence.

The magnitude of the sex differences found by Horner (1968) were present only in the cross-sex competition condition of this research. Horner's research was conducted on an unselected group of students at a large co-educational college. When success avoidance was measured in female

students at a highly selective all girls college, Alper (1973) found success stories and fear of success stories about evenly divided. Alper used a cue for measurement of success which is like the one used in the research under discussion here which has the girl at the top of her class after first term finals, whereas Horner's cue had her female student leading her medical school class. Alper suggests that medicine in this country is seen as primarily a male dominated field. Thus, differences in the student population or the cue could be responsible for the difference in results. In this research students were an unselected group like Horner's Ss, but the cue was more like the one used by Alper.

Boys' level of fear of success in conditions of general competition was surprising, but a look at the stories written in response to that particular cue is instructive and offers some explanation of why boys low in the need for approval should have a fear of success in the classroom. These boys may not value success because it is an embarrassment to them and to the "cool" image they wish to project. This was expressed most clearly by a sixth grade boy who wrote, "Peter is embarrassed because it was announced in front of his class. Peter has been called a faggot and bookworm by 'friends' and hates getting good marks."

Girls seem to be plagued by the same unhappy feelings as boys about being called a "brain", "smarty", or "goody-

good". Two ninth grade girls expressed the same theme. One wrote, "Why can't you have friends if you are smart?", and the other wrote, "She is happy on the outside, but in the inside she wishes she had friends instead of grades."

In addition to the problem of keeping friends while getting good grades, the nature of the conflict for girls is expressed in the following excerpt from a story by a ninth grade girl. "What can she do so people won't think she's a snob, she can join girls sports or fail her next test - no that is not a good idea, her mother won't like that." Perhaps this is an example of why girls with a mixed pattern of needs suffer the most at the thought of success.

Girls feel much more threatened by doing well academically in competition with the boys they like than boys feel relative to succeeding against their girlfriends. Perhaps success is interpreted as aggression, and hence unfeminine, as Horner (1968) suggests. Certainly masculine pride is easily hurt, according to the stories written by the students. A sixth grade girl wrote, "The day before the contest Guy tripped Barbara on purpose." A ninth grade girl wrote, "She knows she has the contest all wrapped up. All Joe's friends are mocking him. They think it's funny how a girl beats a boy. Joe is totally embarrassed." Another ninth grade girl wrote, "The boy (Bruce) never spoke to her again his masculine pride was hurt so much." A twelfth grade girl wrote, "She

doesn't want to appear excessively intelligent or to hurt his male ego."

Winning often causes romance to wither, but even the very act of competing causes trouble. For example, "Barbara loses purposely and ends up depressed anyway because the boy has a different girlfriend" (from a ninth grade girl). A twelfth grade girl wrote, "Boy will win yet he and Barbara will never get close because his need to be way superior to her specifically has been endangered."

The conflict between parent and peer approval and the nature of the double bind are succinctly expressed in this story by a ninth grade girl:

> "She is wondering whether she should let him win so she will have a chance with him or whether she should win and be proud of herself. She liked another boy but she outdid him in grades and grades were important to him. They became rivals in every class. She wants the boy to like her but she wants the prize too. She is wondering if she should ask someone's advice. If she asks her mother she will say to go for the prize. If she asks her friends they will say to go for the boy."

The girls who fear competition are reflecting reality, for many boys' stories reflect the damage that competition does to their feelings of masculinity. Following are two bizarre reactions of twelfth grade boys to being beaten by a girl: "The girl will win and he will cut her into tiny little pieces and send them in the mail to her parents." "The girl will win...Bill will rape her because he is so angry. Then he will be put away because he will suffer a nervous breakdown."

On the other hand, some boys expressed the same conflict and fear over loss of friendship that girls did. A ninth grade boy wrote, "Should I let her win or should I win and she wouldn't see me again?" Boys also experience some of the same conflict between parental and peer expectations as shown by this story from a ninth grade boy, "Bill is in a bad situation - should he make his parents happy or should he make himself happy by letting the girl win?"

In analyzing the results of this research it should be remembered that although there were 251 Ss, dividing them into the 24 cells of group (four), grade (three), and sex (two), resulted in some cells having as few as 5 Ss and others a maximum of 15. Therefore, it should be borne in mind that all the results which analyze data by sex, grade, and group only suggest the presence of significant phenomena which then need further corroboration. The data by sex alone or grade alone or group alone are more reliable because of the larger numbers of Ss in each condition.

In an article on motives and development Kagan(1972) also brings up the importance of ambiguity in understanding motivation. He theorizes that motives are cognitive structures and that, therefore, one of the difficulties of using behavior as a measure of motivation is that such cognitive representations may change without a concomitant change in behavior. The implication is that more than one motive may

be behind a given bit of behavior, and also that many kinds of actions may reflect the same motive. Just as a strong motive to gain power can be expressed in such diverse behavior as physical aggression, hoarding money, or sexuality, so academic achievement may be the behavioral expression of motives for either affiliative or achievement motives or both.

Kagan says the motive for mastery can be either primary or secondary. If the motive for mastery is primary the person will take pleasure in meeting a challenge to his ability out of a desire to match his behavior to a standard, either internal or external. The motive for mastery, may, however, be a derivative of the primary motive to resolve uncertainty, as when a person is confronted by two incompatible ideas or by an event discrepant from his expectations. The kind of affect associated with the primary motive for mastery is <u>excitement</u> because the person himself has generated the uncertainty over mastery, but <u>anxiety</u> is most likely to be the affect aroused when the motive for mastery is secondary to the motive to reduce uncertainty, because in the latter instance the source of the discrepancy between cognitions emanates from the outside world.

Kagan's conceptualizations of uncertainty and of a hierarchy of motives dependent on the probability of

gratification is consonant with Atkinson's (1958) theory in which the tendency to act on the underlying motive is postulated to be strongest when the expectancy of success is 50%. Kagan hypothesizes that uncertainty of gratification during different stages of development determines which goals will be ascendant at that particular stage. He suggests that adolescent uncertainty over sexuality makes the motive for heterosexual involvement ascendant over the drive for school achievement in those young people who have already resolved the uncertainty over their intellectual ability. We know that the adolescent goes through a period of turmoil during which he experiences heightened introspection, concern over his role in society, and a general questioning attitude toward values previously taken for granted.

Considering Kagan's theory within the framework of an interest in sex differences in achievement-related attitudes and behavior during adolescence, it is possible to speculate that the motive for mastery may be subjected to very different stresses for girls and for boys during this period. For girls, the motive for mastery is more likely to be secondary, because of the ambivalence of society relative to achievement goals for girls. This is likely to increase uncertainty in a manner that is not present for boys. This speculation fits well the

general research findings of greater anxiety in girls. The change in the hierarchical position of certain mastery activities for adolescent girls could be the result of several factors which are well established. First, girls as a group have already proven their intellectual mastery with higher marks during elementary school. Secondly, girls reach puberty earlier than boys, so that the hormonal changes of adolescence may lower their threshold to heterosexual stimuli and create additional uncertainty. This would mean a greater level of uncertainty for girls than for boys, occurring at a time when they cannot get consensual validation from their classmates of the opposite sex who are trailing them in the developmental timetable. In addition to the internal stresses, the outside world imposes strains with the surfacing of conflicting societal expectations about women's roles. The girl who is unsure looks toward her culture for the answers and receives a mixed message about what it means to be a young woman.

Where do we go from here? The concept of a conflict of needs creating difficulties for adolescent girls seems to be worth pursuing. We could look at girls with high needs for achievement and approval as having cognitive dissonance during their high school years. The conflicting cognitions would be something like, "I want to be a student who gets good grades, but if I do my classmates won't like

me, and I want to be liked", or "Doing well in school is not feminine, and I need to be feminine because I want to be popular." It might be possible to devise an instrument which would permit an assessment of a hierarchy of motives. This would make it possible to obtain a continuous measure for the independent variable which would be more powerful because it would not require dichotomizing the variables as was done in this research.

Another direction that future research might take is derived from Bardwick's (1971) theorizing about achievement and affiliative needs. She says that girls who fuse achievement and affiliative needs (comparable to HH girls in this study) will probably be motivated to return to work 10 to 15 years after marriage, but girls who develop high autonomous achievement needs (comparable to HL girls because of the absence of a high need for affiliation or approval) are likely to have greater anxiety about femininity and greater vulnerability in their sex-role identity, and these girls may give up achievement altogether. If fear of success and fear of failure are two separate and different things, as proposed here, than we would predict that Ss high on fused achievement-affiliative needs would return to work after their children were in school, but Ss with high autonomous achievement needs would not return, because as Bardwick says, after you have allowed your skills to lie

fallow 15 years you risk failure in competition with younger women either back in school or on the job. Therefore, women in the second group would be more likely to go into volunteer work rather than paid employment. Assessing the validity of this formulation would require doing a longitudinal study.

Parents and those who work with girls and boys in the school setting should examine their own attitudes and biases in order to understand and clarify them. If the options were more clearly presented to girls while they are growing up, important decisions could be made by them with more certainty. Up until this point, girls have had few role models who have presented the idea of women successful in the business and professional worlds. This seems to be changing, and it is possible that we have already seen the last generation of girls who feel that anything other than marriage and motherhood would be accepting second best.

Summary

This research was an attempt to shed some light on reasons for the inconclusive and contradictory findings on the relationship between the motive to achieve (n-Ach) and actual achievement behavior in girls and women. Previous research and theory has pointed to a different relationship between academic achievement and underlying needs in girls and boys. Specifically, academic achievement has been found to be related to the need for approval and affiliation in girls and the need for mastery and personal competence in boys.

Developmental considerations prompted the formulation of a hypothetical model in which high needs for achievement and approval would be compatible in girls prior to puberty and a source of conflict during adolescence. The underlying rationale is that peers become more important as a source of approval during adolescence, and girls expect approval from their peers for social rather than academic success.

Previous research has found that girls and boys are socialized differently by the agents of the culture, both parents and teachers. This difference is thought to be the source of the conflict over achievement in adolescent girls. In order to get at the underlying expectations of significant adults, a measure was designed which asked teachers to rate the importance of eight social and instrumental traits for

the girls and boys they teach. Both male and female teachers rated social traits more important for girls than for boys. When the students in this study were asked to rate the same traits for themselves, girls' scores were more social than the scores of boys. This suggests that girls and boys pick up both subtle and open cues which have an important influence on what is considered appropriate feminine and masculine behavior.

The model proposed that girls with high achievement and approval needs suffer more conflict over achievement during adolescence than girls with high achievement and low approval needs or girls with low achievement need, regardless of the level of their need for approval. Evidence of the conflict was expected to be present in the form of heightened test anxiety and fear of success, and the anticipated result was a drop in academic achievement in girls with conflicting needs.

Results showed that ninth grade was the point of greatest conflict over academic success vs. popularity. Among girls with high achievement needs, those who also had a high need for approval had lowered academic performance at ninth grade. This decrement was not present in boys with similar needs whose grade point average rose during the same time period. The evidence of conflict in the form of higher test anxiety and fear of success was not supported.

Previous research on the motive to avoid success used a measure of fear of success in a general academic setting, but in this research the motive was separated into two components: fear of success in a general achievement situation and fear of success in cross-sex competition. Although both were more common in girls, general fear of success peaked at ninth grade, being present in just over half the girls, but fear of success in cross-sex competition continued to rise until it was present in 86% of twelfth grade girls as compared with 39% of the boys in that grade. Clearly, cross-sex competition in the academic situation arouses strong negative feelings about success in a majority of the senior high school girls in this sample.

APPENDIX

Following are the materials used in the research. Student Ss were given the materials on pages 83 to 100. Girls completed the verbal cues on pages 87, 88, 90, 91, 93, and 95. Boys completed the verbal cues on pages 86, 88, 89, 91, 92, and 94.

Teacher Ss received pages 101 to 103.

Name _____ Grade_____ Age_____

Sex _____ Birth Date _____

Please list the names and ages of your brothers and sisters:

_____

_____

_____

Father's occupation: _____

What is the highest grade he completed in school?_____

Mother's occupation:_____

What is the highest grade she completed in school?_____

If you had to choose would you rather your classmates think of you as popular with other people____or a good student___?(Check only one.)

How important is it for you to be liked by the following people?

	Very Important	Moderately Important	Not Important
your parents	_____	_____	_____
your teachers	_____	_____	_____
girls you know	_____	_____	_____
boys you know	_____	_____	_____

What are your plans after you graduate from high school?

_____

If you have ever thought of a career or job for yourself what is it?_____

If you excel in schoolwork how will the following people react?

	approval	indifference	disapproval
your parents	_____	_____	_____
your teachers	_____	_____	_____
girls you know	_____	_____	_____
boys you know	_____	_____	_____

What kind of family would you like to be a member of when you get married? (Please check one.)

_____ one in which the husband is responsible for money and finances and the wife is responsible for household chores and child care

_____ one in which both husband and wife share financial, household, and child care responsibilities

Each of the following six pages is headed by a sentence called a verbal cue. Your task is to write a story that is suggested to you by the cue. Try to imagine what is going on in each. Then tell what the situation is, what led up to the situation, what the people are thinking and feeling, and what they will do. In other words, write as complete a story as you can, a story with plot and characters.

You will have five minutes to look at each cue and write a story about it. Write your first impressions and work rapidly. I will keep time and tell you when it is time to finish your story.

There are no right or wrong stories or kinds of stories, so you may feel free to write whatever story is suggested to you when you look at the cue.

John is looking over an assignment the teacher gave today.

What is happening? Who are the persons?

What has led up to this situation? What has happened in the past?

What isbeing thought? What is wanted? By whom?

What will happen? What will be done?

Jane is looking over an assignment the teacher gave today.

What is happening? Who are the persons?

What has led up to this situation? What has happened in the past?

What is being thought? What is wanted? By whom?

What will happen? What will be done?

A student is talking about something important with a teacher.

What is happening? Who are the persons?

What has led up to this situation? What has happened in the past?

What is being thought? What is wanted? By whom?

What will happen? What will be done?

Jim is sitting at his desk.

What is happening? Who are the persons?

What has led up to this situation? What has happened in the past?

What is being thought? What is wanted? By whom?

What will happen? What will be done?

Susan is sitting at her desk.

What is happening? Who are the persons?

What has led up to this situation? What has happened in the past?

What is being thought? What is wanted? By whom?

What will happen? What will be done.

A student is thinking about what to do after graduating from high school.

What is happening? Who are the persons?

What has led up to this situation? What has happened in the past?

What is being thought? What is wanted? By whom?

What will happen? What will be done?

Bill and a girl he likes are competing for a prize as the best student in their grade.

What is happening? Who are the persons?

What has led up to this situation? What has happened in the past?

What is being thought? What is wanted? By whom?

What will happen? What will be done?

Barbara and a boy she likes are competing for a prize as the best student in their grade.

What is happening? Who are the persons?

What has led up to this situation? What has happened in the past?

What is being thought? What is wanted? By whom?

What will happen? What will be done?

At the end of the term Peter finds himself with the highest grade in English.

What is happening? Who are the persons?

What has led up to this situation? What has happened in the past?

What is being thought? What is wanted? By whom?

What will happen? What will be done?

At the end of the term Judy finds herself with the highest grade in English.

What is happening? Who are the persons?

What has led up to this situation? What has happened in the past?

What is being thought? What is wanted? By whom?

What will happen? What will be done?

Listed below are some sentences about things we think or things we do. Read each item and decide whether the statement is true or false for you personally. Then mark it true if you think it describes you or false if you think it does not describe you.

1._____ I always go out of my way to help someone in trouble.

2._____ It is sometimes hard for me to go on with my work if I am not encouraged.

3._____ I have never hated anyone.

4._____ Sometimes I have had doubts about my ability to succeed in life.

5._____ I sometimes feel angry when I don't get my way.

6._____ When I don't know something I don't mind admitting it.

7._____ My table manners at home are as good as when I eat out in a restaurant.

8._____ If I could get into a movie without paying and be sure I was not seen, I would probably do it.

9._____ A few times I have given up doing something because I did not think I could do well enough.

10._____ I like to gossip sometimes.

11._____ There have been times when I felt like rebelling against people in authority even though I knew they were right.

12._____ No matter who I am talking to, I'm always a good listener.

13._____ I can remember "playing sick" to get out of something.

14._____ There have been times when I took advantage of someone.

15._____ I'm always willing to admit it when I make a mistake.

16._____ I always try to practice when I preach.

17._____ I do not find it hard to get along with loud-mouthed unpleasant people.

18._____ I sometimes try to get even, rather than forgive and forget.

19._____ I am always polite, even to people who are disagreeable.

20._____ Sometimes I have really insisted on having things my own way.

21._____ There have been times when I felt like smashing things.

22._____ I would never think of letting someone else be punished for something I did wrong.

23._____ I never mind being asked to return a favor.

24._____ I have never been annoyed when people expressed ideas very different from my own.

25._____ There have been times when I was quite jealous of the good luck of others.

26._____ I have almost never felt the urge to tell someone off.

27._____ I am sometimes annoyed by people who ask me for favors.

28._____ I have never felt that I was punished without cause.

29._____ I sometimes think when people have bad luck that they only got what they deserved.

30._____ I have never said something on purpose to hurt someone's feelings.

On this page are listed certain personal characteristics. Please look at each one and think about how important it is to YOU for you to have this trait. Then give each trait a rating from 5 to 1.

The meaning of the ratings is:

5 extremely important
4 very important
3 rather important
2 slightly important
1 not important at all

Please put a check under the rating that applies for each trait.

TRAIT	5	4	3	2	1
considerate	____	____	____	____	____
ambitious	____	____	____	____	____
efficient	____	____	____	____	____
friendly	____	____	____	____	____
independent	____	____	____	____	____
likeable	____	____	____	____	____
generous	____	____	____	____	____
creative	____	____	____	____	____

These are some questions about your feelings in school. There are no right or wrong answers. Please answer yes or no to each question.

1._____ Do you worry when the teacher says she is going to ask you questions to find out how much you know?

2._____ Do you worry about passing at the end of the year?

3._____ When a teacher asks you to get up in front of the class and read aloud, are you afraid that you are going to make some bad mistakes?

4._____ When a teacher says that he is going to call on some students in the class to do math problems, do you hope that he will call on someone else and not on you?

5._____ Do you sometimes dream at night that you are in school and cannot answer the teacher's questions?

6._____ When a teacher says he is going to find out how much you have learned, does your heart begin to beat faster?

7._____ When a teacher is teaching you about math, do you feel that other students in the class understand better than you?

8._____ When you are in bed at night, do you sometimes worry about how you are going to do in class the next day?

9._____ When the teacher asks you to write on the blackboard in front of the class, does the hand you write with sometimes shake a little?

10._____ When a teacher is teaching you English, do you feel that other students in the class understand better than you?

11._____ Do you think you worry more about school than other students?

12._____ When you are at home and you are thinking about math homework for the next day, do you become afraid that you will get the answers wrong if the teacher calls on you?

13._____ If you are sick and miss school, do you worry that you will do more poorly than other students when you return to school?

14._____ Do you sometimes dream at night that other students in your class can do things you cannot do?

15._____ When you are at home and thinking about your English homework for the next day, do you worry that you will do poorly on the homework?

16._____When a teacher says she is going to find out how much you have learned, do you get a funny feeling in your stomach?

17._____If you did poorly when a teacher called on you, would you feel like crying?

18._____Do you sometimes dream at night that the teacher is angry because you do not know your lessons?

In the following questions, the word "test" is used. What is meant by "test" is any time the teacher asks you to do something to find out how much you know or how much you have learned. It could be by your writing the answers on paper or on the blackboard or by speaking aloud in class.

19._____ Are you afraid of school tests?

20._____ Do you worry a lot <u>before</u> you take a test?

21._____ Do you worry a lot <u>while</u> you are taking a test?

22._____ <u>After</u> you have taken a test, do you worry about how well you did on the tests?

23._____ Do you sometimes dream at night that you did poorly on a test you had in school that day?

24._____ When you are taking a test, does the hand you write with shake a little?

25._____ When the teacher says he is going to give the class a test, do you become afraid that you will do poorly?

26._____ When you are taking a hard test, do you forget some things that you knew very well before you started taking the test?

27._____ Do you wish a lot of times that you didn't worry so much about tests?

28._____ When the teacher says she is going to give the class a test do you get a nervous or funny feeling?

29._____ While you are taking a test do you usually think you are doing poorly?

30._____ While you are on your way to school, do you sometimes worry that the teacher may give the class a test?

Dear Teacher,

As part of my doctoral research at the City University of New York I am interested in teachers' attitudes toward the classroom behavior of their pupils.

I hope you will be able to help me by completing the attached two rating scales.

Thank you very much.

Sincerely yours,

Doris Altman

Your Sex _____

Grade or Subject You Teach _____

On this page are listed certain personal characteristics. Please look at each one and think about how desirable you think that trait is in the boys you teach. Then give each trait a rating from 5 to 1.

The meaning of the ratings is:

5 extremely important
4 very important
3 rather important
2 slightly important
1 not important at all

Please put a check under the rating that applies for each trait.

TRAIT	5	4	3	2	1
considerate	___	___	___	___	___
ambitious	___	___	___	___	___
efficient	___	___	___	___	___
friendly	___	___	___	___	___
independent	___	___	___	___	___
likeable	___	___	___	___	___
generous	___	___	___	___	___
creative	___	___	___	___	___

Your sex_____

Grade or Subject you Teach_____

On this page are listed certain personal characteristics. Please look at each one and think about how desirable you think that trait is in the girls you teach. Then give each trait a rating from 5 to 1.

The meaning of the ratins is:

5 extremely important
4 very important
3 rather important
2 slightly important
1 not important at all

Please put a check under the rating that applies for each trait.

TRAIT	5	4	3	2	1
considerate	___	___	___	___	___
ambitious	___	___	___	___	___
efficient	___	___	___	___	___
friendly	___	___	___	___	___
independent	___	___	___	___	___
likeable	___	___	___	___	___
generous	___	___	___	___	___
creative	___	___	___	___	___

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