

INFORMATION TO USERS

This material was produced from a microfilm copy of the original document. While the most advanced technological means to photograph and reproduce this document have been used, the quality is heavily dependent upon the quality of the original submitted.

The following explanation of techniques is provided to help you understand markings or patterns which may appear on this reproduction.

- 1. The sign or "target" for pages apparently lacking from the document photographed is "Missing Page(s)". If it was possible to obtain the missing page(s) or section, they are spliced into the film along with adjacent pages. This may have necessitated cutting thru an image and duplicating adjacent pages to insure you complete continuity.**
- 2. When an image on the film is obliterated with a large round black mark, it is an indication that the photographer suspected that the copy may have moved during exposure and thus cause a blurred image. You will find a good image of the page in the adjacent frame.**
- 3. When a map, drawing or chart, etc., was part of the material being photographed the photographer followed a definite method in "sectioning" the material. It is customary to begin photoing at the upper left hand corner of a large sheet and to continue photoing from left to right in equal sections with a small overlap. If necessary, sectioning is continued again — beginning below the first row and continuing on until complete.**
- 4. The majority of users indicate that the textual content is of greatest value, however, a somewhat higher quality reproduction could be made from "photographs" if essential to the understanding of the dissertation. Silver prints of "photographs" may be ordered at additional charge by writing the Order Department, giving the catalog number, title, author and specific pages you wish reproduced.**
- 5. PLEASE NOTE: Some pages may have indistinct print. Filmed as received.**

Xerox University Microfilms

300 North Zeeb Road
Ann Arbor, Michigan 48106

76-9181

GRABE, Mark David, 1948-
BIG SCHOOL, SMALL SCHOOL: IMPACT OF
THE HIGH SCHOOL ENVIRONMENT.

Iowa State University, Ph.D., 1975
Education, psychology

Xerox University Microfilms, Ann Arbor, Michigan 48106

THIS DISSERTATION HAS BEEN MICROFILMED EXACTLY AS RECEIVED.

**Big school, small school:
Impact of the high school environment**

by

Mark David Grabe

**A Dissertation Submitted to the
Graduate Faculty in Partial Fulfillment of
The Requirements for the Degree of
DOCTOR OF PHILOSOPHY**

Major: Psychology

Approved:

Signature was redacted for privacy.

In Charge of Major Work

Signature was redacted for privacy.

For the Major Department

Signature was redacted for privacy.

For the Graduate College

**Iowa State University
Ames, Iowa**

1975

TABLE OF CONTENTS

| | Page |
|---|------|
| ABBREVIATIONS USED IN TABLES | iv |
| INTRODUCTION | 1 |
| THE ADOLESCENT SOCIETY | 4 |
| Introduction | 4 |
| Conformity within the Adolescent Society | 7 |
| Priorities of the Adolescent Society | 10 |
| Status within the Adolescent Society | 16 |
| STUDENT SELF-CONCEPT | 22 |
| Introduction | 22 |
| Self-Concept and School Achievement | 28 |
| The Dimensions of Self-Concept | 32 |
| STUDENT ALIENATION | 35 |
| Introduction | 35 |
| Self-Concept and Student Alienation | 41 |
| Behavioral Correlates of Student Alienation | 44 |
| A MODEL AND VARIABLES INFLUENCING ITS OPERATION | 48 |
| Model | 48 |
| School Size | 49 |
| Grade Level | 54 |
| Sex of Student | 55 |
| METHOD | 57 |
| Instruments | 57 |
| Design | 63 |

| | |
|--|-----|
| Subjects | 65 |
| Hypotheses and Analyses | 67 |
| RESULTS | 79 |
| Analysis of Group Differences in Participation | 79 |
| Analysis of Activity Priorities | 93 |
| Relating Self-Concept and Participation | 96 |
| Alienation | 108 |
| Longitudinal Analyses | 117 |
| DISCUSSION | 120 |
| Self-Concept | 121 |
| Alienation | 131 |
| Other Issues | 136 |
| Implications | 140 |
| REFERENCES | 143 |
| ACKNOWLEDGEMENTS | 152 |
| APPENDIX A: ALIENATION QUESTIONNAIRE | 154 |
| APPENDIX B: PARTICIPATION QUESTIONNAIRE | 158 |

ABBREVIATIONS USED IN TABLES

Aca - Academic participation
Al - Alienation score
Art - Fine arts participation
Ath - Athletic participation
Club - Club participation
Div - Diversity of participation
F - Female
Hi - High level of participation
L - Large school
Low - Low level of participation
M - Male
RAca - Reward value of academic participation
RArt - Reward value of fine arts participation
RAth - Reward value of athletic participation
RClub - Reward value of club participation
RSoc - Reward value of social participation
S - Small school
SCT - School-specific self-concept score
SC1 - Self-concept of intellectual and school status
SC2 - Self-concept of popularity
SC3 - Self-concept of physical appearance and attributes
Soc - Social participation
Und - Underclassman
Up - Upperclassman

INTRODUCTION

In high school, a student's performance as a learner and his satisfaction with the total school experience are dependent upon more than the quality of his instruction or his own mental abilities. While this situation may be readily acknowledged, educational research has placed little emphasis on other influences of student performance. Research has tended to concentrate on the educator, the organization and selection of material, teaching methods and the study of individual student abilities. Questions concerning what incentive the school as a whole provides for achievement have seldom been investigated. If school life is viewed as an end in itself rather than simply as a means to attain some other end, the quality of school life becomes a relevant research topic. Lecky (1954) has written in support of this same point. He states that "the greatest handicap to constructive action in education is the well-entrenched dogma that learning is the direct result of teaching, a mechanical reaction to the school environment (i.e., the classroom), instead of purposive achievement" (Lecky, 1954, p. 177). Lecky goes on to argue that the emphasis in research should shift to the student and the factors which influence his own desires for "purposive achievement". One such factor and the focal point of the present research is the system of social pressures and rewards operating within the school

environment. While some pressures and rewards operate through the interaction of teachers and students, the most important social interaction probably involves the adolescent peer group. Within this group, priorities are established and rewards in the form of status are dispensed. Individual abilities and institutional expectations aside, the individual student will probably expend the most effort to achieve in areas designated as important by the group to which he belongs.

The original impetus for the present research effort and the most complete description of the educational importance of the adolescent peer group has been provided by Coleman (1959,1961). It is Coleman's contention that the efforts of most adolescents within the school environment are motivated by the possibility of achieving status within the peer group. Status is supposedly achieved through successful competition or outstanding performance in valued or high priority activities. A student who is able to participate successfully in valued activities attains the respect of significant others and is thus likely to define himself as a worthy individual. Such feelings of self-worth are internalized into a self-concept. A student who fails at the valued activities is likely to have a lower self-concept within the school environment. As a consequence of such a system, the same individual could define himself a success or

failure depending upon his luck in attending a school with priorities consistent with his own abilities. Coleman goes on to say that individuals will continue to define themselves as failures within a particular environment for only so long. When the point of tolerance has been exceeded, the individual will withdraw from that situation in search of a more rewarding environment. This mechanism allows Coleman to account for school dropouts and the behavior of deviant groups who do not seem to conform to the school's priority system.

A model describing adolescent behavior within the school environment can easily be fashioned from Coleman's (1959,1961) hypotheses. The functional variables within this model are: (1) student priorities or perceived pressures within the school, (2) student self-concept and (3) student alienation. Various authors have investigated these variables in isolation. A much smaller number of studies have been directed toward the study of relationships among these variables. As the operational definition of all three variables is possible and such definitions have been validated, what is needed at this point is a direct test of the entire model. This research effort is proposed as such a test.

THE ADOLESCENT SOCIETY

Introduction

In our modern society, the adolescent years are spent in a limbo during which most individuals are unable to make much of a meaningful contribution to the dominant adult society. The only real function adolescents seem to have is to attend school. So pronounced has this trend become that in 1972, ninety-four percent of the population between the ages of fourteen and seventeen were engaged in full time academic pursuits (American Almanac, 1972). The great majority of adolescents are thus being set apart from the rest of society in academic institutions. Many contend that this isolation of the adolescent from the rest of society has a singular impact; it forces the individual inward toward his own age group for meaningful interaction.

The roots of the more modern sociological theory that a separate adolescent society has been forced into existence by our educational system is grounded in the earlier work of Talcott Parsons (1949). Parsons argued that age grading by itself does not result in age segregation. Rather, age segregation occurs because important societal functions are placed into operation when individuals reach a certain age. The adolescent youth culture is crystallized about the system of formal education. Within this environment, a pattern of behavior distinctive of the youth culture begins to emerge.

This behavior is not necessarily governed by adult norms. In fact, Parsons claims " ... that the youth culture has a strong tendency to develop in directions which are either on the borderline of parental approval or beyond the pale" (Parsons, 1949, p. 93).

A great deal of more recent literature has investigated the possible existence of a separate youth culture. Conclusions in such efforts depend to a great extent upon what criteria must be satisfied for a subculture to be separate from the dominant culture. Those authors who support the existence of a subculture seem to do so on the basis of the role-model preference of adolescents (Cawelti, 1968; Coleman, 1961; Cusick, 1973; Strom, 1963; Wagner, 1971). Most influential among these works has probably been Coleman's (1961) book concerning the value system and influence of the adolescent subgroup. Much of Coleman's argument for a separate subculture is based upon the adolescent's system of priorities within the supposedly adult run academic institution. While the adults are presumably operating the schools for scholastic purposes, the adolescents seem more intent upon athletic and social success. Other authors say that this discrepancy in values is merely an illusion and a properly administered survey will reveal little difference in the true value system of either group (Bealer, Willits & Maida, 1964; Elkin & Westley, 1955;

Lyell, 1973).

With all its methodological inconsistencies, this controversy may be based on several distinct issues and the resolution of these issues is not crucial to the present research. To be sure, parents and parental opinions are of great importance to adolescents in a long-range sense or in regard to issues of great importance (Brittain, 1963, 1969; Bowerman & Kinch, 1959). However, it seems to be the peer whose respect and admiration are sought on a day to day basis. As a result, the old social lever of adult approval or disapproval is not as efficient within the more immediate environment of the school. The peer provides some things which the adult cannot; a common frame of reference or experience and constant companionship within the school environment (Lyell, 1973; Wagner, 1971).

In an early criticism of the American educational system, G.S. Hall (1901) emphasized the difference between a "scholliocentric" and a "pedocentric" orientation; instead of attempting to shape the student to fit the school, the school should fit the student. This maxim has particular relevance for the education of the adolescent in our modern school systems. For the student who inhabits them on a day to day basis, a school is far more than a training ground. The school becomes an environment within which the business of life must be carried out. This life is not governed by the

long term goals of future happiness and occupational success, but by the immediate needs of the peer group to which the student belongs. Those who interact with adolescents, either as teachers or administrators, must make some effort to understand and allow for the peer influence operating within the schools. It is certainly an important part of the adolescent's world.

Conformity within the Adolescent Society

The establishment of a conceptual link between student priorities and student behavior is a vital task in the construction of a model describing the school experience. To the extent that the individual within this group feels that compliance with group expectations is important, the individual will attempt to satisfy group demands. Such compliance, termed conformity, is a common topic within contemporary texts of adolescent psychology (Conger, 1973; Kiell, 1964; Rogers, 1962; Stone & Church, 1973). Stone and Church (1973) describe the phenomena in this manner

"The greater the wall between adolescents and adults, the more elaborate the peer culture becomes and the more the adolescent has to turn to it for support and identity. He seizes upon and displays all of the trademarks of his kind, so that nobody can possibly miss them. Rigid conformity is the rule, extending to matters of dress, adornment, hair styles, tastes in food and music, posture, gait, vocabulary and intonation" (Stone & Church, 1973, p. 446).

The opinions of the other authors are basically the same. The general conclusion being that the heightened importance

of the peer group during adolescence provides the motivation for conformity to the values, customs and fads during this age period.

Theoretical explanations of adolescent conformity seem to fall into two categories. The first explanation involves a takeoff on Piaget's (1954) theory of moral development (Costanzo & Shaw, 1966). Conformity follows a similar ontogenetic pattern to rule (norm) learning. The young child is uninfluenced by rules and it is not until early adolescence that rules are strictly adhered to. After this stage, individual ideas begin to play a major role and the strict obedience to the "rules of the game" declines. As conformity is the act of behaving in accordance with social norms (rules), it follows that conformity should increase during early adolescence until the norms have been internalized, and then decrease as the individual takes over.

The second explanation treats conformity as one aspect of the total socialization process (Costanzo & Shaw, 1966). This explanation relies on the individual's awareness of and ability to handle social pressure. The young child is probably not aware of the social pressures to conform to peer demands and thus is not influenced by the peer group. With the onset of adolescence, the individual becomes aware of his peers and relies upon their opinions for guidance in nearly all of his visible behavior. By late adolescence, the

individual is more sure of his own values and is comfortable in making decisions. A decline in conforming behavior results. Both the cognitive and social explanations predict similar nonlinear relationships between age and conformity.

Research evidence provides ample verification for the importance of conformity during the adolescent age period. Such research results range from the descriptive studies of Coleman (1961) and Cusick (1973) to more empirically based studies (Costanzo & Shaw, 1966; Iscoe, Williams & Harvey, 1963; Patel & Gordon, 1960). The empirical studies provide the advantage of being able to test the hypothesized nonlinear relationship between age and conformity. Typical experiments usually follow some variation of the following basic design (Asch, 1958; Crutchfield, 1955; Sherif, 1936). Subjects are asked to make judgments in some type of situation which has a rather obvious "correct" answer. On several trials, the target subject's response is preceded by "false judgements" from others in the group. Parameters of this group (i.e., sex, age, credibility) provide the independent variables. The dependent variable is the likelihood of the subject giving the same wrong answer or conforming to the opinion of the group members. The results of such research can be summarized as follows: (1) Conformity seems to be a nonlinear function of age - increasing in early adolescence (10-13 yrs.) and decreasing in later adolescence

(15-17 yrs.), (2) Females tend to be more conforming than males, (3) High prestige peers or nonpeer authorities produce greater conformity than less important group members. Thus age, sex and the identification of model figures within the peer group may be factors to be taken into consideration in establishing a link between student priorities and behavior.

Priorities of the Adolescent Society

Within a conformity-conscious group, priorities or peer expectations are closely related to the types of activities in which individuals will attempt to excel. The identification of priorities within a given group may thus provide an explanation of the motives guiding individual behavior.

The study of the priorities perceived by students has been characterized by two general avenues of approach. The first emphasizes identification of the preferred role model to which students aspire or the high priority activities in which students would like to participate successfully. This type of study relies on a simple methodology utilizing either a straightforward questionnaire or an observational technique. The second general category of studies attempts to assess the existing value climate within a particular school. The value climate, often termed press, is examined using a psychometrically developed questionnaire. The

scales, factor analytically derived from the questionnaire, represent dimensions on which the pressures influencing students can be compared across schools.

The research most representative of the first approach is that of Coleman (1959, 1961, 1965). Although data were gathered using several techniques, these reports were based mainly upon the results of a comprehensive questionnaire administered to 8000 midwestern high school students. While priorities did differ from school to school, there were some general trends. Among the males, the one activity within the school which overwhelmed all others as a high priority was athletics. This dominance was apparent in the activity preference of the students as well as in the sought after role-models. As an illustration of role-model preference, consider the following example from the Coleman questionnaire. Males were asked whether they would rather be remembered by their classmates as a brilliant student, an athletic star or as most popular. The role of athletic star was chosen by forty-four percent of the male students. Among the females in the schools studied, there seemed to be no clear cut dimension of preference comparable to that of athletics among the males. Social activities seemed to be the area of greatest importance. When the females were asked whether they would rather be remembered by classmates as a brilliant student, a leader in activities or most popular,

the roles of most popular and activity leader were selected with nearly equal frequency (35%). Both roles reflect the importance of social activities to the female student. From results such as these, an alarmed Coleman concluded that academics were being pushed from importance by other student activities. Coleman is not the only author to reach such a decision. Prior to Coleman's work, Parsons (1949) claimed that athletics among males and social accomplishments among females were the prime avenues for adolescent achievement and competition.

General trends aside, one of the most important conclusions of Coleman's work is that reliable priority differences among schools do exist. In addition, variations in these value systems can not be predicted from information about physical parameters of the schools (e.g., size, per-pupil expenditures). Although the differences in some cases could be attributed, post hoc, to various aspects of the community or possibly to certain individuals on the schools' staffs, no variables of predictive value were detected. However produced, school priority differences must be considered in predicting the satisfaction of students with different abilities.

The second general approach to studying the priorities of high school students differs from the category of studies just discussed in theoretical approach and methodology. The

first category of studies was basically descriptive without appealing to any theoretical position. The category to be discussed at this point is very strongly influenced by a theoretical position. Emerging from the classic $B=f(P,E)$ formulation of Lewin (1935) and elaborated in the need-press model of Murray (1938), this position has made a strong impact. The data base for this theory was developed mainly within the context of studying the college environment (Astin, 1963a, 1963b; Baird, 1974; Stern, 1960, 1963a). Studies of the college environment indicate that certain types of institutions tend to attract certain types of students. This situation was described in terms of a theory of need-press congruency. Press is defined as the characteristic pressures, stresses, rewards, or conformity-demanding influences of a particular institution (Stern, 1960). Needs refer to the student's personal goals. When applied to college students, the need-press theory states that a student is likely to select a college which emphasizes activities consistent with that student's goals.

After the research concerning college environments began to appear in the literature, a similar methodology began to be applied to the study of high school environments (Herr, 1965; Kulka, 1974; McDill, Rigsby & Meyers, 1969; Mitchell, 1968; Stern, 1961). The need-press theory produces some rather interesting hypotheses when applied to high schools.

As high school students are not allowed to select a school with a press consistent with their needs, many students must contend with a state of need-press incongruency. Although never tested, Mitchell (1968) has proposed that such incongruency leads to student alienation.

Research in high schools has centered upon demonstrating that students' perception of press varies from school to school (Herr, 1965; McDill, Rigsby & Meyers, 1969; Mitchell, 1968; Stern, 1961). Significant differences among schools have been demonstrated, but this method of attack seems stalled at this point. Unlike studies of the college environment (Astin, 1963; Richards, Seligman & Jones, 1970; Richards, 1974) which demonstrate the relationship of press to possible antecedent conditions within the college (e.g., size, affluence, technological emphasis), little has been accomplished within high schools beyond the measurement of press. Possible exceptions may include the works of McDill, Rigsby and Meyers (1969) and Kulka (1974). McDill, et al. (1969) attempt to demonstrate that school climate is sensitive to and influenced by parental attitudes. Kulka (1974) tries to show that student absenteeism is related to the perceived discrepancy between student needs and school demands. Beyond these studies, little data is available. Until additional research successfully relates measured press to antecedent or consequent variables, the continued

development of psychometric instruments to assess press seems pointless.

Aside from this criticism, Mitchell (1973) seriously questions the ability of these measures of the school environment to differentiate separate area of press. Mitchell (1968) used the Stern (1963b) High School Characteristics Index (HSCI) to assess press in 11 high schools. When a factor analysis of the 30 scales was conducted and rotated using the Kaiser varimax criterion (Kaiser, 1958), four significant factors emerged. An analysis of the relative standing of each of the schools on the derived factors revealed significant differences. However, Mitchell (1973) reanalyzed the original data (Mitchell, 1968) and decided that the ability of the instrument to identify separate areas of press must be doubted. Instead, Mitchell postulated the existence of a desirability halo which modifies students' perception of the school environment in either a positive or negative direction. As evidence for this hypothesis, Mitchell cites the significant within-school correlations of the standardized scale scores and a social desirability score. These significant correlations were positive in some schools and negative in others. Mitchell concluded that if a student body is positive about the environment as a whole, it will be indiscriminately positive about all aspects of the

environment. If the student body sees the school in a negative light, it will react negatively to all aspects of the school. Only when the school is neutral as a whole, will a measure such as the HSCI be able to measure individual pressures influencing the students. Thus, there are serious doubts about this type of technique being able to measure different school priorities.

Status within the Adolescent Society

The term status refers to the position of an individual within a social group in reference to his relative standing and the formal or informal powers accorded to this standing. As such, achieved status represents one of the more important outcomes of social interaction. Its ultimate importance as a motivator is partially determined by the availability of other sources of reward. For instance, a large income will sometimes offset the negative aspects of a low status job. According to Thibaut and Kelley (1959), there are often common characteristics representative of groups in which status serves as a primary motivator. These authors claim status to be important when the group members are involved in a great amount of face-to-face interaction, have pretty much the same power and are limited in the range or variety of expected outcomes. Thibaut and Kelley thought these attributes to characterize certain nonvoluntary groups such as prison inmates and ghetto residents. In addition, high

school students could easily fit into this stereotype.

The study of status within the high school environment is not a new topic (Gordon, 1957; Hollingshead, 1949; Waller, 1932). Coleman (1961) has probably done more than any other writer to crystallize the position that status plays in explaining the behavior of high school students. In explaining the adolescent's motivation for expending great amounts of time and effort on priority activities, Coleman states that "the fundamental competition in a high school is neither for grades, nor for athletic achievements, nor for any other such activity. It is a competition for recognition and respect - the elements of which status is composed - in the eyes of one's fellows and the opposite sex" (Coleman, 1961, p. 143). In a very similar vein, Thibaut and Kelley (1959) argue that the dimension upon which status is achieved is important not so much for its own sake as for the fact that it symbolizes one individual having more of the desired skill or possession than another. With its conforming attitude and consensus on priority activities, the adolescent society should provide an ideal atmosphere for a strong status system to emerge. Within the adolescent subgroup, priorities and conformity make clear the dimensions of comparison.

Within any social system, high status by definition must be in short supply. Status implies a ranking of individuals

with respect to some dimension of comparison. Only a limited number of individuals can be at the desirable end of the continuum. The question in relating participation in priority activities to higher status then becomes one of showing that those who participate are the recipients of a disproportionate amount of this commodity. Coleman (1961) has tried to do this by showing that those who are seen by fellow students as having high status are also more likely to participate in the valued activity. Many such examples are available from Coleman's research. For example, those male students designated by the student body as being in the "leading crowd" are much more likely than the average student to be involved in athletics. Coleman argues for the de-emphasis of athletics as if participation in this and other valued activities serves as a ticket for admission to the elite group. If the situation were really this simple, one could appreciate Coleman's alarm in contending that priority activities were pulling the emphasis of students away from scholastic accomplishments. An alternative not considered by Coleman (1961) is that participation in valued activities may be expected and thus produced by existing members of the elite group. Probably, the behavior of individuals is in reality governed by both factors. For example, Phillips and Schafer (1971) use such an explanation in describing the academic behavior of athletes. They

contend that students may first gain peer respect as athletes, but then become better students as well because the individuals feel that such behavior is expected of the elite group. In the Phillips and Schafer (1971) explanation of student behavior, one activity serves as an antecedent and one as a consequence of elite group membership.

One final aspect of the high school social structure must be considered under the topic of status. The model which has been developed thus far represents the high school student body as a unitary social group, with a single set of objectives and a status system based on those objectives. Although acknowledging that the situation is not really this simple, Coleman (1961) develops his arguments on the basis of a single adolescent society. Other authors prefer to talk about similar issues, but in regard to a greater number of subgroups. For instance, Cusick (1973) talks about an adolescent culture separate from the formal structure of the school much as Coleman does. Rather than presenting this subculture as a single entity, Cusick describes the subculture as a conglomerate of separate groups. The way this author depicts the adolescent would make a single status system seem improbable: "We should reflect upon the nature of the adolescent experience, remember that cross communication among adolescents may be very limited, common activities and interests are very rare and perhaps conclude

that there may be no such thing as all students" (Cusick, 1973, p. 162). The observations this author made within a single school would seem to support this position. Cusick identified several groups with different memberships, different priorities and different methods of attaining status. Status was attained within the "power clique" by holding class offices and giving parties, within the "athletic group" by athletic accomplishments and within a third group by petty larceny. Clearly different systems of priorities were in operation. Phelps and Horrocks (1958) reached a similar conclusion. A factor analysis of activities, interests and attitudes led these authors to conclude that there may be as many as ten definable adolescent subgroups.

The resolution of this theoretical difference is important within the context of this study. One must face the fact that subgroups within the schools are undoubtedly present. The problem lies in attempting to justify a common set of activity priorities for determining the status of the individual student. There are at least two possible methods of attacking this problem. First, Spady (1971) argues that perceived status is related to performance in areas which receive considerable recognition from some but not all segments of the peer group. Using athletics as an example of such an activity, the author contends that the visibility of

the activity may give the student a feeling of importance and prestige that is not fully acknowledged by his peers. A second possibility is that students may be forced into membership in a group with less relative status because they lack the necessary skills to succeed in more important areas. The data that Coleman presents concerning preferred role models seems to support this position. The number of actual athletic stars was surely much lower than the number of students who would have liked to have been regarded as such. In addition, such factors as school size and grade level might modify the manner in which status is related to subgroup priorities. In smaller schools, status may be related to a more general, school-wide set of priorities. In larger schools, perceived status may be more closely related to a particular peer subgroup. Such questions will be considered in the present research.

STUDENT SELF-CONCEPT

Introduction

Although self-concept is proposed as a critical variable in the present work, it is only fair to note that many authors treat it as a rather mysterious and possibly meaningless construct (Levy, 1970). Other writers (Rosenberg, 1965; Soares & Soares, 1973) argue that there is no need to take such a negative stand. Rosenberg (1965) states that when the self-concept is treated as an attitude toward an object, the construct has a great deal of utility. The use of the term, attitude, is here proposed in a broad sense to include facts, opinions, and some form of evaluation in regard to the self. Those who find value in the self-concept do so with the implication that either the construct indicates a personal state of self-acceptance or that it functions to guide future behavior. While the first usage may be of particular interest to those with a humanistic orientation, it is probably the second implication which has stimulated the most psychological and educational research. The essence of this second implication is captured in Anastasi's (1968) definition of self-concept as "a personal self-fulfilling prophecy" (p. 57). Indeed, the possibility of manipulating student self-image in order to change academic performance has always been an intriguing topic (Rosenthal & Jacobson, 1968).

Although the conceptualization of self-concept as an attitude guiding behavior has intuitive appeal, there is still the problem of empirical verification. There is now little doubt that measured differences in self-concept can be related to observed differences in behavior. There are many examples (e.g., Fitts, 1972; Purkey, 1970; Wylie, 1961), some of which will be discussed later in this section, which relate self-concept and some form of behavior. However, virtually all reported research is of a survey nature and involves no manipulation of subjects or controlled conditions of observation (Diggory, 1966). Analysis thus requires some form of correlational approach. Because of this statistical technique, a problem exists in inferring some form of causal relationship.

The difficulty in showing a causal relationship between self-concept and behavior is one instance of the more general research problem encountered in attempting to demonstrate the impact of attitudes. As an example, Festinger's (1964) review of the attitude change studies of the past three decades revealed few examples demonstrating a relationship between attitudinal and behavioral change. Similarly, a number of studies have investigated the relationship between induced changes in self-concept and subsequent performance on a behavioral task. In a review of this research, Wylie (1961) states that a consistent relationship between changes

in self-concept and changes in behavior has yet to be established. Shrauger and Rosenberg (1970) provide an explanation for this phenomena by arguing that changes in self-concept may result in changes in verbalizations related to oneself without producing changes in behavior. Evidence from clinical research supports this notion. Byrne (1966) suggests that the evidence from psychotherapy very convincingly demonstrates the counselor's ability to modify the client's verbal report. The problem in psychotherapy is that behavior changes do not always accompany this verbalized change in self-concept. Byrne suggests that these negative findings indicate that self-concept changes are severely limited in their generality.

In spite of this abundance of negative evidence, several authors (Shrauger & Rosenberg, 1970; Silverman, 1964) have succeeded in producing both self-concept and behavioral changes in a laboratory setting. The arguments these authors make are particularly important for the present work because they imply that laboratory research is of limited value in investigations of the impact of self-concept. Shrauger and Rosenberg (1970) propose that the key to the dilemma of behavioral change lies in the experimenter's ability to present the self-concept manipulations in such a way that the verbalizations produced cannot be discredited by the subject. In a short laboratory session, this meant increasing the

self-concept of subjects already possessing high self-concept and lowering the self-concept of subjects with previously existing low self-concepts. The manipulations in these instances are consistent with the existing attitudes and little discrepancy exists to be discredited. The resulting behavioral changes were as predicted. Significant changes were produced among the subjects given manipulations consistent with their previous level of self-concept. Little change was observed among those subjects given discrepant manipulations.

In essence, Festinger (1964) agrees with this point. Festinger stated that unless a change in the person's perception of his environment was produced in conjunction with a change in attitude, no behavior change could occur. In terms of self-concept, this means that an individual's view of himself as a success or failure must be supported to some extent by everyday experience. It should be clear how such a position would support Shrauger and Rosenberg's (1970) statement concerning the limitations present in short-term manipulative studies of the self-concept. Obviously, it is difficult to modify in a few minutes of laboratory time the history the individual subject brings into the laboratory. Such criticisms do not apply to field studies of the self-concept. In the field, the manipulation is in effect a major part of the individual's experience and cannot as

easily be discredited. The experimenter interested in the self-concept thus faces an unusual predicament: manipulative studies provide no valid data from certain groups of subjects and field studies are based upon correlational methods. What alternatives are available? First, large scale intervention programs could be employed in a manipulative study. When administered on a large scale and for ample periods of time, such programs could overcome the historical perspective causing problems in smaller manipulative studies. Research by this method would obviously be impractical in most situations because of time and cost factors. A second alternative is to employ the correlational method in the field to build a model which is hypothesized to describe a causal phenomena. Then, using a longitudinal design, the operation of the model can be examined across an interval of time. A design of this general type will be employed in the present study.

The arguments just presented obviously contend that the attitude of self-acceptance cannot evolve in a vacuum. The attitude seems to need some environmental basis which comes primarily from the individual's interaction with other people. Such a conception originated in the "looking-glass" theory of self-perception advocated by Cooley (1902). This writer proposed that "a self-idea of this sort seems to have three principal elements: the imagination of our appearance

to the other person, the imagination of his judgment of that appearance, and some sort of self-feeling, such as pride or mortification" (p. 152). Later, Mead (1934) restated the same position by contending that individuals perceived themselves by taking the role of other individuals in an attempt to see themselves as others see them. Although alternative ways of thinking of the self-concept exist (Wylie, 1961), the majority of authors to be cited here support the "looking-glass" theory of self-concept if they profess a theoretical orientation at all (Coleman, 1961; Lyell, 1973; Phillips, 1969; Rosenberg, 1965; Soares & Soares, 1973).

Many contend that adolescence is a critical period in the development of the individual's self-concept (see Monge, 1973 for a short review). These authors' explanations for the importance of adolescence differ widely in line with their theoretical position. Freud (1969) relates the unrest during adolescence to the increased sexual drive and resulting strain on the ego-defense system. Erikson (1968) contends that it is a period of identity crisis as the sources of childhood identification are culled and modified. Lewin (1939) attributed the importance of adolescence to the expanding social and geographic life space of the individual. The position to be taken here is in closest agreement with the culturally sensitive view advocated by Lewin. As was

argued in a previous section, the adolescent is very sensitive to peer pressure and it is this peer group which serves as the "mirror" for the adolescent's self-evaluation.

Coleman (1961) concluded that adolescent status is very strongly bound to the priority system of the school. The adolescent must see himself through the eyes and priorities of the status controlling peer group. If in terms of the group's priority system, he has done well, then he can be at peace with himself and probably sees himself in a favorable manner. If he is not recognized, nor given status of any sort, he may find it difficult to escape to a favorable environment and probably envisions himself a failure.

Rosenberg (1965) sees a similar problem in the American high school. This author says that whenever a group sets forth values which can only be met by a few, the conditions are right for widespread feelings of personal inadequacy and failure. One of the prime examples of such a system in American society is illustrated by the fierce competitiveness of the high school. This section on the student self-concept will attempt to demonstrate how strongly personal feelings of worth are related to achievements within the school environment.

Self-Concept and School Achievement

One encounters little difficulty in accumulating a large number of studies relating self-concept and school

achievement. A major deficiency in the literature, at least in terms of present considerations, is that an overwhelming majority of these studies consider only academic accomplishments. Because academic accomplishments represent only a single component of the total school experience, and the relationship of such accomplishments to self-concept have been adequately summarized elsewhere (Purkey, 1970), greater attention will be devoted to the more sparsely researched topics. As a summary, studies of academic achievement and self-concept find a moderate, but nearly always significant correlation between the two variables. The magnitude of the correlation depends to a great extent upon the type of self-concept being measured. For instance, Torshen (1969) found total self-concept to be related to academic achievement with a correlation of .25. When a measure of academic self-concept was employed, the correlation coefficient jumped to .50. While academic activities are definitely an important part of the school environment, Coleman's (1961) data concerning school related priorities show that other factors should be considered as well. Clearly, Coleman was able to show that from the student's perspective, academic considerations were far from being the most important priority of high school students. As an individual's satisfaction with the school experience and ultimately his continued involvement in the school

environment is determined by all phases of school life, one would expect more research effort expended on student defined priorities. Going back to the "looking-glass" theory of self-concept, one would expect students receiving a great deal of positive feedback from peers to have higher self-concepts. Indeed, significant differences in self-concept do exist among groups sociometrically separated into preferred and nonpreferred students (Bauer, 1971). A similar conclusion could be drawn from the longitudinal study of Engel (1959). This author found that changes in self-concept over a two-year period of time were related to changes in peer evaluation. In light of this data, reconsider what Coleman (1961) proposed in regard to student popularity and status. Those students participating in priority activities, athletics among the males and social activities among the females, were more likely to be considered popular. If students are aware that this is the manner in which the status system of the school operates, one could hypothesize that students would also evaluate their personal worth in terms of this index. Coleman does provide limited data to support this position. Those students who were members of the leading crowd were less likely to "want to be someone else". As participation in priority activities is strongly related to membership in the leading crowd, one could possibly infer a relationship between participation in

these activities and self-concept. A direct test of this notion would seem to be warranted. Basically, all such a test would require would be a quantification of the relative priorities of different activity areas and the measured relatedness of participation in these areas to self-concept. One would hypothesize that participation in priority activities would be more strongly related to self-concept than participation in nonpriority activities.

Although not in a comparative sense, there is limited data available which relates nonacademic participation to student self-concept. Both Rosenberg (1965) and Phillips (1969) show a relationship between the amount of extracurricular participation and level of self-concept. The relative importance of different activities in predicting level of self-concept is pretty much an open question. At one time, Rosenberg (1965) contended that high self-concept would be related to successful participation in activities which were unstructured and controlled by student members. For example, this author argued that membership in a musical organization with its adult control and structured format would be less related to a positive self-concept than membership in a pep club which was unstructured and controlled by students. Marsland and Perry (1973) made an attempt to evaluate this hypothesis, but while finding group membership did relate to differences in self-concept, they

could find no systematic effect for amount of structure or adult control. At least for males, the Rosenberg (1965) and Coleman (1961) theories are strongly at odds in regard to which activities would be most strongly related to self-concept. Athletics is probably one of the most structured and adult controlled areas that the school sponsors. This adult control is centered both within and outside of the school. Yet, Coleman (1961) argues that athletic participation should be the most strongly related to differences in self-concept because of its high priority. A study comparing the impact of different types of activities could resolve this controversy.

The Dimensions of Self-Concept

When William James (1910) introduced the concept of self into American psychology, he envisioned an entity having as many forms as there were contexts in which it might be investigated. James listed three major classifications of self-concept: a social self, a material self and a spiritual self. It was the social self which accounted for a large number of the self-definitions. The individual saw himself in a slightly different role within each group of which he was a member. James way of thinking has persisted and many recent investigators have spent their time attempting to extract the dimensions of self-concept from existing scales (e.g., Monge, 1973; Piers, 1969; Stanwyck, 1973). It may

well turn out that these dimensions of self-concept have greater meaning than the global scales from which they were derived.

Self-concept measures have been criticized on the grounds that there seems to be little ability to generalize results from one scale to another. Crowne, Stephens and Kelly (1961), in comparing several measures of self-concept, said that they found few correlations of sufficient magnitude to inspire confidence in any of them. Shepard and Glass (1973) conducted a multitrait-multimethod construct validation procedure on several measures of self-acceptance. These authors found what they termed only modest evidence for the construct validity of self-acceptance. A major part of the problem would seem to lie in the method-specific operationalization of the construct. This problem should lead the researcher to employ caution in the comparison of studies using different scales. Moreover, scores on global scales may be uninterpretable in regard to the influence of hypothesized causal variables. For example, consider the study of Torshen (1969) cited earlier. This study contrasted the correlations of school achievement to a global and an academic-oriented measure of self-concept. Consider what the difference in the size of the correlation coefficients represents. One could argue that the correlations represent the extent to which one's total self-acceptance and one's

academic self-acceptance were influenced by academic accomplishments. More realistically, the size of the global self-concept and achievement correlation was probably determined by the number of questions on the global scale related to academic ability. The construction of the scale thus determines its relatedness to any variable. A global measure of self-concept would seem unattainable when conceptualizing of self-concept as an attitude toward one's abilities in an infinite number of contexts. It would seem more realistic to work with situation specific measures of self-concept.

In the present study, situation specific measures of self-concept are those related to the student's experience within the school environment. No known scale has been designed with this expressed purpose. What is suggested here is that factor defined dimensions of an existing scale be used to select the items for the new school-sensitive self-concept scale. It would not seem necessary to employ factor scores. The purpose of this procedure is to limit to some extent the variability of self-concept scores due to irrelevant experiences outside of the school. Data from the complete scale could be provided to establish a perspective for comparison.

STUDENT ALIENATION

Introduction

Alienation is a term more commonly appearing within the vocabulary of the sociologist or educator than within that of the psychologist. This catch word has been used in different contexts to explain nearly every kind of aberrant behavior from job dissatisfaction to drug abuse. One point should be stressed before proceeding further: the work attempting to assess the dimensions of alienation have focused on adult subjects. Mackey and Ahlgren (1975) contend that all carefully constructed measures of alienation were developed in another era for an adult rather than an adolescent target population. This is unfortunate because an alienated youth culture appears to be becoming more and more of a national problem (Roszak, 1969). Those interested in the adolescent have attempted to adopt the theoretical notions and assessment techniques of the existing literature. While the existing conceptualizations of alienation are in most cases applicable, the assessment devices are probably not. In reading the following review of adolescent alienation, one should note that inappropriate or inadequate methods of assessing alienation were thus possibly used in most.

The contemporary sociologist uses the term alienation to describe one possible outcome of the interaction of the individual with a demanding society. The individual faces

this outcome when the goals established by the society are unreachable or unacceptable according to personal priorities. Dean (1961) states that alienation manifests itself in personal feelings of powerlessness, normlessness or social isolation. Powerlessness represents the perception of being used by the society for purposes other than one's own. Normlessness is indicated by a lack of values or dissatisfaction with the values of a controlling society. Social isolation is a real or perceived separation from the group. Dean is careful to point out that these factors do not represent personality traits, but feelings which are situation specific. Thus, an individual, while simultaneously a member of several groups, may feel alienated from some and yet be comfortable with his membership in others. Productive effort will be directed toward those groups which do not alienate the individual.

The group membership of the adolescent can be analyzed in terms of this perspective. It is not difficult to apply the three aspects of alienation which Dean specifies to situations within the adolescent's experience. At any time, the adolescent can be conceptualized as maintaining at least superficial membership in a number of groups. Some of these groups function within the school environment and other groups function outside the school's boundaries. As was emphasized in a previous section, the groups operating within

the school environment differ in their orientation toward school goals. An adolescent who feels used by the leading crowd, isolated from its values or from its company is in essence also alienated from any realistic source of school influence. Such a student is likely to expend energy on and be influenced by those groups existing outside of the school or by deviant groups within the school. Support for this hypothesis is available from several sources.

Coleman (1961) proposes a model to describe the relationship between student alienation and satisfactory membership within school-oriented groups. Within this model, self-concept serves as a linking mechanism between student satisfaction and student alienation. As discussed in the preceding section, self-concept can be related to satisfactory participation in certain categories of activities. If the student meets continual failure in efforts to participate in these activities, a negative self-evaluation is produced. Coleman claims that the person will not sit still while his self-evaluation is being lowered by his experiences within the social system of the school. If no possibility of gaining status exists, either because status is ascribed to certain predetermined individuals or because the individual does not have the necessary talents in status-bringing activities, the individual will withdraw either physically or psychologically from the environment of

the school. With physical withdrawal, school administrators must face the problems of student absenteeism or student dropout. Psychological alienation results in student apathy and the formation of deviant student subcultures.

Coleman (1961) supplies some descriptive data supporting the model of alienation that he proposes. In an effort to show how alienation develops, Coleman compared the aspirations of students for membership in the leading crowd across grade levels. The proportion of students reporting that being a member of the leading crowd was not important increased sharply with age. These results were said to demonstrate an increasing alienation of many students from the dominant group. A second illustration bears more directly upon the importance of the self-concept. Coleman found that the proportion of students wanting to be someone else declined across increasing grade levels. Taken in conjunction with the results indicating that higher self-concepts existed among members of the leading crowd and the results showing a grade related decline of interest in leading crowd membership, the grade related changes in self-concept suggested to Coleman that self-concept was the link between status and alienation. Of course, this conclusion can be criticized as being extremely tenuous based upon the type of information that Coleman had. In the first place, extremely questionable measures of alienation and

self-concept were used. Secondly, alternative explanations are easily available. At no point does Coleman show a differential change in the self-concept of leading crowd and nonleading crowd members. Possibly the self-concept of both groups increased across the high school years. Such a finding would prove difficult for the proposed model to handle. Even without strong empirical support, Coleman's (1961) model serves a valuable purpose in providing obvious hypotheses for more rigorous research.

The use of poorly operationalized measures is partially eliminated within a study by Pulvino and Hansen (1972). These authors argued that if a student's need structure is congruent with his perception of the press of the school, he will be satisfied with his involvement in the school society. If the student's needs are dissonant with the school's demands, a negative reaction may occur resulting in feelings of alienation or anxiety. Pulvino and Hansen claim that an alienated student will find the academic aspects of school a meaningless chore and search for other interests. Except for the deletion of self-concept, this proposal is remarkably similar to that of Coleman (1961).

The data base for Pulvino and Hansen's (1972) study is much more impressive than Coleman's. These authors presented high school students with (1) the Taylor Manifest Anxiety Scale (Taylor, 1953), (2) Dean's Alienation Scale (Dean,

1961), and modified versions of (3) the High School Characteristics Index and (4) the Activities Index (Herr, Kight & Hansen, 1967). Need-press congruency was assessed by comparing the results of the High School Characteristics Index and Activities Index. A discrepancy score was then related to anxiety and alienation values using polynomial regression analysis. The authors found that need-press dissonance was a meaningful variable among male students. The discrepancy score was significantly related to anxiety, but not to alienation. Anxiety and alienation were significantly related. The results were thus not in direct support of the author's original model. Student anxiety might serve in some sort of mediating function, but the manner in which this relationship would work is unclear. Pulvino and Hansen urged that future research concentrate on discovering the common elements linking alienation, anxiety and need-press discrepancy.

Authors attempting to explain student alienation in terms of the discrepancy between student needs and peer demands have thus met with only a limited degree of success. The research showing some form of relationship is suspect on methodological grounds. Yet, the proposed mechanisms are intuitively appealing. Student self-concept seems a particularly interesting area. The following sections allow for a further investigation of a possible relationship

between alienation and self-concept. In addition, behavioral correlates of alienation indices are examined.

Self-Concept and Student Alienation

There have been very few attempts to study measures of student alienation and self-concept within the same context (Coleman, 1961; Harding, 1966; Warner & Hansen, 1970; White, 1968). Only three of these studies attempted to directly relate alienation and self-concept. Some of the data produced by Coleman's (1961) crude questionnaire procedures have already been presented. Coleman argues that students with lower self-concepts will be alienated in search of a more favorable context.

The most severe and thus obvious form of alienation is represented by the high school dropout. Harding (1966) compared Caucasian, male, high school students who stayed in school with those that dropped out. Students who left school were found to have a lower self-concept of academic ability even when intelligence and grade point average were partialled out. The author argued that attitude toward an ability in a setting which emphasized that ability was crucial.

The only study to employ standardized measures of alienation and self-concept is that of Warner and Hansen (1970). These authors presented high school students with (1) Dean's Alienation Scale (Dean, 1961), (2) the Tennessee Self-Concept Inventory (Fitts, 1965) and (3) the Taylor

Manifest Anxiety Scale (Taylor, 1953). Both the self-concept and anxiety scores were significantly correlated with student alienation. Alienated students appeared to have lower self-concepts and higher anxiety than involved students. The values for these correlations were in the mid .30s and with the large number of subjects employed were easily significant.

It should be noted that the model proposed by Coleman (1961) makes no prediction about the relationship between alienation and self-concept within the entire population of students. Thus, results such as those presented by Warner and Hansen could not be expected to either support or reject Coleman's hypothesis. Time is an extremely crucial factor within Coleman's model. As the student's self-concept is lowered by experiences within the school society, the student is to become alienated. At this point, self-concept and alienation should be significantly related. When the adolescent finds another rewarding environment, his self-evaluation is likely to become more positive. With alienation still being assessed relative to the school experience, no relationship between alienation and self-concept will exist at this later time. Thus, the significant relationship between self-concept and alienation presented by Warner and Hansen (1970) is difficult to interpret. A great deal depends upon the subject's use of

his school experience as a reference in responding to the alienation scale. Greater validity could have been achieved by using a school-specific or adolescent-specific alienation scale (Kunkel, Thompson & McElhinney, 1973; Mackey & Ahlgren, 1975). Assuming that the students responded to the alienation scale in terms of their school experience, interpretation is still difficult. It is possible that the correlation coefficient cited by Warner and Hansen was reduced in magnitude by the inclusion of individuals at different points along the time continuum. A second possibility is that no other situation is able to satisfactorily compensate for an inadequate performance within the school. A final possibility is that Coleman's model is completely without justification.

An adequate test of the first hypothesis stated above would provide support for Coleman's model and a valuable insight into the possible consequences of pressures facing high school students. One possible test would compare the relationship between involvement in school activities and self-concept for groups differing in alienation. This proposal reasons that students who see themselves as alienated no longer define their worth in terms of school activities. Students not alienated to the same degree are more likely influenced by their ability to participate in priority activities. A measureable difference should thus

exist between whatever measure of relatedness was employed in relating self-concept and student participation. Of course, this methodology postulates that alienation differences reflect the time course of withdrawal from the influence of the high school peer group. Alienated students are hypothesized to have already gone through the stage of defining their worth in terms of school accomplishments. After receiving little satisfaction from this value system, the alienated student has switched to a new value system. Failure or even success in school activities is not as important at this stage of the student's relationship with the school environment.

Behavioral Correlates of Student Alienation

Self report measures of alienation allow students to express their feelings of involvement in the mainstream of school life. Such instruments possess practical utility to the extent that scores on the instruments are related to important behavioral differences. Mischel (1968) states that utility is established by demonstrating empirical relations between variables. In other words, individuals categorized according to the construct should differ in relevant aspects of behavior. Mischel contends that a key test of the value of a construct is its range of convenience - what range of behaviors can be related to it. The following presentation is intended to indicate that a wide range of school behavior

are related to differences in measured student alienation.

The school is primarily an academic institution and alienation from the institution should be related to differences in academic performance. Several authors (Burbach, 1972; Pulvino & Hansen, 1972; Warner & Hansen, 1970) report correlations between grade point average (GPA) and alienation scores. Two of these studies (Pulvino & Hansen, 1972; Burbach, 1972) indicate a significant negative relationship between alienation and GPA. On the basis of this information, Pulvino and Hansen (1972) state that the highly alienated person finds the academic aspects of school a meaningless chore and will expend no more energy than is absolutely necessary on such activities. One study (Warner & Hansen, 1970) failed to find a significant correlation between alienation and GPA. This is particularly puzzling in view of the fact that the measure of alienation employed was the same as that used in the Pulvino and Hansen (1972) study. Without any apparent explanation for the discrepancy among studies, it is probably safe to conclude only that GPA may be related to alienation in certain as yet undefined situations.

Considerable effort has been expended in this presentation to show that nonacademic school-sponsored activities are very important to the involved student. Alienated students should thus be infrequent among the athletes, office holders and socially involved individuals

within the school. Again, results related to this realm of student life seem confusing. For instance, Burbach (1972) found differences in measured alienation among office-holders and nonoffice-holders, but not among athletes and nonathletes. This is surprising in light of Coleman's (1961) results indicating athletics as the most important male school activity. Burbach (1972, 1974) did find alienation negatively related to a general index of extracurricular involvement. No generalizations can be made on the basis of this limited information and additional research effort would seem justified.

A final topic of particular interest to contemporary educators concerns the involvement of alienated students in deviant subgroups. The only topic receiving much attention in this category seems to be drug abuse. Tec (1972) examined the extent to which disenchantment with, and detachment from the formal priorities of the school environment were associated with marihuana use. No formal instruments for assessing student alienation were used. Rather, students were differentiated according to simple criteria thought to reflect alienation and then compared in their usage of marihuana. For instance, those students who reported a dislike for school were most likely to also report using marihuana. Usage was also negatively related to involvement in extracurricular activities. Athletes reported the lowest

incidence of drug usage. A final interesting result was derived from a modification of the role-model preference question employed by Coleman (1961). In addition to being asked whether they would like to be remembered as athletes, most popular, scholars or activity leaders, Tec included another category - don't care to be remembered for any of these. The students checking this final category were by far the most frequent users.

Although all the authors cited seemed to be implying that alienation was the independent variable and GPA, activity participation or marihuana usage the dependent variable, these definitions must be made with a certain amount of reservation. It is easy to see how a degree of mutuality or for that matter a complete reversal in implied causality might exist, but only Tec (1972) bothers to caution the reader of this possibility. In the model being developed by the present author, the same type of causal inference is being made. This conscious error is made in order to present a coherent model and with full realization that reality is probably not so arranged. It is hoped that justification for this simplification will be produced through the model's utility and the results of future research efforts.

A MODEL AND VARIABLES INFLUENCING ITS OPERATION

Model

The model being developed here can be briefly summarized. Students interacting within the school environment communicate the priorities of that institution to one another. Using this perceived list of priorities and knowledge of their success or failure in each area, students can then arrive at personal assessments of self-worth. In this assessment procedure, success or failure in priority activities is weighted more heavily than performance in activities of lesser importance. Students arriving at a positive evaluation are likely to maintain or increase their involvement in the school society. Students forced to reach a negative conclusion will after a time withdraw from the influence of the school environment. Such withdrawal should manifest itself in different indices of student alienation.

The model just described can be viewed from either a static or a dynamic perspective. At any time, certain relationships should exist among elements of the model and these relationships should be specified. Such relationships include: (a) a positive relationship between participation in priority activities and self-concept scores and (b) a stronger relationship between measures of participation and self-concept for nonalienated students than for alienated students. In addition, the model really describes a

developmental process as the student interacts with the high school environment. This perspective can be examined only through longitudinal analysis. The longitudinal results should indicate that: (a) changes in student self-concept scores can be predicted from participation in valued school activities and (b) students with existing low self-concepts who are unable to participate in valued activities will become alienated. While a general model of school influence has been proposed, additional variables may alter the relationships among the components of this model. Such variables to be studied in the course of this research include school size, grade level and sex of student. Although these variables may alter the relationships predicted by the general model, the source of these alterations should be logically related to and predicted from the more general approach. Such predictive power should serve as a test of the model's validity.

School Size

The major work on school size and the manner in which this variable influences students was published by Barker and Gump (1964). These authors argued that student participation in school sponsored activities could be explained in terms of "ecological pressure". Ecological pressure was hypothesized as a homeostatic mechanism operating to maintain membership in all organizations at a functional level. This

conceptually simple mechanism allows student participation to be explained in terms of the number of available activities and the number of students in the institution. When Barker and Gump compared the number of behavioral settings (possibilities for participation) and the number of students, they found that the ratio of students to behavioral settings decreased with a decrease in school size. In order to compensate for this lower ratio of students to activities, these authors argued that greater peer pressure would be exerted on students to participate in the smaller schools. The data provided by these authors did show participation to be related to school size, but really ignored the issue of peer pressure. While the number of settings students participated in was not greater in small schools, the depth of participation in these behavioral settings was. Depth of participation can best be explained by contrasting the observation of an athletic event with direct involvement in that activity. A student observing the activity and one participating in the activity were both conceptualized as participating in the behavioral setting. Direct involvement, participation as it will be defined in this presentation, was found to be greater in small schools. Students from smaller schools were also found to participate in a greater variety of activities and at a lower grade level. Most of these results have been verified in a national sample of students

participating in the ACT testing program (Baird, 1969).

Working with Barker and Gump, Willems (1964, 1967) investigated the pressures toward participation experienced in large and small schools. This problem was approached in a number of different ways. In the first analysis, five target settings were specified and students participating in these activities were asked their reasons for involvement. Student protocols were scored for own, other and impersonal forces. Other and impersonal forces were combined as "foreign pressures" and then compared across differences in school size. Students from smaller schools were found to experience greater foreign pressure than were the students from the larger schools. In a more controlled example, students had to sort different statements regarding possible reasons for participation into categories representing those forces which did or did not influence their involvement in a particular activity. The results from this methodology supported the results obtained from the open ended questions. In a final example, Willems presented students with a hypothesized setting occurring in no school and asked students why they might consider participating in this hypothesized activity. The reasons students from smaller schools gave were more influenced by concern for peer demands than those reasons given by students from larger schools. All three examples were seen as supporting the sensed obligation or perceived

pressure hypothesis advocated by Barker and Gump.

Barker and those doing research in support of the theory of ecological pressure have obviously concluded that school size is the variable responsible for many of the effects observed. However, it is possible that school size is confounded with other variables (e.g., community size, rural vs. urban environment) which may be actually producing the differences attributed to school size. Wicker (1968) has attempted to discount these alternative explanations by demonstrating that within schools of all sizes, the relative pressure to participate in any activity is controlled by the manpower required by the activity and the number of potential participants. Wicker argues that such a finding would demonstrate the importance of school size because in the general case the number of available participants is related to the size of the institution. Activities were identified within schools of large and small student population which were overmanned or undermanned. The index of undermanning was the number of students who performed in an activity divided by the total number of students present at the activity. In general, an athletic event would not show a high level of undermanning while an activity like camera club would. Students responded to semantic differential scales describing their experience within each type of activity. Wicker wanted to demonstrate that when the

level of undermanning was controlled, no differences on the scales could be attributed to the size of the school. In most cases, this was true. Wicker then argued that it was the number of available students rather than other variables associated with schools of different sizes which produced the differences observed by Barker and Gump.

Consider the implications of the frequency of participation and sensed obligation research for the general model being developed. This research seemed to imply that greater expectations exist in the smaller schools. Intuitively, such a position seems plausible. For example, a male student from a small school may feel humiliated in his failure to make an athletic team. Few students among the possible thousands in a larger school would be ridiculed by their peers for such a failure. Student awareness of the reality of their involvement in priority activities would thus make an important difference in terms of the relationship between activities and self-concept. If the peer controlled "looking-glass" indicates that participation is really expected, then a strong relationship would probably be found with self-concept. From this perspective, it can be hypothesized that the relationship between self-concept and activities would be greatest among students from smaller schools.

Grade Level

Although there are no studies upon which predictions can be made, an argument similar to the one made for school size can be made for grade level. In many cases, underclassmen can not be expected to possess the maturity, ability or physical size to become involved in certain school activities. Failure among underclassmen in such situations would be commonplace and thus not seriously detrimental in light of the expectancies of the immediate peer group. From this assumption, one could hypothesize that the strongest relationship between general achievement and self-concept would be found among upperclassmen. It might be possible to break participation down into those activities in which upper- and underclassmen could realistically compete for status and those in which they could not. For example, academic accomplishments, but not athletic accomplishments, should be as strongly related to self-concept among underclassmen as among upperclassmen. The relationship between self-concept and activities being specified here is ignoring the influence of alternative activities for the lower grades. Such activities as junior varsity athletics or the novice classification in debate do exist. The relationship of participation in such activities to achieved status is unclear. Certainly, it would not be as strong as that of "varsity" activities. Coleman (1961) in discussing

such activities says that they have low visibility and thus are not important determinants of status.

Sex of Student

The final variable of interest is not as conceptually simple as school size or grade level. One way to attack the problem would be to examine the importance of the school in meeting the status needs of the individual. Coleman (1961) showed that the status of males was most strongly related to participation in athletics - a school controlled activity. What about the female status system? First of all, Coleman found that it was more likely than the male status system to be related to ascribed qualities. Such things as money, clothes and good looks are beyond the school's control. The activities within the school which serve as the female substitute for athletics are basically social in nature. While these activities do center upon the school, this is only because the school allows them the opportunity to interact with others. The school environment as such is not important beyond making others available. Certainly, friendships can be easily developed outside of the school environment. The male would find it much more difficult to find another arena for his athletic talents. It is thus hypothesized that male accomplishments within the school will be more strongly related to self-concept differences than female accomplishments.

Although studies of the high school seldom analyze for sex differences, some data are available. White (1968) using the Dean (1961) measure of alienation found females to be more alienated than males. While no theoretical explanation was given, the results are easily explained in terms of the model being explained here. As the female's status is not strongly determined by what happens within the school, it is not surprising that she would be alienated from the school as a source of accomplishment. Recent data available from a study by Kulka (1974) supports this possibility. This author examined the discrepancy found between personal needs and the demands of the school. The discrepancy was found to be significantly larger for females than for males. The school seems to ignore the needs of the female student to a greater extent than those of the male. When confronting an institution operating in this fashion, the sex differences in alienation are understandable.

METHOD

Instruments

Piers-Harris Children's Self-Concept Scale - The Piers-Harris Scale (1969) consists of 80 declarative statements to which the subject responds yes or no. The statements are worded so that roughly half indicate a positive attitude toward the self and the other half a negative attitude. The original standardization procedure, conducted in grades 4-12, indicated no consistent grade or sex differences. In addition, the scale does not seem to correlate unduly with social desirability. Bentler (1972) reports that the scale seems suitable for studies of change in self-concept if the researcher keeps the standard error of measurement in mind in interpreting the results. The stability of this instrument across variations in grade and sex make it especially suitable for the longitudinal analyses and cross-sex comparisons to be attempted in the present research.

In order to construct a more school specific measure of self-concept, guidance counselors in the first twelve schools contacted were asked to select the items which would be most influenced by school experiences. The majority opinion of these counselors in regard to the original 80 items produced a new 32 item school-specific scale. In another attempt to construct a school-related scale, the factor-analytically

derived scales were examined. There was a strong similarity between the items from three scales and the items selected by the counselors. By dropping three items from the counselor selections and adding four other items, a scale composed of three subscales was produced. The subscales were labeled intellectual and school status, physical appearance and attributes, and popularity by Piers and Harris (1964). This scale was used in most of the analyses referring to self-concept. Data is also provided which demonstrate that school-specific self-concept is a more sensitive measure of the influence of school-related variables than the more global measure (see Table 1). Unless specified, self-concept will refer to the more restricted instrument in the context of this research.

Reported measures of the internal consistency of the global scale range from .78 to .90. Four month test-retest reliability coefficients were in the mid .70s (Bentler, 1972). A KR-20 computed on the 32 item restricted scale was .81 (random sample of 200). The internal consistency of the restricted scale is thus comparable to that of the global scale. Test-retest reliability data is presented in a later section.

School related alienation scale - The alienation scale to be used in this research was recently constructed by Kunkel, Thompson and McElhinney (1973). The original scale

Table 1. Comparison of Global and School-Specific Self-Concept Regression Models for First Observation Period

| Size/Class | n | Predictors | | | | | Model Significance | R ² | Corrected R ² |
|-----------------------|-----|------------|------|-----|------|-------|-----------------------|----------------|-----------------------------|
| | | Ath | Aca | Soc | Art | Clubs | | | |
| Global Scale | | | | | | | | | |
| Small-Under | 286 | .001* | - | - | - | - | .001 | .08 | .07 |
| Large-Under | 148 | - | - | - | .001 | - | .01 | .11 | .08 |
| Small-Upper | 256 | .001 | .01 | - | - | - | .001 | .13 | .11 |
| Large-Upper | 368 | - | - | - | .01 | .001 | .001 | .08 | .07 |
| School-Specific Scale | | | | | | | | | |
| Small-Under | 286 | .001 | .01 | - | - | - | .001 | .13 | .12 |
| Large-Under | 148 | - | .001 | - | .01 | - | .01 | .15 | .12 |
| Small-Upper | 256 | .001 | .01 | - | - | .01 | .001 | .17 | .15 |
| Large-Upper | 368 | .01 | - | - | - | .01 | .001 | .09 | .08 |

*Significance level of predictor.

was designed for use in curriculum evaluation programs in Indiana. While little data exists to validate this scale, it is the only scale the present author is aware of which purports to measure alienation from the school environment. Situation-specific alienation is a critical variable within the model proposed in this research. For this reason, the Kunkel et al., (1973) scale was used in place of a more popular measure of alienation (e.g., Dean, 1961).

Kunkel, et al., (1973) provide data based upon a sample of 10,600 senior high students. No norms are provided based upon sex or grade level. Ten items selected from the original instrument were used to construct the alienation scale for the early stages of this research. Three additional items were added for the final assessment period. The scale items are combined in this study to produce a single alienation scale. This procedure is in part faulty because the items more closely resemble Guttman than Likert scales. In addition, all questions do not have the same number of possible responses. The procedure used can be defended on two points. First, this research required only a crude measure of alienation. The alienation score should be considered a linear combination of the scale items used. When the score is interpreted in this manner, it is not necessary to defend the internal properties of the items comprising the scale. Secondly, even though the items may

lack certain psychometric properties, measures of internal consistency were surprisingly good. A coefficient alpha computed on a random sample of 200 students selected from the second measurement period produced a value of .69 for the ten item scale. The same procedure applied to the entire population of the third measurement period produced a comparable value of .68. The thirteen item scale produced a coefficient alpha of .80 in the same population. The ten and thirteen item scales used in the present study are presented in Appendix A.

Participation questionnaire - In addition to the alienation and self-concept scales, each student responded to a questionnaire. This instrument assessed priority, participation and perceived reward differences in five areas of student activity; athletics, academics, fine arts, clubs and social life. The relevant portions of the original questionnaire are presented in Appendix B.

Each student was asked to rank-order the five activity areas in terms of the student's own preferences. Peer group rankings were obtained by computing the average ranking given to an activity within a particular group of students. Differences in the average rank were taken as an indication of a difference in the priority attached to participation in a certain activity area. Because means obtained from ranked variables are not independent, the magnitude of the

discrepancies between variable means are difficult to interpret. For present concerns, it was sufficient to identify high and low priorities.

The perceived reward value of each activity area was assessed using a 7 point Likert type scale. Four of the points on this scale were anchored to a descriptive statement. The total score for all five items was taken as an indication of the reward value of the school environment.

Participation frequency and diversity were measured using an activity checklist. On this checklist the student was asked to mark the activities in which he or she had participated during the past year. Students were also asked to list in the blanks provided any additional activities not mentioned on the checklist. For the nonacademic areas, students were told not to include class-related activities or activities which the school did not directly sponsor (e.g., 4-H, church groups). No distinction was made between levels of involvement - "varsity" vs. "nonvarsity" athletic performance, level of expertise in fine arts (i.e., first chair, second chair, etc.) or importance within an activity (e.g., pep club president).

Two changes were made on the participation checklist in order to attain greater specificity regarding participation in two activity areas. During the second and third measurement periods, students were asked to indicate the

number of times on the honor roll rather than just indicating that they had been on it at some time. During the third measurement period, students were asked if they dated regularly. No information regarding dating frequency had been gathered previously. In situations in which these differences may influence some statistical results, tables (see Table 22) will include information demonstrating the impact of the changes. When no special comment is made, statistics are based upon the most complete data.

The participation diversity score was obtained by summing the number of activity areas in which the student listed at least one activity. Each student received a score ranging from 0 to 5 in diversity. This procedure is very similar to that used by Barker and Gump (1964).

Design

The classification variables of interest for the majority of analyses were sex, grade level and school size. These variables have been fashioned into a 2 (sex) x 2 (grade level) x 2 (school size) classification system. The dividing point for the school size variable has been set at a total enrollment of 580 students in the upper three grades. The grade level dichotomy separates eleventh and twelfth graders from ninth and tenth graders. A possible interpretive problem exists because large high schools do not usually contain a ninth grade. Two alternatives exist: only tenth

through twelfth grade students could be used from both sized schools or the ninth grade students could be included in the small school analyses. Because ninth graders are considered high school students in smaller schools, they are exposed to all of the pressures of the high school environment. By the time these students are tenth graders, they have one year of experience within the school environment and are not really comparable to large school tenth graders in this respect. For this reason, high school membership as defined by the school will be used in classifying students.

Two general categories of questions are being asked within the present research. The first category involves a descriptive study of the relationship among certain variables of interest. The second category involves a longitudinal study of these variables' operation over a period of time. Ideally, there should be no difference in the subject populations for these two types of considerations. However, reality dictates that only certain groups defined by the sex by school sized classification system will be available for longitudinal study. School availability and changing interests throughout the course of this research have limited the type of data available.

The descriptive analyses were based upon an equal number of subjects from the sex by school size by grade level classification scheme. The number of subjects in each

category was determined by the smallest sized category available. Subjects were randomly selected from the total sample available in other categories to equal this number. This procedure is advocated based upon knowledge of the difficulties present in unequal-n analyses (Winer, 1971, pps. 402-404) and the belief that the differences in sample size were not produced by an independent variable also influencing the outcome of other variables.

Two longitudinal approaches were used. The first employed a two-year lag and the second a one-year lag. Because of subject availability, the information attained from the two longitudinal studies differed. The composition of the populations for the two longitudinal studies will be specified more exactly in the next section.

Subjects

The composition of the total subject population for each of the three testing periods is given in Table 2. The two-year longitudinal analyses were based upon a sample of 101 male students. It was not possible to include separate analyses for grade level or school size. The one-year longitudinal analyses were based upon samples of 84 males and 115 females. Eight small and four large schools participated in the first year of the study, 12 small and 1 large school participated in the second year of the study, and 15 small and 5 large high schools participated in the final year of

Table 2. Classification of Students Participating in Study

| Group | Size Grade - Sex | Small Under Male | Small Under Female | Small Upper Male | Small Upper Female | Large Under Male | Large Under Female | Large Upper Male | Large Upper Female |
|-----------------------------|------------------------|------------------------|--------------------------|------------------------|--------------------------|------------------------|--------------------------|------------------------|--------------------------|
| <u>Descriptive Results</u> | | | | | | | | | |
| First Year (1973) | | 280 | - | 254 | - | 146 | - | 286 | - |
| Second Year (1974) | | 267 | 260 | 246 | 250 | 30 | 38 | 24 | 16 |
| Third Year (1975) | | 167 | 176 | 378 | 368 | 114 | 109 | 144 | 106 |
| <u>Longitudinal Results</u> | | | | | | | | | |
| One-Year Lag | | - | - | 58 | - | - | - | 43 | - |
| Two-Year Lag | | 22 | 35 | 62 | 80 | - | - | - | - |

the study. The subjects for the two-year longitudinal analyses came from 5 small and 3 large high schools. Seven small schools provided subjects for the one-year longitudinal study.

Hypotheses and Analyses

Because of the large amount of data which has been gathered, it is a cumbersome undertaking to cogently outline the hypotheses of interest and to clearly state their rationale and means of evaluation. Rather than attacking these tasks separately, it seems most parsimonious to integrate these areas into specific statements of hypotheses and their proposed method of evaluation. The following list is organized by topic and type of analysis. After a statement of each analysis, hypotheses based upon prior data or derived from theoretical positions will be advanced. Many testable outcomes will not be mentioned because no theoretical basis exists for making a prediction. The analyses are as follows:

1. Participation frequency - The amount of participation in each of the five activity areas was analyzed using a 2 (sex) x 2 (grade level) x 2 (school size) analysis of variance. One-hundred subjects were selected at random from each of the eight possible groups for these analyses. All subjects were from the final observation period. Based upon the data provided by Barker and Gump (1964) and Baird (1969),

one can hypothesize a significant school size main effect in all areas with the exception of academics. Main effects for sex of student should be found in athletics, social activities and clubs based upon Coleman's (1961) data regarding sex differences in priorities. A significant school size by grade level interaction is predicted by Barker and Gump's (1964) theory regarding ecological press. A larger number of underclassmen should be pressed into service in the smaller schools. The difference between schools of different size should thus be larger in the lower grades than in the upper grades. These are the most important hypotheses based upon theoretical considerations.

2. Participation diversity - The participation diversity scores were analyzed by the same 2 x 2 x 2 analysis of variance mentioned previously. The only hypothesis with theoretical justification predicts a significant school size main effect. Verification of this hypothesis would replicate Barker and Gump's (1964) data on the same topic.

3. Reward value of participation - A 2 (sex) x 2 (school size) x 2 (grade level) x 2 (participation level) least squares analysis of variance was used on each reward value score. The unequal-n analysis was made necessary by the inclusion of the amount of participation classification. Subjects were grouped as above or below the mean in amount of participation. It was hypothesized that for obvious reasons

amount of participation would be significantly related to perceived reward value. In addition, Coleman's (1961) data concerning sex differences in school priorities predicts that males will find athletics more rewarding while females will find social activities and clubs more rewarding.

4. Activity priorities - A quantification of student priorities was necessary in order to provide a basis for hypothesizing about several other analyses (see sections four and six). A crude measure was obtained by averaging the rankings given to an activity area by all students of a particular subgroup. Because ranks assigned to a set of variables are not independent, the average values have limited statistical meaning. In this case, the only requirement is a crude differentiation of high and low priorities and the averaging procedure provides this information. The priorities obtained from these ranking procedures should approximate Coleman's (1961) conclusions regarding priority activities. Athletics should be high among the priorities of the male and social activities among the priorities of the female.

Certain theoretical arguments made necessary a comparison of the diversity of student priorities in large and small school populations. Analyses to be discussed at a later point rely upon regression and correlational procedures to compare the impact of activities upon students within

large and small school environments. The hypothesis tested utilizing these techniques was that activities have a greater impact upon a small school student. For example, one might hypothesize that athletic activities would be more strongly correlated with self-concept among small-school students. An alternative to the "impact hypothesis" does exist. Large school students may have more specialized interests. While the correlation relating activities to self-concept may be smaller in a larger school, this might be because students interested in that activity and uninterested students were grouped together for the analyses. It is important to determine if the proportion of students with specific activity priorities differs widely with school size.

The following procedure was utilized to test the hypothesis of greater diversity of priorities in large schools. The frequency of first and second activity priorities was recorded in a 2 x 5 table (school size x activity area). The independence of the rows and columns was tested via a chi-square statistic. Separate comparisons were made for comparable groups. The hypothesis regarding greater diversity in the larger schools would be supported by a significant chi-square and an obvious pattern of greater diversity in the large school group.

5. Regression prediction of self-concept - A multiple-regression procedure was used to predict

differences in self-concept using participation in the five activity areas as the independent variables. A separate analysis was conducted within each subgroup. The model developed here proposes that participation in activities would be most strongly related to self-concept among the small-school upperclassmen. A crude test of this hypothesis was based upon a comparison of the R-squared values produced by the regression model within each subgroup. Unfortunately, the present author is aware of no statistical test which compares the predictive power of the same regression model applied to different populations. Because a specific statement has been made predicting the population in which self-concept and participation will be most strongly related, the hypothesis could easily be rejected. However, verification of the hypothesis based upon statistical test is not possible. In this case, the results will have to remain on a purely descriptive level.

6. Priority participation as a predictor of self-concept

- Analyses of the relationship between participation and self-concept was by a stepwise regression procedure. In order to ensure that the variables identified as best predictors by the stepwise methodology were not an artifact of the procedure used, regression procedures utilizing different methods of variable selection were utilized. A sample of one hundred students from each subgroup was

analyzed using the forward selection, backward elimination (Draper & Smith, 1966, pp. 167-169), and maximum R-squared improvement (Barr & Goodnight, 1972, p. 128) techniques. In all cases, the order of importance of the variables was the same.

In addition to comparing methods of variable selection, the magnitude of the correlations of participation in the individual activities and self-concept (see section ten) was predictive of the importance of the independent variables in the regression equations. Serious problems due to multicollinearity (Gordon, 1968) thus do not prevent statements about the relative value of participation in different types of activities from being made. This is not meant to imply that the activity variables were independent of each other in the prediction of self-concept. If this were the case, the sum of the independent correlations would equal the R-squared value from the regression model. Of course, the R-squared value was appreciably lower than this sum. The correlation comparison only demonstrates that the predictive power of specific variables within the regression model were not camouflaged by variance shared among several predictors.

7. Alienation - The alienation scores were analyzed by the same $2 \times 2 \times 2$ analysis of variance outlined in section one. A complete set of hypotheses is difficult to make

because of the limited research in this area. The one possible predicted result concerns Coleman's (1961) statements about sex differences. Coleman claimed that males were closely tied to participation in certain school activities and were thus more dependent upon the school for status. As students are likely to stay in situations which provide an opportunity for high status, one could hypothesize greater alienation among female students. However, an alternative to this hypothesis can be based upon the same arguments. A certain segment of the male student body must face failure in meeting school priorities. The stronger priorities hypothesized to exist among the males make failure more evident to the male student. Thus, one could also hypothesize greater alienation among males. The validation of either hypothesis depends first upon a significant sex difference in alienation and secondly upon corroboration from other data in the study. The discovery of sex differences in the relationship between self-concept and participation would be particularly useful.

8. Predicting self-concept in alienated and nonalienated subgroups - The model being developed here proposes that students will define their worth in terms of school priorities only if they were not alienated from the school environment. The method proposed as a test of this hypothesis was to make an arbitrary division in terms of

alienation and then compare the relationship of self-concept and activity participation in the two groups. The alienated and nonalienated groups for small school male and female upperclassmen (third data collection period) were each subjected to the regression procedure described in section five. The alienated groups were selected by standardizing the alienation scores and then selecting those individuals with a z value exceeding .67. After adjustment for shrinkage, the percentage of variance accounted for by the alienated and nonalienated regression equations were compared. It was hypothesized that differences would exist and that the variance accounted for within the nonalienated group would be larger. Again, the author knows of no statistical technique which can be applied to test any observed differences.

One difficulty which may be encountered in the utilization of another's assessment instrument is that the original author may have constructed the instrument from a different perspective than one's own. As can be seen by studying the items in Appendix A, Kunkel, Thompson and McElhinney (1973) conceptualized school-related alienation as being nearly totally dependent upon the academic aspects of school life. These authors' perspective is much narrower than the one being proposed here. The present model proposes that academics is only one of the several important

dimensions of the contemporary high school experience. The narrow scope of the alienation scale may pose a threat to the analysis just proposed. Students not satisfied with the academic aspect of high school life may still remain involved because of other interests. It would be erroneous to label these students as alienated from the school and to expect their opinions of self-worth to be uninfluenced by accomplishments in other areas of the school environment. Thus, differences may not be observed in the amount of self-concept variability accounted for by the regression models.

A test of the more general hypothesis that individuals withdraw from situations which force a negative self-evaluation can still be provided. The alienation scale was used to assign students to alienated or nonalienated subgroups according to the student's position above or below the group mean. The frequency of academic accomplishments was then correlated with the self-concept score labeled Intellectual and School Status and with the total school-specific self-concept within both alienated and nonalienated groups. The correlation of participation frequency and the self-concept variables should be significantly greater in the nonalienated group. This comparison was made in the same two populations utilized for the regression comparisons. This methodology should provide

a test of the proposed relationship among participation, self-concept and alienation more consistent with the nature of the alienation scale used.

9. Predicting self-concept scale scores from participation in activities - A validation procedure - In order to provide further justification for relating self-concept and individual areas of participation, a validation procedure was proposed. This procedure was deemed necessary in order to demonstrate the independence of the predictor variables. If the same pattern of significant predictors was found with each subscale, one would be led to doubt that participation in different areas was really important. Rather, a group of students with certain characteristics may see themselves in a positive manner no matter what criterion was used. Three subscales are available: intellectual and school status, physical appearance and attributes, and popularity. While the composition of the scales makes exact prediction of the significant independent variables difficult, one would hypothesize that regression analyses using scale scores as criterion would produce different patterns of significant predictors. It was hypothesized that academic activities would be the best single predictor of intellectual and school status, athletics of physical appearance and attributes, and social activities of popularity. It would seem unnecessary

to perform these analyses in all subgroups. Because the predictions seem most clear among male upperclassmen, only these groups were used.

10. Correlation of variables within subgroups - Reward scores, self-concept scale and composite scores, alienation scores and participation in each activity area were intercorrelated within each subgroup. The purpose of this procedure was to provide support for other analyses and to test several minor hypotheses. Section six requires the correlations of self-concept and participation in individual activity areas. Section nine can be supported by the correlation of scale scores and participation in individual activity areas.

Tests of the magnitude of correlations between different subgroups are also of value. While several of the descriptive relationships discussed previously can not be statistically tested, the relative magnitude of the Pearson product-moment correlation is not subject to the same limitations. The number of possible comparisons is large and too cumbersome to enumerate. The most important comparisons involve differences in the relationship of self-concept and activities across age and sex subgroups. The results of these comparisons should support the hypotheses made in sections five, six and eight.

11. Longitudinal test-retest correlations - As a background for the other longitudinal analyses and to provide stability data on the measurement instruments, test-retest correlations for the self-concept and alienation scales were computed.

12. Longitudinal prediction of self-concept - One of the more important components of this research is the prediction of student self-concept across time. Rather than trying to predict difference scores on the basis of intervening participation, the approach taken was to predict the second self-concept score from the first score and intervening participation variables. The latter procedure seems more methodologically sound than the former procedure (see Cronbach and Furby, 1970). It was predicted that the participation variables would significantly increase the predictive power of the regression equation utilizing only the first measure of self-concept. This hypothesis can be tested using the R-squared improvement technique (Kerlinger, 1973, p. 649). In this method, regression statistics are calculated with and without the variables of hypothesized significance. A test is available for testing the significance of any increase in the percentage of variance accounted for (R-squared) by additional variables. This methodology will be applied to the two-year data for males and the one-year data for males and females.

RESULTS

Analysis of Group Differences in Participation

Participation frequency - A 2 x 2 x 2 analysis of variance (school size x grade level x sex of student) was performed on the reported frequency of participation within each activity area. The results of these analyses are presented in detail in Tables 3 through 7. Group means for all five activity areas are provided in Table 8.

A significant main effect for school size was present in the analyses for all five activity areas. In all cases, the students from the smaller institutions were observed to take part in a larger number of activities. Sex differences were found for four of the activity areas: athletics, academics, fine arts and clubs. As might be expected, females indicated a greater frequency of participation in academics, $F(1,792)=12.70, p\leq.001$; fine arts, $F(1,792)=29.08, p\leq.001$; and clubs, $F(1,792)=64.77, p\leq.001$. Males participated in more athletic activities, $F(1,792)=33.08, p\leq.001$.

Student grade level proved to be a significant variable for four of the five activity areas. The younger students reported a higher incidence of participation in athletic activities, $F(1,792)=14.01, p\leq.001$. Upperclassmen listed more academic activities, $F(1,792)=11.92, p\leq.001$; social activities, $F(1,792)=5.28, p\leq.05$; and clubs, $F(1,792)=5.93, p\leq.01$.

Table 3. Analysis of Variance for Frequency of Academic Participation

| Source | df | MS | F |
|--------------------|-----|-------|----------|
| Size | 1 | 9.31 | 5.74** |
| Sex | 1 | 20.56 | 12.70*** |
| Grade | 1 | 19.30 | 11.92*** |
| Size x Sex | 1 | .70 | .43 |
| Size x Grade | 1 | .17 | .10 |
| Sex x Grade | 1 | .01 | .00 |
| Size x Sex x Grade | 1 | 12.90 | 7.97** |
| Error | 792 | 1.62 | |

**Indicates level of significance, $p \leq .01$.

***Indicates level of significance, $p \leq .001$.

Table 4. Analysis of Variance for Frequency of Athletic Participation

| Source | df | MS | F |
|--------------------|-----|-------|----------|
| Size | 1 | 18.20 | 14.35*** |
| Sex | 1 | 41.94 | 33.08*** |
| Grade | 1 | 17.76 | 14.01*** |
| Size x Sex | 1 | 2.13 | 1.67 |
| Size x Grade | 1 | 1.38 | 1.09 |
| Sex x Grade | 1 | .03 | .03 |
| Size x Sex x Grade | 1 | 1.22 | .96 |
| Error | 792 | 1.27 | |

***Indicates level of significance, $p \leq .001$.

Table 5. Analysis of Variance for Frequency of Social Participation

| Source | df | MS | <u>F</u> |
|--------------------|-----|-------|----------|
| Size | 1 | 2.26 | 4.60* |
| Sex | 1 | 1.32 | 2.69 |
| Grade | 1 | 12.12 | 24.67*** |
| Size x Sex | 1 | .07 | .14 |
| Size x Grade | 1 | 2.14 | 4.36* |
| Sex x Grade | 1 | 1.02 | 2.07 |
| Size x Sex x Grade | 1 | 1.94 | 3.95* |
| Error | 792 | .42 | |

*Indicates level of significance, $p \leq .05$.

***Indicates level of significance, $p \leq .001$.

Table 6. Analysis of Variance for Frequency of Fine Arts Participation

| Source | df | MS | <u>F</u> |
|--------------------|-----|--------|-----------|
| Size | 1 | 128.11 | 100.48*** |
| Sex | 1 | 37.08 | 29.08*** |
| Grade | 1 | 1.31 | 1.02 |
| Size x Sex | 1 | 39.40 | 30.90*** |
| Size x Grade | 1 | 4.75 | 3.72* |
| Sex x Grade | 1 | .01 | .01 |
| Size x Sex x Grade | 1 | 6.41 | 5.03* |
| Error | 792 | 1.27 | |

*Indicates level of significance, $p \leq .05$.

***Indicates level of significance, $p \leq .001$.

Table 7. Analysis of Variance for Frequency of Club Participation

| Source | df | MS | F |
|--------------------|-----|-------|----------|
| Size | 1 | 63.07 | 81.18*** |
| Sex | 1 | 50.32 | 64.77*** |
| Grade | 1 | 4.61 | 5.93* |
| Size x Sex | 1 | 4.08 | 5.26* |
| Size x Grade | 1 | .37 | .47 |
| Sex x Grade | 1 | .01 | .01 |
| Size x Sex x Grade | 1 | .00 | .00 |
| Error | 792 | .78 | |

*Indicates level of significance, $p \leq .05$.

***Indicates level of significance, $p \leq .001$.

Table 8. Means for Participation Variables

| Group | | | Activity | | | | | Div |
|-------|-----|-------|----------|------|-----|------|------|------|
| Size | Sex | Grade | Aca | Ath | Soc | Art | Club | |
| S | M | Und | .53 | 1.32 | .33 | .68 | .61 | 1.98 |
| S | M | Up | 1.13 | 1.17 | .85 | 1.10 | .81 | 2.75 |
| S | F | Und | 1.17 | 1.03 | .60 | 1.74 | 1.26 | 3.13 |
| S | F | Up | 1.25 | .75 | .78 | 1.79 | 1.45 | 3.14 |
| L | M | Und | .66 | 1.28 | .44 | .66 | .23 | 1.98 |
| L | M | Up | .69 | .81 | .56 | .41 | .35 | 1.85 |
| L | F | Und | .67 | .63 | .48 | .47 | .60 | 1.90 |
| L | F | Up | 1.20 | .34 | .65 | .57 | .70 | 2.14 |

Several interactions reached a level of statistical significance. Only those variables demonstrating a significant interaction with school size will be considered here. Sex of student interacted with school size for two activity areas: fine arts, $F(1,792)=30.90, p \leq .001$ and clubs, $F(1,792)=5.26, p \leq .05$. In both cases, there was a greater discrepancy between the participation frequency of male and female students in small schools than in large schools. Grade level interacted with school size with social activities as the dependent variable, $F(1,792)=4.36, p \leq .05$. A larger difference in social participation was found between upper- and underclassmen in small schools than in large schools.

The three-way interaction of school size, grade level and sex of student reached a significant level for three activities: social, $F(1,792)=3.95, p \leq .05$; academics, $F(1,792)=7.98, p \leq .01$; and fine arts, $F(1,792)=5.03, p \leq .05$. The exact pattern of means responsible for this higher-order interaction can be extracted from Table 8. One common trend can be observed throughout all three activity areas. In general, students from small schools participated in more activities than did students from the larger institutions. However, underclass males proved to be a departure from this trend. In all three activity areas, there was little difference in the participation frequency of large and small

school underclass males.

Participation diversity - This variable represents the number of different areas for which the student listed at least one activity. The results of the 2 x 2 x 2 analysis of variance (school size x grade level x sex of student) are reported in Table 9. Means are given in Table 9.

Significant main effects were demonstrated for school size, $F(1,792)=65.38, p \leq .001$; grade level, $F(1,792)=5.28, p \leq .05$; and sex of student, $F(1,792)=20.44, p \leq .001$. Respectively, these main effects were due to the greater diversity of participation found among small school students, upperclassmen, and female students.

Size of school interacted significantly with sex of student, $F(1,792)=11.80, p \leq .001$. This interaction was due to the greater discrepancy found between the diversity scores of small-school males and females than between the scores of these same two large-school groups. A significant three-way interaction, $F(1,792)=8.52, p \leq .01$, was also present. This interaction was similar in pattern to the three-way interactions found for the frequency of participation variables. Again, the younger male group proved to be the exception to the general finding of greater diversity scores among the small school groups. The mean diversity scores for the large and small school male underclassmen were identical (see Table 8).

Table 9. Analysis of Variance for
Participation Diversity

| Source | df | MS | F |
|--------------------|-----|--------|----------|
| Size | 1 | 122.32 | 65.38*** |
| Sex | 1 | 38.24 | 20.44*** |
| Grade | 1 | 9.89 | 5.29* |
| Size x Sex | 1 | 22.08 | 11.80*** |
| Size x Grade | 1 | 5.60 | 2.99 |
| Sex x Grade | 1 | 1.90 | 1.02 |
| Size x Sex x Grade | 1 | 15.94 | 8.52** |
| Error | 792 | 1.87 | |

*Indicates level of significance, $p \leq .05$.

**Indicates level of significance, $p \leq .01$.

***Indicates level of significance, $p \leq .001$.

Reward value of participation - A $2 \times 2 \times 2 \times 2$ analysis of variance (school size \times grade level \times sex of student \times level of participation) was performed on the reported reward value for each activity area. Because the classification of students by amount of participation produced groups of unequal size, an unequal-n analysis of variance procedure was required. The results of the five analyses are presented in Tables 10 through 14. Group means for all five areas are presented in Table 15.

Level of participation was the only main effect to reach significance in all five analyses (all $p \leq .001$). As would be expected, greater participation resulted in the activity being perceived as more rewarding. Sex of subject produced significant differences in three areas: academic, $F(1,784)=30.79, p \leq .001$; clubs, $F(1,784)=5.53, p \leq .05$; and fine arts, $F(1,784)=47.08, p \leq .001$. For each activity area, the female students reported a more rewarding experience. Grade level was a significant factor in two analyses: fine arts, $F(1,784)=5.24, p \leq .05$, and clubs, $F(1,784)=4.28, p \leq .05$. The younger students found clubs to be more rewarding while older students found fine arts to be more rewarding. School size accounted for no significant main effects.

Although a few interactions were significant (see Tables 10-14), no systematic trends which would contribute to this discussion were observed.

**Table 10. Analysis of Variance for Reward
Value of Academic Activities**

| Source | df | MS | F |
|-------------------|-----|--------|-----------|
| Grade (G) | 1 | 1.05 | .51 |
| Sex (SX) | 1 | 63.49 | 30.79*** |
| Size (SZ) | 1 | 4.32 | 2.10 |
| Participation (P) | 1 | 208.29 | 101.03*** |
| G x SX | 1 | 2.71 | 1.31 |
| G x SZ | 1 | 3.95 | 1.91 |
| G x P | 1 | 5.48 | 2.66 |
| SX x SZ | 1 | .20 | .09 |
| SX x P | 1 | 12.05 | 5.85* |
| SZ x P | 1 | .08 | .04 |
| G x SX x SZ | 1 | 1.39 | .68 |
| G x SX x P | 1 | 2.37 | 1.14 |
| SX x SZ x P | 1 | 6.15 | 2.98 |
| G x SZ x P | 1 | .01 | .00 |
| G x SX x SZ x P | 1 | .80 | .40 |
| Error | 784 | 2.06 | |

*Indicates level of significance, $p \leq .05$.

***Indicates level of significance, $p \leq .001$.

Table 11. Analysis of Variance for Reward
Value of Athletic Participation

| Source | df | MS | F |
|-------------------|-----|--------|-----------|
| Grade (G) | 1 | 10.46 | 3.51* |
| Sex (SX) | 1 | .00 | .00 |
| Size (SZ) | 1 | 1.18 | .39 |
| Participation (P) | 1 | 540.74 | 181.30*** |
| G x SX | 1 | 1.45 | .49 |
| G x SZ | 1 | 11.86 | 3.98* |
| G x P | 1 | .04 | .01 |
| SX x SZ | 1 | .00 | .00 |
| SX x P | 1 | 4.93 | 1.65 |
| SZ x P | 1 | .49 | .16 |
| G x SX x SZ | 1 | 15.40 | 5.16* |
| G x SX x P | 1 | 1.64 | .55 |
| SX x SZ x P | 1 | .03 | .01 |
| G x SZ x P | 1 | 1.19 | .40 |
| G x SX x SZ x P | 1 | .38 | .13 |
| ERROR | 784 | 2.98 | |

*Indicates level of significance, $p \leq .05$.

***Indicates level of significance, $p \leq .001$.

Table 12. Analysis of Variance for Reward
Value of Social Activities

| Source | df | MS | F |
|-------------------|-----|--------|-----------|
| Grade (G) | 1 | .07 | .03 |
| Sex (SX) | 1 | 4.67 | 2.08 |
| Size (SZ) | 1 | .14 | .06 |
| Participation (P) | 1 | 235.41 | 105.36*** |
| G x SX | 1 | 4.54 | 2.03 |
| G x SZ | 1 | .88 | .39 |
| G x P | 1 | .44 | .20 |
| SX x SZ | 1 | 1.20 | .54 |
| SX x P | 1 | .23 | .10 |
| SZ x P | 1 | .78 | .34 |
| G x SX x SZ | 1 | .41 | .18 |
| G x SX x P | 1 | 4.19 | 1.88 |
| SX x SZ x P | 1 | 1.30 | .58 |
| G x SZ x P | 1 | 3.68 | 1.65 |
| G x SX x SZ x P | 1 | 8.81 | 3.95* |
| Error | 784 | 2.23 | |

*Indicates level of significance, $p \leq .05$.

***Indicates level of significance, $p \leq .001$.

**Table 13. Analysis of Variance for Reward
Value of Club Activities**

| Source | df | MS | F |
|-------------------|-----|--------|----------|
| Grade (G) | 1 | 14.37 | 4.28* |
| Sex (SX) | 1 | 18.55 | 5.52* |
| Size (SZ) | 1 | 1.47 | .44 |
| Participation (P) | 1 | 137.85 | 41.08*** |
| G x SX | 1 | .00 | .00 |
| G x SZ | 1 | 19.33 | 5.73* |
| G x P | 1 | .00 | .00 |
| SX x SZ | 1 | 12.33 | 3.67 |
| SX x P | 1 | 4.60 | 1.37 |
| SZ x P | 1 | 7.54 | 2.24 |
| G x SX x SZ | 1 | 3.25 | .97 |
| G x SX x P | 1 | .69 | .20 |
| SX x SZ x P | 1 | 5.24 | 1.56 |
| G x SZ x P | 1 | 7.39 | 2.20 |
| G x SX x SZ x P | 1 | .33 | .10 |
| Error | 784 | 3.36 | |

*Indicates level of significance, $p \leq .05$.

***Indicates level of significance, $p \leq .001$.

Table 14. Analysis of Variance for Reward
Value of Fine Arts Participation

| Source | df | MS | F |
|-------------------|-----|--------|-----------|
| Grade (G) | 1 | 15.99 | 5.24* |
| Sex (SX) | 1 | 143.73 | 47.08*** |
| Size (SZ) | 1 | .95 | .31 |
| Participation (P) | 1 | 670.95 | 219.75*** |
| G x SX | 1 | 1.03 | .34 |
| G x SZ | 1 | 1.47 | .48 |
| G x P | 1 | .01 | .00 |
| SX x SZ | 1 | 8.44 | 2.76 |
| SX x P | 1 | 2.29 | .75 |
| SZ x P | 1 | .47 | .15 |
| G x SX x SZ | 1 | .93 | .30 |
| G x SX x P | 1 | .74 | .24 |
| SX x SZ x P | 1 | 3.91 | 1.28 |
| G x SZ x P | 1 | 2.96 | .97 |
| G x SX x SZ x P | 1 | .08 | .02 |
| Error | 784 | 3.05 | |

*Indicates level of significance, $p \leq .05$.

***Indicates level of significance, $p \leq .001$.

Table 15. Mean Reward Value

| Group | | | | Activities | | | | |
|-------|-----|------|-------|------------|------|------|------|------|
| Grade | Sex | Size | Level | Art | Soc | Ath | Club | Aca |
| Und | M | S | Low | 2.21 | 4.35 | 3.87 | 3.00 | 3.73 |
| Und | M | S | High | 4.83 | 5.32 | 5.69 | 3.70 | 5.59 |
| Und | M | L | Low | 2.72 | 4.03 | 4.50 | 3.27 | 4.01 |
| Und | M | L | High | 4.63 | 5.76 | 6.32 | 4.52 | 5.43 |
| Und | F | S | Low | 3.77 | 4.51 | 4.35 | 3.67 | 5.14 |
| Und | F | S | High | 5.48 | 5.71 | 5.96 | 3.92 | 5.74 |
| Und | F | L | Low | 3.45 | 4.86 | 4.33 | 3.43 | 4.81 |
| Und | F | L | High | 5.26 | 5.62 | 6.08 | 4.74 | 5.97 |
| Up | M | S | Low | 2.92 | 4.44 | 4.15 | 2.60 | 4.22 |
| Up | M | S | High | 4.88 | 5.73 | 6.20 | 3.91 | 5.38 |
| Up | M | L | Low | 2.89 | 4.61 | 3.75 | 2.97 | 4.51 |
| Up | M | L | High | 4.88 | 5.22 | 5.66 | 3.86 | 5.46 |
| Up | F | S | Low | 4.10 | 4.33 | 3.96 | 3.76 | 4.84 |
| Up | F | S | High | 5.63 | 5.59 | 5.61 | 4.20 | 5.47 |
| Up | F | L | Low | 3.45 | 4.49 | 4.28 | 2.91 | 5.13 |
| Up | F | L | High | 5.67 | 5.60 | 5.54 | 3.78 | 6.03 |

Analysis of Activity Priorities

The mean ranks assigned each activity area by the eight subject groups are presented in Table 16. Because of the interdependence of ranked variables, appropriate statistical comparisons are difficult to make. Thus, the following statements are made without adequate statistical verification. General trends appeared to be present in the selection of high priority activities. Three areas, athletics, academics and social activities, dominated the higher priority selections of all subject groups. Sex differences seemed to exist for the activity area designated as being most important. While male groups were likely to select athletics or social activities, all four female groups indicated academic activities to be of greatest priority.

A chi-square statistic was used to test for differences in the diversity of priorities for comparable groups from large and small high schools. A 2 x 5 contingency table (subject group x activity area) was utilized to record the frequency of first and second activity priorities. As shown in Table 17, only one of the four comparisons demonstrated the existence of a significantly different pattern of priorities. In this comparison, the younger group of female students from small schools were shown to have more diverse priorities than were younger females in the larger schools, $\chi^2(4) = 11.44, p \leq .05$.

Table 16. Mean Ranks for Activity Areas

| Group | | | Activity | | | | |
|-------|-----|-------|----------|------|------|------|------|
| Size | Sex | Grade | Ath | Soc | Aca | Art | Club |
| S | M | Und | 3.66 | 3.51 | 3.05 | 2.17 | 2.61 |
| S | M | Up | 3.60 | 3.68 | 3.36 | 2.04 | 2.34 |
| S | F | Und | 3.39 | 3.55 | 3.66 | 2.49 | 1.90 |
| S | F | Up | 2.98 | 3.57 | 3.85 | 2.65 | 1.93 |
| L | M | Und | 3.68 | 3.38 | 3.41 | 2.26 | 2.29 |
| L | M | Up | 3.38 | 3.68 | 3.60 | 2.12 | 2.18 |
| L | F | Und | 3.13 | 3.76 | 3.92 | 2.07 | 2.14 |
| L | F | Up | 2.73 | 3.64 | 4.29 | 2.74 | 1.69 |

Table 17. Chi-Square Analyses of Priorities

| Group | Ath | Aca | Soc | Art | Club |
|---------|-----|-----|-----|-----|------|
| S Und F | 97 | 99 | 99 | 39 | 16 |
| L Und F | 45 | 79 | 73 | 12 | 9 |

$\chi^2 (4) = 11.44, p \leq .05$

| Group | Ath | Aca | Soc | Art | Club |
|---------|-----|-----|-----|-----|------|
| S Und M | 109 | 70 | 90 | 27 | 38 |
| L Und M | 50 | 45 | 36 | 21 | 12 |

$\chi^2 (4) = 7.30, N.S.$

| Group | Ath | Aca | Soc | Art | Club |
|--------|-----|-----|-----|-----|------|
| S Up F | 150 | 244 | 197 | 110 | 35 |
| L Up F | 25 | 68 | 49 | 25 | 3 |

$\chi^2 = (4) 7.30, N.S.$

| Group | Ath | Aca | Soc | Art | Club |
|--------|-----|-----|-----|-----|------|
| S Up M | 167 | 150 | 183 | 40 | 58 |
| L Up M | 64 | 77 | 75 | 18 | 14 |

$\chi^2 = (4) 6.09, N.S.$

Relating Self-Concept and Participation

Correlational analyses - The correlations relating the frequency of participation in each activity area and the self-concept scores are given in Tables 18 through 21. With the large subject populations available, the majority of these correlations were statistically significant.

Comparisons were made to determine if participation in a given area was more strongly related to self-concept in the smaller schools than in the larger schools. These tests were made between comparable subject groups (e.g., underclass males from large and small schools). Although most correlations were of a larger magnitude for the small school groups, only four of a possible 20 were significantly different. These significant differences are indicated in the Tables.

It was predicted that the magnitude of the relationship between participation and self-concept would be related to the priority of the activity among the peer group members. In general, priority activities should be more strongly correlated with self-concept. Table 22 presents a detailed comparison of the magnitude of the correlations within each student group. It is difficult to argue for a definite decision of acceptance regarding the priority hypothesis. For example, the correlation of the number of fine arts activities and self-concept scores was one of the strongest

Table 18. Correlations of Self-Concept and Activity Variables for Male Underclassmen^{1,2}

| | Aca | Ath | Soc | Art | Club | SCT | SC1 | SC2 | SC3 |
|------|------|-----|-----|------|------|-----|-----|------|-----|
| Aca | | .11 | .07 | .17 | .20 | .19 | .22 | -.10 | .05 |
| Ath | .11 | | .27 | .11 | .18 | .21 | .16 | .17 | .24 |
| Soc | .11 | .19 | | .27 | .35 | .19 | .23 | .20 | .24 |
| Art | .00 | .12 | .21 | | .37 | .18 | .19 | -.09 | .08 |
| Club | .15 | .15 | .24 | .35 | | .28 | .24 | .15 | .29 |
| SCT | .09 | .24 | .16 | -.08 | .25 | | .82 | .61 | .67 |
| SC1 | .24 | .21 | .14 | -.21 | .22 | .82 | | .47 | .62 |
| SC2 | -.12 | .28 | .12 | -.19 | .07 | .59 | .51 | | .49 |
| SC3 | -.06 | .34 | .12 | -.23 | .17 | .61 | .53 | .58 | |

¹Small school students are above the diagonal, if $r > .15, p \leq .05$. Large school students are below the diagonal, if $r > .15, p \leq .05$.

²None of the comparable correlations of activity and SCT differed significantly with school size.

Table 19. Correlations of Self-Concept and Activity Variables for Female Underclassmen¹

| | Aca | Ath | Soc | Art | Club | SCT | SC1 | SC2 | SC3 |
|------|-----|------------------|------|------------------|------|------------------|-----|-----|-----|
| Aca | | .24 | .27 | .31 | .26 | .31 | .33 | .16 | .10 |
| Ath | .04 | | .27 | .48 | .31 | .36 ² | .35 | .20 | .43 |
| Soc | .23 | .13 | | .18 | .25 | .10 | .09 | .20 | .05 |
| Art | .14 | .09 | -.04 | | .41 | .50 ² | .44 | .31 | .43 |
| Club | .09 | .29 | .16 | .22 | | .26 | .30 | .20 | .21 |
| SCT | .36 | .12 ² | .12 | .18 ² | .17 | | .84 | .68 | .71 |
| SC1 | .44 | .15 | .05 | .12 | .06 | .80 | | .51 | .65 |
| SC2 | .31 | -.03 | .17 | -.01 | .00 | .64 | .52 | | .50 |
| SC3 | .07 | .18 | .07 | .05 | -.02 | .57 | .49 | .44 | |

¹Small school students are above the diagonal, if $r > .15, p \leq .05$. Large school students are below the diagonal, if $r > .20, p \leq .05$.

²Significant size differences in correlations of activity and SCT.

Table 20. Correlations of Self-Concept and Activity Variables for Male Upperclassmen¹

| | Aca | Ath | Soc | Art | Club | SCT | SC1 | SC2 | SC3 |
|------|-----|-----|-----|------------------|------|------------------|------|-----|-----|
| Aca | | .14 | .17 | .33 | .22 | .37 | .35 | .16 | .12 |
| Ath | .07 | | .30 | .13 | .26 | .28 | .24 | .17 | .31 |
| Soc | .13 | .29 | | .27 | .18 | .32 | .25 | .26 | .31 |
| Art | .08 | .05 | .09 | | .25 | .35 ² | .34 | .12 | .04 |
| Club | .23 | .38 | .14 | .32 | | .21 | .21 | .12 | .09 |
| SCT | .30 | .29 | .16 | .09 ² | .10 | | .82 | .64 | .62 |
| SC1 | .33 | .24 | .11 | .13 | .17 | .83 | | .47 | .54 |
| SC2 | .00 | .01 | .11 | -.02 | -.02 | .09 | -.09 | | .52 |
| SC3 | .01 | .15 | .17 | .00 | .01 | .21 | .07 | .92 | |

¹Small school students are above the diagonal, if $r > .10, p \leq .05$. Large school students are below the diagonal, if $r > .16, p \leq .05$.

²Significant size differences in correlations of activity and SCT.

Table 21. Correlations of Self-Concept and Activity Variables for Female Upperclassmen¹

| | Aca | Ath | Soc | Art | Club | SCT | SC1 | SC2 | SC3 |
|------|------|-----|-----|-----|------------------|------------------|-----|-----|-----|
| Aca | | .17 | .20 | .26 | .20 | .27 | .28 | .07 | .15 |
| Ath | .28 | | .18 | .12 | .20 | .21 | .20 | .10 | .27 |
| Soc | -.06 | .22 | | .19 | .29 | .31 | .29 | .27 | .29 |
| Art | .34 | .13 | .06 | | .25 | .36 | .35 | .15 | .17 |
| Club | .33 | .23 | .22 | .14 | | .35 ² | .32 | .21 | .22 |
| SCT | .41 | .12 | .17 | .38 | .07 ² | | .87 | .71 | .73 |
| SC1 | .47 | .21 | .23 | .32 | .15 | .85 | | .56 | .73 |
| SC2 | .16 | .05 | .19 | .16 | .10 | .72 | .53 | | .58 |
| SC3 | .21 | .18 | .20 | .27 | .02 | .71 | .66 | .59 | |

¹Small school students are above the diagonal, if $r > .10, p \leq .05$. Large school students are below the diagonal, if $r > .20, p \leq .05$.

²Significant size differences in correlations of activity and SCT.

Table 22. Comparison of the Magnitude of the Activity and Self-Concept Correlations Within Each Student Group

| Group | | | Activity | | | | |
|-------|-----|-------|-------------------|-------|-------|-------|-------|
| Size | Sex | Grade | Ath | Soc | Aca | Art | Club |
| S | M | Und | .19a ¹ | .21a | .19a | .18a | .28a |
| S | M | Up | .37c | .28ab | .32bc | .35bc | .21a |
| S | F | Und | .31a | .36a | .10 | .50 | .26a |
| S | F | Up | .27ab | .21a | .31b | .36b | .35b |
| L | M | Und | .09ab | .24b | .16b | -.08a | .25b |
| L | M | Up | .30b | .29b | .16ab | .09a | .10a |
| L | F | Und | .36b | .12a | .12a | .18ab | .17ab |
| L | F | Up | .27ab | .21a | .31b | .36b | .35b |

¹Letters indicate values which do not differ significantly.

relationships demonstrated for several of the groups. As shown in Table 16, fine arts were given a low priority score in all student groups. If comparisons are made between the highest and lowest priority for each subgroup, only two of eight comparisons demonstrate a significantly larger correlation for the priority activity (all other comparisons revealed no significant differences). Considering the issue from a different perspective, the two lowest priorities produced correlations which were either the smallest or not significantly different from the smallest in seven of eight cases (five were the smallest values observed).

Regression analyses - Participation scores for each of the five activity areas were entered in a multiple-regression formula with self-concept as the dependent measure. This procedure was repeated for each group of subjects. The amount of variability accounted for by each model and the level of significance achieved by the models and individual predictors are given in Table 23.

The hypothesis being tested here was that the greatest amount of variability in self-concept scores would be accounted for within the older, small-school populations. As mentioned previously, this hypothesis cannot be statistically verified. Data from three years of study were examined in search of support for this hypothesis. In general, the hypothesis would appear to be supported. Among the older

Table 23. Group Regression Models Predicting Self-Concept

| Size | Grade | Sex | n | Predictors | | | | | Model Significance | R ² | Corrected R ² |
|------------------------|-------|-----|-----|------------|------|------|------|-------|-----------------------|----------------|-----------------------------|
| | | | | Ath | Soc | Aca | Art | Clubs | | | |
| Time 1 Subjects (1973) | | | | | | | | | | | |
| S | Und | M | 280 | .01 | | .01 | | | .001 | .13 | .12 |
| L | Und | M | 146 | | | .01 | .01 | | .01 | .15 | .12 |
| S | Up | M | 254 | .01 | | .01 | | .01 | .001 | .17 | .15 |
| L | Up | M | 286 | .01 | | | | .01 | .01 | .09 | .08 |
| Time 2 Subjects (1974) | | | | | | | | | | | |
| S | Und | M | 297 | .05 | | .01 | | | .001 | .13 | .12 |
| S | Und | F | 298 | .01 | | .05 | .05 | | .001 | .12 | .11 |
| S | Up | M | 270 | .05 | .05 | .001 | | | .001 | .22 | .20 |
| S | Up | F | 266 | .05 | | .01 | .01 | .05 | .001 | .19 | .17 |
| Time 3 Subjects (1975) | | | | | | | | | | | |
| S | Und | M | 167 | .05* | | | | .05 | .001 | .13 | .11 |
| S | Und | F | 176 | | | .05 | .001 | .001 | .001 | .29 | .28 |
| S | Up | M | 378 | .001 | .001 | .001 | .001 | | .001 | .26 | .25 |
| S | Up | F | 368 | | .001 | .01 | .001 | .001 | .001 | .26 | .25 |
| L | Und | M | 114 | .05 | | | .01 | .01 | .01 | .15 | .12 |
| L | Und | F | 109 | | | | | .01 | .01 | .16 | .13 |
| L | Up | M | 144 | .001 | | .001 | | | .001 | .18 | .16 |
| L | Up | F | 106 | | .05 | .001 | | | .001 | .24 | .21 |

*Significance level of predictor.

students, the relationship between self-concept and predictors was consistently stronger in the smaller institutions. This was especially true of male students. With one major exception, underclass groups demonstrated a weaker relationship between self-concept and predictors and only small differences were present between the various student groups. The single exception was the small school female underclassman. This group demonstrated the strongest relationship between self-concept and school-related activities.

One should note the increase in variability accounted for across the three years of this research. As explained at an earlier point, this increase was due to changes in the participation frequency questionnaire. Improvements in the completeness of the original questionnaire appear to have tapped additional information related to the student's self-concept. This additional information changes only the predictive power of the regression model. The hypothesized differences in the relative amount of variability accounted for within subject groups were little influenced by these changes.

The significance of the individual predictors provides some insight into the relative impact of different activities upon the student's self-concept. Because of statistical problems mentioned earlier, it was important to demonstrate

that the best predictors in a regression equation would also produce the higher correlation when independently related to the dependent measure. By comparing the information provided in Tables 18 through 21 with the regression results in Table 23, this condition was verified. Again, the hypothesis that high priority areas would be the best predictors of self-concept can not be universally accepted. Fine arts and clubs, the two lowest priority areas, were often significant predictor variables when high priority activities were not. However, some evidence can be garnered for the special importance of priority activities. The highest priority activity was a significant predictor of self-concept in six of eight regression equations while the lowest priority activity was a significant predictor in three of eight. Sex differences in the priority given an activity area also appeared to be related to the likelihood that the activity would be a significant predictor of self-concept. The largest sex differences in priority were found for academics and athletics. While females preferred academics, males consistently listed athletics as a more important activity. Of the four same sex regression models produced with year three data, athletics was a significant predictor of self-concept in all four male groups while reaching significance in none of the female groups. Academic activities were significant predictors in three female groups

and two male groups. As with the correlational results, the priority of activity hypothesis has received only weak support. It would not seem justified to argue that priority activities make a unique contribution to the conceptual model being developed here.

Validation of regression procedure - This validation procedure was proposed to demonstrate the possible independence of the activity variables as predictors of various components of adolescent self-concept. As an alternative, a certain segment of the student population may evaluate themselves more positively no matter what activities they participate in. The "school specific" self-concept scale is composed of three factors: Intellectual and School Status, Popularity, and Physical Appearance and Attributes. Separate regression analyses were employed predicting each scale score from the frequency of participation in the five activity areas. These regression models are presented in Table 24. The scales appeared to be sensitive to participation differences in what might be considered logical activity areas. The best predictor of Intellectual and School Status was the academic activity area. The Popularity scale was most strongly related to social activities and the scale labelled Physical Appearance and Ability was most closely related to athletic and social activities.

Table 24. Regression Models Predicting Self-Concept Variables

| SC Variable | n | Predictors | | | | | Model Significance | R ² | Corrected R ² |
|-------------|-----|------------|------|------|------|-------|-----------------------|----------------|-----------------------------|
| | | Ath | Aca | Soc | Art | Clubs | | | |
| SCT | 378 | .001 | .001 | .001 | .001 | | .001 | .26 | .25 |
| SC1 | 378 | .01 | .001 | .05 | .01 | | .001 | .22 | .21 |
| SC2 | 378 | | .05 | .001 | | | .001 | .09 | .09 |
| SC3 | 378 | .001 | | .001 | | | .001 | .16 | .15 |

Alienation

Analysis of group differences in alienation - A 2 x 2 x 2 analysis of variance (school size x grade level x sex of student) was performed on the total (13 item) alienation score. The results of this analysis are presented in Table 25. Group means are given in Table 26.

Two main effects were significant. Small school students were significantly more alienated, $F(1,792)=8.80, p\leq.01$. Male students were more alienated than were female students, $F(1,792)=30.07, p\leq.001$. One interaction, school size and sex of student, was also significant, $F(1,792)=5.36, p\leq.05$. The difference between the mean alienation scores of males and females was greater within the small school environment than within the larger schools.

Correlational analyses - The correlations relating alienation, self-concept, participation frequency, and participation reward are given in Tables 27 through 30. Numerous comparisons could be made based on these results, but such tests would add little of substance. One important generality would seem appropriate: alienation was most strongly related to academic success. The frequency of academic accomplishments, the perceived reward value of academic activities, and the self-concept of intellectual ability were among the strongest and most consistent

Table 25. Analysis of Variance for Alienation Scores

| Source | df | MS | F |
|--------------------|-----|---------|----------|
| Size | 1 | 1397.74 | 8.80** |
| Sex | 1 | 1359.54 | 30.07*** |
| Grade | 1 | 42.06 | .93 |
| Size x Sex | 1 | 242.18 | 5.35* |
| Size x Grade | 1 | 134.67 | 2.98 |
| Sex x Grade | 1 | 147.35 | 3.26 |
| Size x Sex x Grade | 1 | 60.67 | 1.34 |
| Error | 792 | 45.21 | |

*Indicates level of significance, $p \leq .05$.

**Indicates level of significance, $p \leq .01$.

***Indicates level of significance, $p \leq .001$.

Table 26. Group means for Alienation

| Group | Mean |
|--------------------------|-------|
| Small Underclass Males | 23.44 |
| Small Upperclass Males | 20.75 |
| Small Underclass Females | 18.32 |
| Small Upperclass Females | 18.45 |
| Large Underclass Males | 19.56 |
| Large Upperclass Males | 19.61 |
| Large Underclass Females | 17.74 |
| Large Upperclass Females | 18.41 |

Table 27. Correlations of Alienation, Self-Concept and Activity Variables for Male Underclassmen¹

| | Aca | Soc | Ath | Art | Club | RAca | RSoc | RAth | RArt | Club | SCT | SC1 | SC2 | SC3 | Al |
|-------|------|------|------|------|------|------|------|------|------|------|------|-----|------|-----|------|
| Aca | | .07 | .11 | .17 | .20 | .40 | -.02 | .12 | .14 | .09 | .19 | .22 | -.10 | .05 | -.24 |
| Soc | .11 | | .27 | .27 | .35 | .14 | .29 | .19 | .04 | .02 | .19 | .23 | .20 | .24 | .16 |
| Ath | .11 | .19 | | .11 | .18 | .10 | .19 | .51 | -.09 | .01 | .21 | .16 | .17 | .24 | -.02 |
| Art | .00 | .21 | .12 | | .37 | .17 | .08 | .11 | .56 | .15 | .18 | .19 | -.09 | .08 | -.13 |
| Club | .15 | .24 | .15 | .35 | | .20 | .22 | .11 | .17 | .25 | .28 | .24 | .15 | .29 | -.03 |
| RAca | .27 | -.06 | .05 | .02 | .11 | | .11 | .24 | .30 | .25 | .25 | .23 | -.09 | .15 | -.37 |
| RSoc | .11 | .46 | .34 | .11 | .06 | .14 | | .22 | -.03 | .09 | .17 | .09 | .15 | .25 | .13 |
| RAth | -.18 | .21 | .44 | .11 | .09 | .22 | .29 | | .11 | .16 | .27 | .20 | .14 | .31 | -.16 |
| RArt | -.05 | -.07 | -.07 | .43 | .17 | .10 | .08 | -.10 | | .27 | .17 | .07 | -.23 | .01 | -.26 |
| RClub | -.05 | .57 | .14 | -.04 | .27 | .39 | .12 | .20 | .22 | | .26 | .23 | .12 | .22 | -.24 |
| SC | .09 | .16 | .24 | -.08 | .25 | .32 | .11 | .40 | .00 | .23 | | .82 | .61 | .67 | -.14 |
| SC1 | .24 | .14 | .21 | -.21 | .22 | .47 | .12 | .31 | -.08 | .15 | .82 | | .47 | .62 | -.07 |
| SC2 | -.12 | .12 | .28 | -.19 | .07 | .07 | .23 | .31 | -.09 | .06 | .59 | .51 | | .49 | .10 |
| SC3 | -.06 | .12 | .34 | -.23 | .17 | .06 | .06 | .35 | -.23 | -.04 | .61 | .53 | .58 | | .07 |
| Al | -.14 | -.01 | -.10 | -.07 | -.07 | -.43 | -.22 | -.30 | -.16 | -.36 | -.36 | .26 | -.02 | .02 | |

¹Small school students are above the diagonal, if $r > .15$, $p \leq .05$. Large school students are below the diagonal, $r > .20$, $p \leq .05$.

Table 28. Correlations of Alienation, Self-Concept and Activity Variables for Female Underclassmen¹

| | Aca | Soc | Ath | Art | Club | RAca | RSoc | RAth | RArt | Club | SCF | SC1 | SC2 | SC3 | Al |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Aca | | .27 | .24 | .31 | .26 | .33 | .05 | .09 | .15 | .11 | .31 | .33 | .16 | .10 | -.27 |
| Soc | .23 | | .27 | .18 | .25 | .03 | .31 | .16 | .07 | .13 | .10 | .09 | .20 | .05 | .04 |
| Ath | .04 | .13 | | .48 | .31 | .21 | .14 | .43 | .21 | .09 | .36 | .35 | .20 | .43 | -.11 |
| Art | .14 | -.04 | .09 | | .41 | .28 | .15 | .35 | .46 | .20 | .50 | .44 | .31 | .13 | -.31 |
| Club | .09 | .16 | .29 | .22 | | .12 | .16 | .20 | .20 | .11 | .26 | .30 | .20 | .21 | -.03 |
| RAca | .30 | .09 | .13 | .17 | .22 | | .10 | .12 | .20 | .26 | .42 | .43 | .18 | .32 | -.50 |
| RSoc | -.02 | .26 | .21 | .03 | .04 | .33 | | .21 | .16 | .14 | .34 | .24 | .41 | .39 | -.04 |
| RAth | .12 | .05 | .39 | -.09 | .17 | .33 | .43 | | .30 | .18 | .32 | .28 | .23 | .41 | -.16 |
| RArt | -.02 | -.02 | .11 | .46 | .21 | .27 | .18 | .16 | | .24 | .21 | .21 | .13 | .22 | -.20 |
| RClub | -.07 | .04 | .13 | .17 | .35 | .26 | .20 | .21 | .52 | | .22 | .26 | .15 | .22 | -.25 |
| SC | .36 | .12 | .14 | .18 | .17 | .31 | .12 | .06 | .15 | .12 | | .84 | .68 | .71 | -.34 |
| SC1 | .44 | .05 | .15 | .12 | .06 | .27 | .10 | .00 | .05 | -.04 | .80 | | .51 | .65 | -.35 |
| SC2 | .31 | .17 | -.03 | -.01 | .00 | .06 | .11 | .03 | .03 | .01 | .64 | .52 | | .50 | -.22 |
| SC3 | .07 | .07 | .18 | .05 | -.02 | .05 | .18 | .08 | -.02 | .03 | .57 | .49 | .44 | | -.30 |
| Al | -.31 | -.03 | -.19 | -.19 | -.25 | -.55 | -.13 | -.22 | -.25 | -.24 | -.51 | -.48 | -.22 | -.16 | |

¹Small school students are above the diagonal, if $r > .15$, $p \leq .05$. Large school students are below the diagonal, $r > .20$, $p \leq .05$.

Table 29. Correlations of Alienation, Self-Concept and Activity Variables for Male Upperclassmen¹

| | Aca | Soc | Ath | Art | Club | RAca | RSoc | RAth | RArt | Club | SCT | SC1 | SC2 | SC3 | Al |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Aca | | .17 | .14 | .33 | .22 | .28 | -.02 | .05 | .19 | -.09 | .37 | .35 | .16 | .12 | -.18 |
| Soc | .13 | | .30 | .27 | .18 | .17 | .37 | .23 | .16 | .01 | .32 | .25 | .26 | .31 | -.02 |
| Ath | .07 | .29 | | .13 | .26 | .07 | .17 | .58 | .02 | .04 | .28 | .24 | .17 | .31 | -.06 |
| Art | .08 | .09 | .05 | | .25 | .25 | .08 | .04 | .61 | .06 | .35 | .34 | .12 | .04 | -.21 |
| Club | .23 | .14 | .38 | .32 | | .12 | .06 | .25 | .11 | .23 | .21 | .21 | .12 | .09 | -.15 |
| RAca | .35 | .09 | .15 | .10 | .24 | | .18 | .13 | .27 | .00 | .30 | .33 | .10 | .02 | -.47 |
| RSoc | .02 | .23 | .08 | .12 | .08 | .26 | | .23 | .14 | .09 | .30 | .22 | .32 | .31 | -.08 |
| RAth | .05 | .05 | .49 | .03 | .17 | .22 | .12 | | .07 | .18 | .20 | .17 | .11 | .24 | -.15 |
| RArt | .07 | .06 | .04 | .39 | .13 | .12 | .11 | .18 | | .17 | .21 | .23 | .04 | .03 | -.28 |
| RClub | .12 | .08 | .13 | .07 | .26 | .16 | .02 | .21 | .24 | | .05 | .07 | -.03 | .07 | -.18 |
| SCT | .30 | .16 | .29 | .09 | .10 | .16 | .09 | .05 | .17 | .00 | | .83 | .64 | .62 | -.23 |
| SC1 | .33 | .11 | .24 | .13 | .17 | .20 | .04 | .05 | .18 | .01 | .83 | | .47 | .54 | -.26 |
| SC2 | .00 | .11 | .01 | -.02 | -.02 | -.01 | .12 | .01 | -.05 | -.05 | .09 | -.09 | | .52 | -.06 |
| SC3 | .01 | .17 | .15 | .00 | .01 | .06 | .13 | .13 | -.02 | -.01 | .21 | .07 | .92 | | .03 |
| Al | -.24 | -.13 | -.16 | -.13 | -.08 | -.41 | -.16 | -.28 | -.26 | -.22 | -.31 | -.31 | -.19 | -.29 | |

¹Small school students are above the diagonal, if $r > .10$, $p \leq .05$. Large school students are below the diagonal, $r > .16$, $p \leq .05$.

Table 30. Correlations of Alienation, Self-Concept and Activity Variables for Female Upperclassmen¹

| | Aca | Soc | Ath | Art | Club | RAca | RSoc | RAth | RArt | Club | SCT | SC1 | SC2 | SC3 | Al |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Aca | | .20 | .17 | .26 | .20 | .28 | .00 | .02 | .10 | -.06 | .27 | .28 | .07 | .15 | -.12 |
| Soc | -.06 | | .18 | .19 | .29 | .06 | .36 | .17 | .04 | .08 | .31 | .29 | .27 | .29 | -.03 |
| Ath | .28 | .22 | | .12 | .20 | .00 | .02 | .44 | .04 | -.07 | .21 | .20 | .10 | .27 | -.05 |
| Art | .34 | .06 | .13 | | .25 | .21 | .01 | .00 | .47 | .15 | .36 | .35 | .15 | .17 | -.23 |
| Club | .33 | .22 | .23 | .14 | | .07 | .07 | .19 | .10 | .24 | .35 | .32 | .21 | .22 | -.18 |
| RAca | .30 | .14 | .14 | .26 | .08 | | .18 | .10 | .30 | .23 | .28 | .31 | .10 | .21 | -.44 |
| RSoc | .06 | .37 | .13 | .09 | .12 | .21 | | .19 | .07 | .23 | .29 | .26 | .34 | .33 | -.08 |
| RAth | .14 | .18 | .36 | .14 | .21 | .16 | .37 | | .08 | .20 | .18 | .18 | .23 | .30 | -.23 |
| RArt | .31 | -.02 | .01 | .42 | .05 | .28 | .15 | .19 | | .32 | .22 | .22 | .09 | .10 | -.28 |
| RClub | .19 | .02 | .24 | .19 | .18 | .10 | .21 | .15 | .38 | | .19 | .25 | .11 | .17 | -.42 |
| SCT | .41 | .17 | .12 | .38 | .07 | .39 | .11 | .13 | .32 | -.01 | | .87 | .71 | .73 | -.25 |
| SC1 | .47 | .23 | .21 | .32 | .15 | .29 | .06 | .19 | .33 | .05 | .85 | | .56 | .70 | -.29 |
| SC2 | .16 | .19 | .05 | .16 | .10 | .13 | .18 | .09 | .10 | -.06 | .72 | .53 | | .58 | -.10 |
| SC3 | .21 | .20 | .18 | .27 | .02 | .18 | .13 | .22 | .13 | -.16 | .71 | .66 | .59 | | -.21 |
| Al | -.34 | .11 | -.15 | -.36 | -.09 | -.24 | -.21 | -.33 | -.34 | -.31 | -.34 | -.37 | -.15 | -.25 | |

¹Small school students are above the diagonal, if $r > .10$, $p \leq .05$. Large school students are below the diagonal, $r > .20$, $p \leq .05$.

correlates of student alienation.

Regression models for alienated and nonalienated students - The alienation scores were used to differentiate groups of alienated and nonalienated students. It was hypothesized that self-concept scores would be more strongly related to the activity variables in the nonalienated populations. This hypothesis was tested by comparing the amount of variability accounted for by the regression models applied to the alienated and nonalienated groups. Information obtained from these regression models is presented in Table 31. As is shown in this Table, little difference existed between the alienated and nonalienated groups.

Correlation of participation and self-concept variables within alienated and nonalienated groups - The correlations of school-specific and Intellectual and School Status self-concept scores with the frequency of academic participation were compared for alienated and nonalienated students. It was hypothesized that the magnitude of the correlations would be significantly greater in the nonalienated groups. Within the small-school upperclass male group, this hypothesis was supported for both self-concept variables. The school-specific self-concept scores were significantly more strongly related to participation frequency, ($z=2.01, p \leq .05$), among the nonalienated group,

Table 31. Regression models for Alienated and Nonalienated Students

| Group | n | Predictors | | | | | Model Significance | R ² | Corrected R ² |
|---------|-----|------------|------|------|------|-------|-----------------------|----------------|-----------------------------|
| | | Ath | Aca | Soc | Art | Clubs | | | |
| M Al | 106 | | .01* | | .01 | | .001 | .27 | .24 |
| M Nonal | 272 | .01 | .01 | .001 | .01 | | .001 | .26 | .25 |
| F Al | 88 | | | .01 | | | .01 | .28 | .21 |
| F Nonal | 280 | .05 | .001 | | .001 | .001 | .001 | .25 | .24 |

*Significance level of predictor.

$r(176) = .44$, than among the alienated group, $r(202) = .27$. This same difference was present for the Intellectual and School Status correlations, $z = 2.41$, $p \leq .05$. For this variable, a correlation of .44 was produced by the nonalienated group and a value of .22 was present for the alienated students. Only the school-specific self-concept scale produced a significant difference in the correlations produced by alienated and nonalienated small-school upperclass females, $z = 2.20$, $p \leq .05$. The correlation of self-concept and frequency of participation was larger for the nonalienated group, $r(195) = .34$, than for the alienated group, $r(173) = .14$.

As might be expected, alienated and nonalienated groups differed significantly in participation frequency: males, $t(376) = 3.66$, $p \leq .018$ and females, $t(366) = 2.00$, $p \leq .05$. Means for these comparisons were as follows: male nonalienated, 1.19; male alienated, .70; female nonalienated, 1.51; female alienated, 1.21. Because restriction of range would provide an alternative explanation for the correlation results, range and variance of participation frequency were compared for the alienated and nonalienated groups. No differences in range and no significant differences in variance (F_{max}) were observed.

Longitudinal Analyses

Longitudinal correlations - Test-retest and inter-test longitudinal correlations were computed to provide stability data on the measurement instruments and the relationships among instruments. This information is shown in Table 32.

By combining test-retest stability information obtained in this study with additional data provided by Bentler (1972), an indication of the permanence of the adolescent self-concept can be provided. Bentler reported four month test-retest reliability coefficients for the global scale to be in the mid .70s. The one year stability coefficients for the "school-specific" self-concept scale were .64 (female) and .67 (male). The two year test-retest correlation for male students was .39. The one and two year stability coefficients for males were significantly different, $z=2.67, p \leq .01$. Adolescent self-concept would appear to be an extremely flexible personality variable.

Longitudinal prediction of self-concept - The longitudinal relationship between self-concept and school-sponsored activities was investigated by predicting the final self-concept score from the initial self-concept score and intervening participation variables. It was hypothesized that the participation variables would significantly increase the predictive power of a regression equation utilizing only the previous self-concept score as an

Table 32. One-Year Lag Longitudinal Correlations¹

| | 1st SCT | 2nd SCT | 1st A1 | 2nd A1 |
|---------|---------|---------|--------|--------|
| 1st SCT | | .67 | -.31 | -.51 |
| 2nd SCT | .64 | | -.29 | -.29 |
| 1st A1 | -.52 | -.41 | | .59 |
| 2nd A1 | -.43 | -.40 | .65 | |

¹Males are represented above the diagonal, females below

independent variable. This hypothesis was tested using the R-squared improvement procedure. Although this technique is sensitive to the number of predictor variables employed, the number of variables utilized in the present analysis were limited to prevent capitalization upon chance. In addition to the initial self-concept score, two activity variables (academics and athletics for males, fine arts and social for females) were used in the one-year lag regression models. Athletics, academic and social activities were used as the additional predictors in the male, two-year lag model.

Two of the three analyses demonstrated that inclusion of the activity variables produced a significant increase in the amount of present self-concept score variability accounted for. Both the female one year lag, $F(2,111)=5.10, p \leq .01$, and male two-year lag analysis, $F(3,96)=13.33, p \leq .01$, demonstrated significant improvements in R-squared. The male one-year lag analysis did not reach significance.

DISCUSSION

The primary goal of this research was the development and evaluation of a conceptual model explaining the behavior of adolescents within the high school environment. The functional variables within this particular model were: (1) student priorities or perceived pressures within the school, (2) reported frequency of participation within priority activities, (3) student self-concept, and (4) student feelings of alienation from the school. The model, adopted in part from Coleman (1961), contends that students successfully participating in activities valued by peers will have adequate self-concepts and be involved in or influenced by what was happening in the school. Depending upon certain time parameters unspecified by Coleman, the student who was unsuccessful in valued activities was to have either a low self-concept or be alienated from the school's influence.

While a general model of adolescent school-related behavior has been proposed, additional variables may alter the relationships observed among the components of this model. Such variables studied in the course of this research included school size, grade level and sex of student. The classification of students by this scheme has a two-fold purpose. As a goal of lesser importance, the classification of students allows for an investigation of group differences in the variables associated with the model and their

inter-relationships.. School size and sex differences are probably most important in this respect. Of more importance, the utilization of different subject populations allows for a check on the generalizability of the basic model. Although comparisons may indicate that the model works better in some populations than in others, these differences should not be considered failures of the model. Known or observable differences associated with the various populations should explain why the general model appears to be more or less successful within a given population.

Self-Concept

The most basic relationship to be demonstrated in support of the proposed model was probably that between participation frequency and self-concept. Support was demonstrated for the existence of such a relationship. All regression models predicting self-concept scores from the five activity variables were highly significant. In addition, most correlations relating participation in the individual activity areas to self-concept were significant. The magnitude of these correlation coefficients varied greatly, but nine of forty correlations equaled or exceeded a value of .35. In general, the magnitude of these correlations was similar to what comparable relationships are reported in other sources (e.g., Torshen, 1969).

While the relationship between participation and self-concept was demonstrated to be statistically significant, an interpretive problem still exists. This problem involves the direction of causality within the demonstrated relationship. Determination of the direction of effect is important in this study because the model makes specific predictions regarding the manner in which the variables will influence each other. It was implied that what the student accomplished in school-related activities would have a strong impact upon how positively that student evaluated himself. As an alternative to this explanation, students may take personal perceptions of ability into account in selecting activities to participate in. As a final alternative, the relationship between participation and self-concept is probably most realistically conceptualized as an upward or downward spiral. Attempts at participation, when successful, raise the student's evaluation of personal ability and result in greater participation in the future. The student who fails will evaluate personal ability less positively and seek out fewer opportunities to participate in what he has defined as failure situations. Either the alternative hypothesizing the influence of participation upon self-concept or the one positing the interdependence and mutual influence of both variables are acceptable within the framework of the model.

Obviously, the issue of causality can not be resolved here. However, data from this research do allow for some cautious speculation regarding the relationship between student participation and self-concept. If convincing arguments can not be developed in this fashion, the manipulative intervention studies necessary to further investigate the impact of student activities would seem a pointless waste of time and money. In providing a methodology to test the possible impact of participation upon self-concept, this research represents an improvement over that done previously. Past efforts (e.g., Coleman, 1961; Rosenberg, 1965) have ignored possible alternative explanations.

The methodology employed here was an R^2 improvement analysis of the longitudinal data. The R^2 improvement procedure allows a test of the hypothesis that a given variable provides a significant increase in the predictive power of a regression model. The increase in predictive power can be considered unique to a given set of variables and is uncontaminated by other variables in the full model or by possible relationships between these additional variables and the variables of interest. The variables of interest in this case were the participation scores. The variable to be controlled was the student's initial self-concept score. It was predicted that the participation variables would

significantly increase the predictive power of the regression equation utilizing only the first measure of self-concept. Support for this hypothesis would demonstrate a unique relationship between participation and self-concept uncontaminated by previous self-concept or the impact of previous self-concept upon present participation. This hypothesis was supported in two of the three populations tested. The possibility that students adjust their perceptions of self-worth according to their success in school-related activities thus remains a viable hypothesis and would seem deserving of additional research effort.

To this point, little has been made of the distinction between the different areas of student participation. Five types of school-related activities were included in this research. As correlates of self-concept, the diversity of school experience sampled by these five areas probably exceeds that investigated in any previous research. The importance of considering this many dimensions of school experience would appear to be justified by the fact that all five types of activities were significant correlates of self-concept in one population or another. Whether or not one agrees with Coleman's (1961) warning that other types of activities may be detracting from academic pursuits, the possibility that these other activities have serious consequences for potential participants should be considered.

While nearly everyone is aware of the diversity of activities that the school sponsors, not everyone sees many of these activities as part of the student's education. This research argues that both the layman and educator's conception of the school as an agent of change must be broadened to include the impact of nonclassroom activities.

The primary reason for including the different activity areas was not so much to demonstrate that each was a possible correlate of self-concept as to compare the relative strength of each activity area's relationship to self-concept. The proposed model emphasized that activities given higher peer priority should be more strongly related to self-concept than less important activities. This prediction of the model was based upon a "looking-glass" theory of self-concept. As described previously, the "looking-glass" theory argues that the individual uses the standards of others to evaluate his own abilities. Those activities given priority by others should thus be the most important standards for self-evaluation. The crude method used to assess student priorities indicated that three areas, academic, athletic and social activities, should be superior to fine arts and clubs as correlates of self-concept. The regression and correlational procedures employed to test this hypothesis provided confusing results. With the data available, it would seem unjustified to argue for the unique importance of

priority activities. An explanation for this failure is not apparent. While this application of the "looking-glass" theory of self-concept would appear to be intuitively sound, additional research will be required to discover if this approach has empirical justification as an explanation for the hypothesized impact of school-related activities.

To this point, the discussion has proceeded with little consideration of possible population differences in the relationship between self-concept and participation. Because of possible implications for educational policy, school size represents a particularly interesting population variable. A theoretical basis for hypothesizing differences attributable to school size can be found in the work of Barker (1964) and his associates. These individuals argued that students in smaller institutions were under greater pressure to become involved in school activities. It was hypothesized by the present author that one possible consequence of this greater pressure would be more intense self-appraisal associated with the student's school related successes and failures. This would mean that in schools of smaller size, a successful participant would evaluate himself more positively and an unsuccessful participant more negatively than in the larger institution. Information gathered in this study appeared to support such a position. When significantly different, the correlations of activity frequency and self-concept were of a

larger magnitude in the small school groups. The regression analyses also demonstrated a stronger relationship between self-concept and predictors in the smaller institutions. The data provided here not only supports the greater hypothesized impact of activities in smaller schools, but also suggests a possible alternative to Barker (1964) and his associates' mechanical conceptualization explaining student involvement. Barker claimed that the school in some way pressured students to participate in order to produce the critical mass of students necessary to keep each activity operating. It is not clear how this approach would explain the self-concept results presented here. As an alternative, students may be aware of the expectations of their peers and experience these expectations as pressures toward or standards for involvement. Peer expectations need have nothing to do with providing the necessary manpower to keep the activity going. Because of the larger number of students and greater pool of talent available in the larger schools, students in this type of institution should not experience feelings of personal inadequacy for their lack of involvement in a large number and variety of activities. On the other hand, small school students are aware of the level of participation of their peers and may evaluate themselves according to the same standards. Willems' (1967) data demonstrating that small school students perceived greater external pressures toward

participation support this expectancy argument.

The grade level differences in the relationship between activities and self-concept can also be explained on the basis of peer expectations. The best prediction of student self-concept was demonstrated among the older students. It is in these same groups of students that peer expectations would also logically be most demanding. In many activity areas, time is required to gain experience and develop expertise. In athletics, older students are more likely to have developed the necessary size and physical capabilities. Older students are also more likely to hold positions of responsibility and leadership in those activities they participate in. The total of all these factors suggest that the majority of the activities sponsored by the school seem geared to have the greatest impact upon the older student. The unsuccessful student is forced to confront his failures more as an upperclassman than before.

The school size and grade level results demonstrate support for the "looking-glass" theory of self-concept not found in the priority data. Here, peer expectations and self-concept were logically related. When peer expectations were most demanding, as in the small school and upperclass groups, success or failure in the school was most predictive of student self-concept.

Before going on to another component of the model, the present author would like to voice a general criticism of the use of published self-concept scales as dependent measures. At least as self-concept is measured by these instruments, it is inappropriate to consider self-concept as a general personality factor. Multitrait-multimethod evaluations of several measures of self-concept (e.g., Shepard & Glass, 1973) support this criticism. The deficiency inherent in all such scales is that each has been developed from a slightly different perspective and measures slightly different facets of self-evaluation.

Consider one problem in the present research which is very strongly related to the manner in which self-concept was conceptualized. The scale used in this research was constructed from three factored subscales. Each of the subscales was demonstrated to be most strongly related to participation in a logically related activity area. For example, the Intellectual and School Status factor was best predicted by academic accomplishments. The total of the three scales was represented as a general measure of school self-concept. In a similar manner, the total of all subscales was to represent general self-concept. An important issue within the present research was the determination of which of the five activity areas was most strongly related to the way students evaluated their worth

within the school environment. Comparisons of the various predictors of self-concept allowed the researcher to reach a decision regarding this issue, but some degree of skepticism would seem appropriate in considering these results. To what cause should a result demonstrating that academic activities were the single strongest predictor of total school self-concept be attributed? It was previously argued that these results reflected the importance of academic accomplishments within the school. An alternative does exist. There were more items on the self-concept scale related to self appraisal of intellectual ability than any other topic. A similar problem would have existed even if the entire Piers-Harris scale had been employed. This type of information raises serious questions regarding some of the results obtained. Yet, this research is not different from most published work dealing with predicting differences in the self-concept. Others fail to mention similar possible confoundings.

Based upon these criticisms, two suggestions are proposed for future research efforts. (1) If the researcher intends to use existing self-concept instruments, the factor analytically derived subscales would appear to be of more value than the general self-concept score. As has been argued, the general score is undefined while the subscales have a more obvious referrent. (2) Self-concept should be

reconceptualized as an individual's opinion of his ability in a nearly infinite number of areas. Research instruments should be designed to be sensitive to the specific area of self-evaluation in question. Individuals probably do have general opinions of their worth, but this global self-evaluation is based upon a subset of activity areas unique to each individual. A methodology for determining these critical areas of self-evaluation could possibly be developed.

Alienation

Of the variables investigated in this research, the study of student alienation probably provides the information of most immediate interest to educational practitioners and concerned laypeople. Teachers are interested in this topic because most must confront at least a few uninterested and uninvolved students on a day to day basis. Others have become concerned with the alienating environment of American school systems through the popularized works of certain educational critics (Glasser, 1969; Illich, 1971). These authors argue that the typical high school curriculum provides little information of relevance to the student's immediate life situation. Only those students who find personal success in academic competition or who see future goals (e.g., college entrance) as related to scholastic achievement are likely to maintain interest in the academic

portion of school life.

Data from this study demonstrate just how important academic awards (i.e., honor roll, National Honor Society) can be in shaping the student's perception of academic relevance. Frequency of academic activities, perception of the reward value of scholastic activities, and the self-concept subscale related to intellectual ability were among the strongest correlates of alienation. The items on the alienation scale were not intended as measures of academic success, yet they appear to be strongly influenced by it. Because many students lack the aptitude necessary for "honor roll" level performance, the strong relationship between alienation and academic participation presents a serious indictment of secondary education. Ideally, curriculum should be perceived as relevant to the student's present and future concerns regardless of the student's ability.

Obviously, the measure of student alienation turned out to have a narrower scope than had been anticipated. This situation must be stressed in considering the adequacy of the proposed model and some of the observed group differences. For example, the significant sex difference was the opposite of that observed in previous research. White (1968) found females to be significantly more alienated than males and the exact opposite conclusion was drawn from this research. This

discrepancy can be resolved by considering the demonstrated sex differences related to academic achievement and differences in the nature of the alienation scales employed. White used Dean's (1961) measure of alienation. This instrument has a much more global scope and less distinct situational referents than the scale used in this research. The scale used here was strongly biased toward academic topics. The academic activity area produced several sex differences which may explain the alienation results. Females listed a significantly greater number of academic accomplishments and also reported more rewarding academic experiences. With the academic bias present in the alienation scale, it is obvious why females as a group might report being less alienated.

The academic bias of the alienation scale caused difficulty in demonstrating the proposed differences in impact of activities upon alienated and nonalienated students. This problem resulted because the scale provided a situation-specific measure of alienation which was narrower in scope than the areas of school life assessed through the activity variables. The proposed model contended that alienated individuals moved outside the alienating environment in search of a more positive self-evaluation. In the present case, the academically alienated student could possibly find another source of positive self-evaluation

within the school environment (e.g., athletics, social contacts, etc.). This may be the reason the hypothesized R^2 differences in the alienated and nonalienated models relating activities and self-concept did not materialize. However, differences supporting the model were produced when only academic activities were considered. In this case, the scope of the alienation scale was appropriate to the activity used as a correlate of self-concept. Involved students demonstrated a relationship between self-concept and academic activities of a significantly greater magnitude than that observed among alienated students. If this relationship could be generalized to all areas of school experience, greater understanding of the uninvolved high school student would result. Additional research, utilizing a more appropriate measure of alienation (Mackey & Ahlgren, 1975), could test this generalization.

The final topic involving student alienation concerns the significant differences in alienation associated with school size. Small school students were shown to be more alienated. This difference can not be dealt with as easily as that involving sex differences. With sex differences, the academically oriented alienation scores could be related to sex differences in academic accomplishments and the reward value of classwork. However, with school size, small school students were more alienated while listing more academic

accomplishments. Several possible explanations for the difference related to school size can be suggested. The first is consistent with the model of adolescent behavior being advocated here. It has been argued that small school students experience greater pressures toward successful participation in all school activities and that failure consequently forces a more negative self-evaluation. Some support has been presented for this proposition. It was also argued that students forced to continually face negative self-evaluations would become physically or psychologically alienated from the source of the negative evaluation. In this case, greater pressure toward success in the small school may have resulted in greater alienation among those students unable to achieve success. A second proposal, more related to physical properties of the school, is that larger schools are able to offer a broader curriculum and thus provide relevant topics to a greater proportion of students. In ways, these proposals are interrelated. A school, able to provide a large number of vocational as well as traditional course offerings, is more likely to provide some arena for successful performance. When some opportunity for successful performance is available, students are likely to be less alienated.

Other Issues

Barker and Gump's (1964) arguments for ecological pressure were based mainly upon the frequency and diversity of participation in schools of different size. Little attention was paid to the manner in which sex or age differences might interact (except for Willems, 1967) with school size or produce independent effects of interest. Data is here available both to replicate the original results and to provide this additional information.

The effect of school size was nearly the same as observed in earlier research (Baird, 1969; Barker & Gump, 1964). In all five activity areas, small school students participated in a greater number of activities. The exception to the earlier research was in the area of academic accomplishments. Baird (1969) specifically looked at this area and found no size differences. No obvious explanation exists for the different results found in this and the Baird study.

Diversity of student participation gives an indication of the breadth of each student's experience within the school. Small school students appeared to be receiving a greater diversity of experience in addition to their greater involvement within each area. The biased nature of the alienation instrument aside, it is interesting that the average small school student appears to be so much more

involved and yet claims a greater feeling of alienation.

Main effects existed for other variables as well.

Although mundane, sex differences in frequency of participation did support popular stereotypes. Females were successful participants in a larger number of clubs, fine arts, and academic activities. Males participated in more athletic activities. As would be expected from these results, females also demonstrated more diversity in the types of activities they were involved in. When asked to rate the reward value of each of the five activity areas, females rated the three areas in which they were more frequent participants as significantly more rewarding than did the male students. No sex differences were observed in the reward value of athletic or social activities. It is interesting that males were involved in more athletic activities and yet indicated this participation to be no more rewarding than did females.

The other independent variables was grade level. Only the fine arts area did not produce a significant difference in participation frequency. Older students were more involved in academics, clubs and social activities while the younger student was a more likely participant in athletics. As these results would also suggest, older students exhibited a greater diversity of involvement.

One of the more interesting hypotheses relating to participation frequency involves possible interactions of school size and grade level. Probably the best reason for hypothesizing such an interaction comes from what Willems (1967) terms marginality. Developed as a corollary of the ecological pressure theory, marginality referred to the necessity of utilizing students of lesser talents to keep the small school's activities in operation. Lesser talent here refers to a lower aptitude for the activity or to students from lower grades. Only one school size by grade level interaction was present in this data and that interaction (social) was in an area less intuitively subject to the marginality hypothesis than other activities.

The reason for the failure of the marginality hypothesis may be suggested in the significant three-way interactions. A significant three way interaction existed for fine arts, academics and social activities as well as the diversity of participation. In all cases, the interaction appeared to be due to the atypical level of small school underclass males. This group did not appear to follow the general trend of greater small school participation. The small school underclass female results did support the marginality hypothesis.

The younger small school males provided unusual results in other aspects of this study as well. It was this group

whose participation scores failed to predict a larger proportion of self-concept variability than a comparable large school group. These same results were observed in two different populations of subjects. It is possible that the apparent commonalities in these bits of information are coincidental. Yet, a plausible reason why small school underclass males behave in a manner similar to the large school groups might provide added insight into some of the other results of this research.

Implications

The importance of this study lies in both its possible theoretical and practical implications. It represents an attempt to validate a model of adolescent behavior fashioned from the hypotheses of previous authors (Barker & Gump, 1964; Coleman, 1961) and in doing so to provide additional descriptive information of value to those concerned with the adolescent experience.

A model has been established based upon correlational data which should provide hypotheses for other types of future studies. Like other portions of this discussion, the correlational data have been utilized to provide plausible ideas rather than proven causal relationships.

The approach taken here was to conceptualize the schools' impact as being very broad in scope. Many activities, in addition to academics, influence the student's

evaluation of self and school. In Coleman's (1961) opinion, the fact that these other activities were competing with academics for the student's time was unfortunate. Coleman was concerned because his data showed academics to be secondary to athletics and social activities as adolescent priorities. The present data do not show this to be true. In general, academics represented the first priority and was also the strongest and most consistent correlate of adolescent self-concept and school-related alienation. The decision as to whether the schools' emphasis has become too broad can not be made here. This decision rests to a large extent upon one's opinion regarding the role of the school in our society.

School size represented a powerful variable in the present research. Rather than attempting to arrive at a decision regarding the optimal size for high schools, it would seem most profitable to consider the positive and negative aspects of the existing schools. For this discussion, three types of information seem pertinent: breadth of experience, feelings of personal competence, and alienation from the school. The student in the larger institution definitely lacks the breadth of experience of the small school student. It could be argued that the large school student is forced to specialize in order to attain the necessary level of competence for participation. Aside from

not gaining what benefits the other activities have to offer, the specialized nature of large school participation does not reflect a wider variety of student priorities. Specialized participation does not appear to result in specialized interests. Students in large schools were shown to have priorities which were no different or even narrower in scope than those observed in small schools. In other words, if large school students are involved in activities, many must be participating in areas which have little personal importance.

Small school students seem to have a much easier time becoming involved, but feel greater pressure not to fail. Those who do fail seem to evaluate themselves more negatively than comparable large school students. School personnel should be especially cognizant of the pressures on a student who because of ability or other factors is unable to participate in school activities. This study indicates that students in small schools may need special help in dealing with their own feelings of personal worth. All too often, it is the larger school which has the most proficient counseling program. Perhaps special methods could be implemented into the school curriculum to deal with adolescent problems (Glasser, 1969).

Long range products of different educational environments have seldom been investigated. Some (Davis,

1966) argue that the life situation encountered in high school gives the individual a set of experiences (other than scholastic) which may prepare him for future life situations. Those who have successfully weathered the greater small school pressure and have been successfully involved in the greater diversity of activities as a result, may be better prepared to meet new situations. Davis contends that this is the case and presents data to demonstrate that small school students go on to select more ambitious and demanding careers. In opposition to this argument, Baird (1969) claims that the behavior peculiar to the small school student is situation-specific and shows no generalizability to future college extracurricular involvement. The Davis argument is intriguing and future long range developmental studies may need to consider the context of high school experiences, as well as the actual experiences, in attempting to explain later behavior.

REFERENCES

- American Almanac for 1972 - The statistical abstract for the United States. New York: Grosset and Dunlap, 1972.
- Anastasi, A. Psychological tests. (3rd ed.) New York: McMillan, 1968. (3rd ed.) New York: Macmillan, 1968.
- Asch, S. Effects of group pressures upon modification and distortion of judgements. In E. Maccoby, T. Newcomb, and E. Hartley (Eds.), Readings in social psychology. New York: Holt, 1958.
- Astin, A. Differential college effects on the motivation of talented students to obtain the Ph.D. Journal of Educational Psychology, 1963, 54, 63-71. (a)
- Astin, A. Further validation of the environmental assessment technique. Journal of Educational Psychology, 1963, 54, 217-226. (b)
- Baird, L. Big school, small school: A critical examination of the hypothesis. Journal of Educational Psychology, 1969, 60, 253-260.
- Baird, L. The practical utility of measures of college environments. Review of Educational Research, 1974, 44, 307-329.
- Barker, R. The ecological environment. In R. Barker & P. Gump (Eds.), Big school, small school: High school size and student behavior. Stanford, California: Stanford University Press, 1964.
- Barker, R. & Gump, P. Big school, small school: High school size and student behavior. Stanford, California: Stanford University Press, 1964.
- Barr, A. & Goodnight, J. In J. Service (Ed.), A user's guide to the statistical analyses system. Raleigh, North Carolina: Student Supply Store, North Carolina State University, 1972.
- Bauer, N. Differences in personality traits among most preferred and least preferred students in grades 10, 11 and 12. Journal of Educational Research, 1971, 65, 65-70.
- Bealer, R., Willits, F., & Maida, P. The rebellious youth subculture - a myth. Children, 1964, 11, 43-48.

- Bentler, P. The Piers-Harris Children's Self-Concept Scale. In O. Buros (Ed.) The seventh mental measurement yearbook. Highland Park, New Jersey: Gryphon Press, 1972.
- Bowerman, C. & Kinch, J. Changes in family and peer orientation of children between the fourth and tenth grades. Social Forces, 1959, 37, 206-211.
- Brittain, C. Adolescent choices and parent-peer cross pressures. American Sociological Review, 1963, 28, 385-391.
- Brittain, C. A comparison of rural and urban adolescents with respect to parent vs. peer compliance. Adolescence, 1969, 13, 59-68.
- Burbach, H. Empirical study of powerlessness among high school students. High School Journal, 1972, 55, 343-354.
- Burbach, H. A study of committed and uncommitted high school students. High School Journal, 1974, 57, 127-135.
- Byrne, D. An introduction to personality: A research approach. Englewood Cliffs, New Jersey: Prentice-Hall, 1966.
- Cawelti, G. Youth assess the American high school, PTA Magazine, 1968, 62, 16-19.
- Coleman, J. Academic achievement and the structure of competition. Harvard Educational Review, 1959, 29, 330-351.
- Coleman, J. The adolescent society. New York: Free Press, 1961.
- Coleman, J. Adolescents and the schools. New York: Basic Books, 1965.
- Conger, J. Adolescence and youth. New York: Harper and Row, 1973.
- Cooley, C. Human nature and the social order. New York: Scribner's, 1902.
- Costanzo, P. & Shaw, M. Conformity as a function of age level. Child Development, 1966, 37, 967-975.

- Cronbach, L. & Furby, L. How we should measure change - or should we? Psychological Bulletin, 1970, 74, 68-80.
- Crowne, D., Stephens, M., & Kelly, R. The validity and equivalence of tests of self-acceptance. Journal of Psychology, 1961, 51, 101-112.
- Crutchfield, R. Conformity and character. American Psychologist, 1955, 10, 191-198.
- Cusick, P. Inside high school: The student's world. New York: Rinehart and Winston, 1973.
- Davis, J. The campus as a frog pond: An application of the theory of relative deprivation to career decisions of college men. American Journal of Sociology, 1966, 72, 17-31.
- Dean, D. Alienation: Its meaning and measurement. American Sociological Review, 1961, 26, 753-758.
- Diggory, J. Self-evaluation: Concepts and studies. New York: Wiley, 1966.
- Draper, N. & Smith, H. Applied regression analysis. New York: John Wiley and Sons, 1966.
- Elkin, F. & Westley, W. The myth of adolescent culture. American Sociological Review, 1955, 20, 680-684.
- Engel, M. The stability of the self-concept in adolescence. Journal of Abnormal and Social Psychology, 1959, 58, 211-215.
- Erikson, E. Identity: Youth and crisis. New York: Norton, 1968.
- Festinger, L. Behavioral support for opinion change. Public Opinion Quarterly, 1964, 28, 404-417.
- Fitts, W. Manual for Tennessee self-concept scale. Nashville: Counselor Recordings and Tests, 1965.
- Fitts, W. The self concept and behavior: Overview and supplement. Nashville: Counselor Recordings and Tests, 1972.
- Freud, A. Adolescence as a developmental disturbance. In G. Caplan and S. Lebovici (Eds.), Adolescence: Psychosocial perspectives. New York: Basic Books, 1969.

- Glasser, W. Schools without failure. New York: Harper and Row, 1969.
- Gordon, C. The social system of the high school. Glencoe: Free Press, 1957.
- Gordon, R. Issues in multiple regression. American Journal of Sociology, 1968, 73, 592-616.
- Hall, G. The ideal school as based on child study. The Forum, 1901, 32, 24-39.
- Harding, K. A comparative study of Caucasian male high school students who stay in school and those who drop out. Unpublished doctoral dissertation, Michigan State University, 1966.
- Herr, E. Differential perceptions of environmental press by high school students. Personnel and Guidance Journal, 1965, 43, 678-686.
- Herr, E., Knight, H., & Hansen, J. The relation of student's needs to their perception of the high school environment. Journal of Educational Research, 1967, 61, 51-53.
- Hollingshead, A. Elmtown's youth. New York: John Wiley, 1949.
- Illich, I. Deschooling society. New York: Harper & Row, 1971.
- Iscoe, I., Williams, M., & Harvey, J. Modification of children's judgements by a simulated group technique: A normative developmental study. Child Development, 1963, 34, 963-978.
- James, W. Psychology: The briefer course. New York: Holt, 1910.
- Kaiser, H. The varimax criterion for rotation in factor analyses. Psychometrika, 1958, 23, 187-200.
- Kerlinger, F. Foundations of behavioral research (2nd Ed). New York: Holt, Rinehart and Winston, 1973.
- Kiell, N. The universal experience of adolescence. New York: International Universities Press, 1964.

- Kulka, R. Adjustment to high school: $B=f(P,E)$? Paper presented at the meeting of the American Psychological Association, New Orleans, September, 1974.
- Kunkel, R., Thompson, J., & McElhinney, J. School related alienation: Perceptions of secondary school students. Paper presented at the meeting of the American Educational Research Association, New Orleans, February, 1973.
- Lecky, P. Self consistency: A theory of personality. New York: Island Press, 1954.
- Levy, L. Conceptions of personality: Theories and research. New York: Random House, 1970.
- Lewin, K. A dynamic theory of personality. New York: McGraw - Hill, 1935.
- Lewin, K. Field theory and experiments in social psychology: Concepts and methods. American Journal of Sociology, 1939, 44, 868-897.
- Lyell, R. Adolescent and adult self-esteem as related to cultural values. Adolescence, 1973, 8, 85-92.
- Mackey, J. & Ahlgren, A. Dimensions of Adolescent Alienation. paper presented at the meeting of the American Educational Research Association, Chicago, February, 1975.
- Marsland, D. & Perry, M. Variations in adolescent societies. Youth and Society, 1973, 5, 61-83.
- McDill, E., Rigsby, E., & Meyers, L. Sources of educational climates in high schools. Final Report. The Johns Hopkins University, Contract No. OE-3-10-080, U.S. Department of Health, Education and Welfare, 1969.
- Mead, G. Mind, self and society. Chicago: University of Chicago Press, 1934.
- Mischel, W. Personality and adjustment. New York: John Wiley and Sons, 1968.
- Mitchell, J. Dimensionality and differences in the environmental press of high schools. American Educational Research Journal, 1968, 5, 513-530.

- Mitchell, J. The influence of a desirability halo effect on ratings of institutional environment. Journal of Educational Measurement, 1973, 10, 195-203.
- Monge, R. Developmental trends in factors of adolescent self-concept. Developmental Psychology, 1973, 8, 382-393.
- Murray, H. Explorations in personality. New York: Oxford, 1938.
- Parsons, T. Essays in sociological theory. Glencoe, Illinois: Free Press, 1949, 89-102.
- Patel, A. & Gordon, J. Some personal and situational determinants of yielding to influence. Journal of Abnormal and Social Psychology, 1960, 61, 411-418.
- Phelps, H. & Horrocks, J. Factors influencing informal groups of adolescents. Child Development, 1958, 29, 69-86.
- Phillips, R. Student activities and self-concept. Journal of Negro Education, 1969, 38, 32-37.
- Phillips, J. & Schafer, W. Consequences of participation in interscholastic sports. Pacific Sociological Review, 1971, (July), 328-338.
- Piaget, J. The moral judgment of the child. New York: Basic Books, 1954.
- Piers, E. Manual for the Piers-Harris children's self concept scale. Nashville; Counselor Recordings and Tests, 1969.
- Piers, E. & Harris, D. Age and other correlates of self-concept in children. Journal of Educational Psychology, 1964, 55, 91-95.
- Pulvino, C. & Hansen, J. Relevance of needs and press to anxiety, alienation and GPA. Journal of Experimental Education, 1972, 40, 70-75.
- Purkey, W. Self-concept and school achievement. Englewood Cliffs, New Jersey: Prentice Hall, 1970.
- Richards, J. Environments of British Commonwealth Universities. Journal of Educational Psychology, 1974, 66, 572-579.

- Richards, J., Seligman, R., & Jones, P. Faculty and curriculum as measures of college environments. Journal of Educational Psychology, 1970, 61, 324-332.
- Rogers, D. The psychology of adolescence. New York: Appleton, Century, & Crofts, 1962.
- Rosenberg, M. Society and the adolescent self-image. Princeton, New Jersey: Princeton University Press, 1965, 191-205.
- Rosenthal, R. & Jacobson, L. Pygmalion in the classroom: Teacher expectations and pupil's intellectual development. New York: Holt, Rinehart and Winston, 1968.
- Roszak, T. The making of a counter culture: reflections on the technocratic society and its youthful opposition. Garden City, N. Y.: Doubleday, 1969.
- Shepard, L. & Glass, G. A multitrait-multimethod approach to the construct validation of self-acceptance. Paper presented at the meeting of the American Educational Research Association, New Orleans, February, 1973.
- Sherif, M. The psychology of social norms. New York: Harpers, 1936.
- Shrauger, S. & Rosenberg, S. Self-esteem and the effects of success and failure feedback on performance. Journal of Personality, 1970, 38, 407-417.
- Silverman, I. Self-esteem and differential responsiveness to success and failure. Journal of Abnormal and Social Psychology, 1964, 69, 115-119.
- Soares, L. & Soares, A. Tests of self-concept as measures of personality change. Paper presented at the meeting of the American Educational Research Association, New Orleans, February, 1973.
- Spady, W. Status, achievement and motivation in the American high school. School Review, 1971, 79, 379-403.
- Stanwyck, D. Self-concept development: A longitudinal study. (Doctoral dissertation, Purdue University, 1973). (University Microfilms No. 73-15872).

- Stern, G. Congruence and dissonance in the ecology of college students. Student Medicine, 1960, 8, 304-339.
- Stern, G. Continuity and contrast in the transition from high school to college. In N. Brown (Ed.), Orientation to college learning - a reappraisal. Washington: American Council on Education, 1961.
- Stern, G. Characteristics of the intellectual climate in college environments. Harvard Educational Review, 1963, 33, 5.41. (a)
- Stern, G. Scoring instructions and college norms: Activities Index, college characteristics index. Syracuse, New York: Psychological Research Center, 1963. (b)
- Stone, L. & Church, J. Childhood and Adolescence. New York: Random House, 1973.
- Strom, R. Comparison of adolescent and adult behavioral norm properties. Journal of Educational Psychology, 1963, 54, 322-330.
- Taylor, J. A personality scale of manifest anxiety. Journal of Abnormal and Social Psychology, 1953, 48, 285-290.
- Tec, N. Some aspects of high school status and differential involvement with marihuana: A study of suburban teenagers. Adolescence, 1972, 7, 1-28.
- Thibaut, J & Kelley, H. The social Psychology of Groups. New York: John Wiley and Sons, 1959, 222-238.
- Torshen, K. The relation of classroom evaluation to students' self-concept and mental health. Unpublished dissertation, University of Chicago, 1969.
- Wagner, H. The increasing importance of the peer group during adolescence. Adolescence, 1971, 6, 53-58.
- Waller, W. The sociology of teaching. New York: John Wiley, 1932.
- Warner, R. & Hansen, J. The relationship between alienation and other demographic variables among high school students. High School Journal, 1970, 54, 202-210.

- White, M. Alienation and self-esteem as they relate to race, sex, socioeconomic and school variables in urban high school age youth. (Doctoral dissertation, Wayne State University, 1968). (University Microfilms No. 71-19177).
- Wicker, A. Undermanning, performance and students' subjective experiences in behavior settings of large and small high schools. Journal of Personality and Social Psychology, 1968, 10, 255-261.
- Willems, E. Forces toward participation in behavioral settings. In R. Barker and P. Gump (Eds.), Big school, Small school. Stanford: Stanford University Press, 1964.
- Willems, E. Sense of obligation to high school activities as related to school size and marginality of student. Child Development, 1967, 38, 1247-1260.
- Winer, B. Statistical principles in experimental design. New York: McGraw-Hill, 1971.
- Wylie, P. The self-concept. Lincoln, Nebraska: University of Nebraska Press, 1961.

ACKNOWLEDGEMENTS

I would like to thank the members of my doctoral committee, Dr. Don Charles, Dr. Fred Brown, Dr. Wayne Bartz, Dr. Gary Phye, Dr. Thomas Bartsch, and Dr. Anton Netusil, for their help in guiding my doctoral study. Discussions with Dr. Brown and Dr. Bartsch were helpful in planning and carrying out the statistical analyses involved in the dissertation. Any logical flaws in the interpretation of the data are due to my own errors in applying their suggestions. Dr. Bartz has been instrumental in developing the interest that I have in psychological research. Dr. Netusil and Dr. Phye have befriended me and provided encouragement throughout my graduate career.

I would especially like to thank Dr. Charles for his guidance during the eight years of my college education. His encouragement and helpful criticism during the three years required to complete this study have contributed a great deal to the papers and dissertation which resulted.

My wife, Cindy, deserves special thanks. Aside from the continuing encouragement that she provided, the time required to conduct this research and write this dissertation placed an unfair burden on her. I appreciate her sacrifices of time and personal priorities.

Thanks must also go to the many people who participated in this research and provided financial support. The large

scope of this project would not have been possible without support from the Graduate College. I am especially grateful to the administrators and students from the more than forty schools involved in this study. I only hope that the information gained in some way provides them ample compensation.

APPENDIX A:

ALIENATION QUESTIONNAIRE

Instructions. The following questions are intended to measure the importance you attach to your school. Answer the questions by darkening the letter corresponding to the answer which reflects the way you feel.

1. In general, how well do you like your school?
 - a. I like it very much
 - b. I like it
 - c. Neither like nor dislike
 - d. Many days I would like to stay away
 - e. If I could, I would quit
2. During the past school year, did you ever stay away from school just because you didn't want to come?
 - a. No
 - b. Yes, for 1 or 2 days
 - c. Yes, for 3 to 6 days
 - d. Yes, for 7 to 15 days
 - e. Yes, for 16 days or more
3. During the last two years, it seems to me that:
 - a. School is much more directly related to life outside school
 - b. School has little relationship to life outside school
 - c. Much of what I hear in school is contradictory to what I see outside of school
4. If you were to judge the degree to which you are using your ability in school, what rating would you give?
 - a. Above my ability
 - b. Equal to my ability
 - c. Below my ability
5. How much time do you usually spend on school work outside of school each day?
 - a. None at all
 - b. Less than one-half hour
 - c. One hour or more
6. Do you have your school work finished on time?
 - a. Always
 - b. Usually
 - c. Sometimes
 - d. Seldom
 - e. Never

7. Concerning the things I do as school work:
 - a. I think almost all of the school work I do is valuable
 - b. I think about $3/4$ of the school work I do is valuable
 - c. I think about $1/2$ of the school work I do is valuable
 - d. I think about $1/4$ of the school work I do is valuable
 - e. Almost none of the work I do is valuable
8. How often do teachers compliment you concerning some phase of your school work?
 - a. Almost every day
 - b. About once a week
 - c. About once a semester
 - d. I don't remember it ever happening
9. As this school enforces regulations so that learning and instruction can occur, I think the enforcement is:
 - a. About right
 - b. Too weak
 - c. Much too weak
 - d. Too strict
 - e. Much too strict
10. If something happened and you had to stop school now, how would you feel?
 - a. Very happy - I'd like to quit
 - b. I wouldn't care one way or another
 - c. I would be disappointed
 - d. I would try hard to continue
 - e. I would do almost anything to continue
11. If I were to list the five or six most important questions I have about my life, and then examined what I am learning in school, I would find that the school is providing me with help in examining possible answers to?
 - a. Most of the important questions in my life
 - b. About half of my important questions
 - c. One or two of my important questions
 - d. No important questions
 - e. School experiences prevent me from seeking solutions to important questions

12. In general, are you satisfied or dissatisfied with the way you are treated by teachers and other school officials?
 - a. Very well satisfied
 - b. Satisfied
 - c. Neither satisfied nor dissatisfied
 - d. Dissatisfied
 - e. Very much dissatisfied

13. If I were to list the five or six most important problems that this community faces and then looked at what I am learning at school, I would find that school is helping me to examine possible approaches to:
 - a. Most of the important problems in this community
 - b. About half of the important problems
 - c. One or two of the important problems
 - d. School experience ignores the communities problems

APPENDIX B:

PARTICIPATION QUESTIONNAIRE

Number the following activities in the order of their importance for you. 1=most important, 5=least important (Use each number only once)

- ___ academic - school work
- ___ social - dates, dances, etc.
- ___ athletics - varsity and junior varsity
- ___ music, art, drama - band, orchestra, plays, etc.
- ___ hobby clubs - science club, FFA, pep club, etc.

Rate the following as to how valuable or rewarding they have been to you. Circle your choice.

| | Not Rewarding | | Seldom Rewarding | | Sometimes Rewarding | | Always Rewarding |
|----------------------|------------------|---|---------------------|---|------------------------|---|---------------------|
| Academic | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Social | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Athletics | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Music, Art, Drama | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Hobby Clubs | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

From the list below, check any activity which you have participated in during the past year. Try to be as accurate as possible. Indicate only activities which your school sponsors as an outside of class activity (for example - what you do in physical education class is not to be listed under athletics). Indicate things we have missed in the spaces provided.

Athletics () basketball () baseball () golf () football
() cross country () wrestling () track () tennis
others_____

Academic () honor roll (how many quarters)
() National Honor Society
others_____

Social () regular dating (at least once every two weeks)
() student council () class officer
() homecoming royalty
others_____

Music, Art, Drama () class play () band () chorus
() solo or small group () speech contest
() debate
others_____

Clubs

☐ foreign language club ☐ FTA ☐ FFA
☐ yearbook staff ☐ student paper ☐ math club
☐ science club ☐ art club
☐ letterman's (woman's) club ☐ pep club
others_____