SOCIAL INTERACTION PATTERNS AND OCCUPATIONAL ASPIRATIONS OF SELECTED HIGH SCHOOL STUDENTS

Thesis for the Degree of Ph. D.

MICHIGAN STATE UNIVERSITY

Paul R. Messier

1961

This is to certify that the

thesis entitled

SOCIAL INTERACTION PATTERNS AND OCCUPATIONAL ASPIRATIONS OF SELECTED HIGH SCHOOL STUDENTS

presented by

Paul Raymond Messier

has been accepted towards fulfillment
of the requirements for

Ph. D. degree in Education

Major professor

Date August 10, 1965

O-169

ABSTRACT

SOCIAL INTERACTION PATTERNS AND OCCUPATIONAL ASPIRATIONS OF SELECTED HIGH SCHOOL STUDENTS

by Paul R. Messier

Purpose of the Study

The purpose of this study was to analyze the relationships between the social interaction patterns of high schools and the occupational aspirations of students of low socioeconomic background. The rationale of the study indicates that the attitudes and aspirations of individuals are influenced by groups that are characterized by personal, affective, social interaction patterns rather than by groups characterized by impersonal, cognitive, social interaction patterns. Research was cited which established that 1) schools have middle class orientations, and 2) the occupational aspirations of students are positively related to their socioeconomic backgrounds. Therefore, students of low socioeconomic background have occupational aspirations that differ from those deemed worthy by the school. The aspirations of these students should be more like those of the school when the schools is characterized by personal, affective, social interaction patterns.

Procedures of the Study

The student involved thirty-four public schools located in twenty-three different states. These schools were selected

on the basis of such factors as pupil-teacher ratio, enrollment per grade, and per pupil expenditure.

The design of the study controlled for two variables: 1) the socioeconomic level of the high school student bodies, and 2) the college aspirations of the students' parents.

Eight social interaction factors were measured in each of the thirty-four high schools. These factors were designed to reveal information related to the social interaction patterns of the high schools. These social interaction patterns were as follows: 1) the degree to which the school's social system served as a source of peer friendships for students, 2) the degree to which the school's social system served as a source of adult friendships, 3) the degree to which students turned to fellow students for assistance in solving problems, 4) how well teachers knew students, 5) the degree to which students turned to people within the school's social system when encountering problems,7) how frequently students socially interacted with staff personnel, and 8) the degree to which teachers relied upon within-the-school contacts when identifying students whom they felt they knew best. A twenty-five per cent sample of the student bodies was used to determine these factors. The total student population was used to determine the socioeconomic level of the student bodies. The occupational aspirations of the junior and senior male students of low socioeconomic background were measured. A total of 36,467 students and 1,994

teachers was used in the study.

Hypothesis of the Study

The main hypothesis of the study was that the occupational aspirations of students having low socioeconomic backgrounds would be influenced in the direction of the middle class orientation of the schools in high schools characterized by personal, affective social interaction patterns. Fifty-five research hypotheses were stated and tested. Tests were made on each of the social interaction factors separately, as well as between schools scoring either high or low on the majority of the factors. Special tests were conducted on teacher-pupil interaction patterns.

Results of the Study

The results indicated that no relationship exists between the social interaction patterns as measured in this study, and the occupational aspirations of junior and senior male students of low socioeconomic background in these thirty-four high schools. The results did reveal that the occupational aspirations of these students were significantly higher in high schools characterized by a high degree of college aspirations for the students among parents, as well as in those schools in which there is a high socioeconomic level of the student body.

SOCIAL INTERACTION PATTERNS AND OCCUPATIONAL ASPIRATIONS OF SELECTED HIGH SCHOOL STUDENTS

By

Paul R. Raymond Messier

A THESIS

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

College of Education

1961

ACKNOWLEDGEMENTS

Special acknowledgement is expressed to Dr. Floyd G. Parker, my major advisor, whose patience and encouragement were of great assistance to me during the study. My sincere gratitude is given to Dr. Archie O. Haller for his helpful suggestions concerning research procedures. Appreciation is also expressed by the writer to Dr. James W. Costar and Dr. Thomas F. Green for their ideas, guidance, and support in the completion of the study. The author is indebted to the administrators, teachers, and students of the thirty-four high schools that participated in the study. Finally, the writer wishes to express sincere appreciation to his wife, Mary Ann, for her assistance and understanding throughout the entire project.

TABLE OF CONTENTS

CHAPTER Page

LIST OF TABLES

CHAPTER I

PROBLEM AND RATIONALE

Introduction

Certain attitudes which individual students possess are determined primarily by parental influences. That is, the individual student acquires the attitudes held by his parents during his early childhood, and these attitudes set the pattern of the student's life orientation. Some of these attitudes impair or limit the student from making the most desirable adjustment to society. Schools must contend with these attitudes if they are to foster the best possible development of individuals within the limits of their mental capacities. Whether or not the schools can alter and redirect the attitudes of their students is the question that was the concern of this study.

Research indicates that attitudes are not changed by the presentation of factual information. Many research findings support the contention that the attitudes of an individual are more likely to change when he socially interacts with a group maintaining different attitudes. This is especially true when the group serves a dynamic function in his life.

It then follows that schools which are characterized by close, friendly relationships and which give evidence of

being dynamic social systems in the lives of their students are more likely to influence the attitudes of their students than schools which are not so characterized.

The attitude used in this study is that of occupational aspirations. These aspirations are primarily determined for the student by parental influences. The nature of these aspirations varies directly with the socioeconomic level of the family; i.e., low socioeconomic families maintain low aspirations. Since the orientation of our public schools is that of the middle socioeconomic class, students of low socioeconomic class origin may be said to have aspirations that differ from those valued by the schools.

With these conditions in mind, this study analyzes eight social interaction factors in thirty-four high schools located in twenty-three different states. These factors are intended to reveal the degree to which teachers and students do or do not work closely together in their general day-to-day school activities. In a sense, they are related to whether or not the school is a dynamic social system in the lives of the students.

After measuring the social interaction patterns, the high schools were classified into what can generally be called dynamic or non-dynamic schools.

The occupational aspirations of the junior and senior, male students of low socioeconomic background were measured in each of the schools. These were then related to the

social interaction patterns of the schools.

It is hypothesized that in high schools in which students and teachers work closely together, the occupational aspirations of the students from low socioeconomic backgrounds may be influenced in the direction of the higher aspirations present in the middle class orientation of the school. Stated otherwise, the schools will influence the occupational aspirations of students from low socioeconomic background in the direction of the higher aspirations of the middle class orientation when the schools are dynamic social systems in the lives of their students.

Definition of the Problem

The public school system has been given a large array of responsibilities by the society which created it. Among these responsibilities is that of developing every individual to the highest degree of his capacity. The fulfillment of this obligation is considered of the utmost importance for the maintenance and improvement of a democratic society.

Because all individuals are not alike, the schools must accept the challenge of providing for these differences. With individuals deficient in physical or mental capabilities, the school exerts much energy in the attainment of its purpose. Some individuals who possess adequate or even superior mental and physical capabilities have no desire to

improve themselves beyond the minimal level. These individuals do not aspire to the same goal as that of the school, which is to achieve. On the other hand, what is esteemed by them may not be considered as valuable by the school. Because their orientation to life is different from that of the mainstream of the culture, and that of the school, their energies may be inappropriately directed.

The schools are committed to the same goal of the best possible development with respect to all of their students. Schools have experienced difficulty in dealing with individuals who have differing orientations. Although these individuals have been the focus of much concern among educators, the schools have frequently been inept in dealing with them. It is this concern which undergirds the object of this study.

The sources of the differences in the attitudes, values, goals, aspirations, and desires of individuals have been identified in numerous studies. The social institution of the family has received considerable study, and its role in value development has been clarified.[1]

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[1]A. L. Baldwin, "Socialization and the Parent-Child Relationship," Child Development, 19 (September, 1948), 127-136; Daniel R. Miller and Guy E. Swanson, The Changing American Parent. (New York: John Wiley & Sons, 1958); and Salomon Rettig and Benjamin Pasamanick, "Moral Value Structure and Social Class," Sociometry, 24 (March, 1961), 21-35.

The general level of aspirations of students can be decidedly influenced by the demands of parents.[2] Dynes noted a relationship between family experiences and occupational aspirations.[3] With students of the same mental ability and achievement, Young found that plans to attend college were determined by parental factors.[4] Parental orientations have been shown to be influential in the educational and occupational aspirations of students.[5]

Differences in orientation have been shown to be related to race and ethnicity. Strodtbeck concluded that there are ethnic differences in values related to achievement.[6]

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[2]Kurt Lewin, A Dynamic Theory of Personality (New York: McGraw-Hill, 1935), p. 100.

[3]R. R. Dynes, A. C. Clarke and S. Dinitz, "Levels of Occupational Aspiration: Some aspects of family experience as a variable," American Sociological Review, 21 (April, 1956), 212-215.

[4]Donald D. Young, "Parental Influence Upon Decisions of Scholastically Talented Youth Concerning Higher Education" (unpublished Doctor's thesis, The University of Wisconsin, 1959).

[5]David J. Bordua, "Educational Aspirations and Parental Stress on College," Social Forces, 38 (May, 1960), 262-269; and J. A. Kahl, "Educational and Occupational Aspirations of 'Common Man' Boys," Harvard Educational Review, 23 (Summer, 1953), 186-203.

[6]Fred L. Strodtbeck, "Family Interaction, Values and Achievements," Talent and Society, David C. McClelland, et al., editors (Princeton, New Jersey: D. Van Nostrand Co., 1958), pp. 135-194.

Differences in educational and occupational aspirations are related to race differences.[7] In another study, both race and ethnicity were found to be related to the general achievement syndrome.[8]

A number of studies have indicated the relationship of aspirations, attitudes, values, and goals to social class status.[9] Empey studied the occupational aspirations of senior high school males of different social classes and found significant differences.[10] Value differences between social classes were noted in studies by Centers,[11]

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[7]R. C. Holloway and J. V. Berreman, "The Educational and Occupational Aspirations and Plans of Negro and White Male Elementary School Students," Pacific Sociological Review, 2 (Fall, 1959), 56-60.

[8]_____, "Race, Etnicity, and the Achievement Syndrome," American Sociological Review, 24 (February, 1959), 47-60.

[9]L. Reissman, "Level of Aspiration and Social Class," American Sociological Review, 18 (1953), 233-242; William H. Sewell, Archie O. Haller, and Murray A. Straus, "Social Status and Educational and Occupational Aspiration," American Sociological Review, 22 (February, 1957), 67-73; and J. Stubbens, "The Relationship between Level of Vocational Aspiration and Certain Personal Data," Genetic Psychology Monographs, 41 (February, 1950), 327-408.

[10]LaMar T. Empey, "Social Class and Occupational Aspiration: A Comparison of Absolute and Relative Measurement," American Sociological Review, 21 (December, 1956), 703-709.

[11]R. Centers, The Psychology of Social Classes (Princeton, N.J.: Princeton University Press, 1959), pp. 151-159.

Ausubel,[12] and Kohn.[13] In a study by Leshan, the results indicated a difference in immediate and differed goal gratification orientations between social classes.[14] Martin B. Loeb concluded that, "because of the prolonged intimate relationship especially during childhood, each social class develops a pattern of behavior and a value system which differentiates it from the other."[15] The general achievement orientation varies with the social status of individuals.[16]

Rural and urban residence have also been shown to

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[12]David P. Ausubel, Theory and Problems of Adolescent Development (New York: Grune & Stratton, 1954), pp. 327-328.

[13]Melvin L. Kohn, "Social Class and Parental Values," American Journal of Sociology, 64 (January, 1959), 337-351.

[14]L. L. Leshan, "Time Orientation and Social Class," Journal of Abnormal and Social Psychology, 47 (1952), 589-592.

[15]Martin B. Loeb, "Implications of Status Differentiation for Personal and Social Development," The Harvard Educational Review, 23 (No. 3, 1953), 168.

[16]Elizabeth Douvan, "Social Status and Success Strivings," Journal of Abnormal and Social Psychology, 52 (1956), 219-223; B. C. Rosen, "The Achievement Syndrome: A Psychocultural Dimension of Social Stratification," American Sociological Review, 21 (April, 1956), 203-211; and Harry K. Schwarzweller, "Values and Occupational Choice," Social Forces, 39 (December, 1960), 126-135.

be related to the orientation of individuals.[17] That is, rurally reared students have lower occupational and educational aspirations.

Considering educational aspirations and plans to attend college as a separate dimension, many of the same relationships exist.[18] Phillips observed that students with high socioeconomic backgrounds have high educational aspirations.[19] "Rural people in general and farm people in particular place a lower value on higher education than do urban people."[20] Coinciding with this, Mulligan found

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[17]Archie O. Haller and W. H. Sewell, "Farm Residence and Levels of Educational and Occupational Aspiration," American Journal of Sociology, 62 (January, 1957), 407-411; Charles M. Grigg and Russell Middleton, "Community of Orientation and Occupational Aspirations of Ninth Grade Students," Social Forces, 38 (May, 1960), 303-308; Archie O. Haller, "The Influence of Planning to Enter Farming on Plans to Attend College," Rural Sociology, 22 (June, 1957), 137-141; Archie O. Haller, "Research Problems on the Occupational Achievement Levels of Farm-Reared People," Rural Sociology, 23 (Dec., 1958), 357-362; and Archie O. Haller, "Planning to Farm: A Social Psychological Interpretation," Social Forces, 37 (March, 1959), 263-268.

[18]E. Grant Youmans, The Educational Attainment and Future Plans of Kentucky Rural Youths, Kentucky Agricultural Experiment Station, Bulletin No. 664 (Lexington: University of Kentucky, 1959).

[19]Florence L. Phillips, "A Socio-Economic Study of College Women" (Unpublished Doctor's Thesis, Bloomington: Indiana University, 1958).

[20]Everett M. Rogers, Social Change in Rural Society (New York: Appleton-Century-Crofts, Inc., 1960), p. 50.

the farming, semiskilled and unskilled groups under-represented and the white collar group over-represented at Indiana University.[21] In a survey conducted by the National Opinion Research Center fifty-four per cent of the total sample felt college training was needed to get along in the world compared to forty-seven per cent of the farmers indicating this sentiment.[22] Howard W. Beers' study uncovered the same orientation.[23]

Of course, the argument that these differences represent the results of what is sometimes termed "social justice" can be introduced. That is, people of lesser natural ability fall to the lower strata of society and assume simpler tasks. To support this argument, many studies could be cited which indicate significant relationships between intelligence of children and the social and occupational level of their parents.[24] This cannot

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[21]Raymond A. Mulligan, "Socio-Economic Background and College Enrollment," American Sociological Review, (April, 1951), 188-196.

[22]National Opinion Research Center, "Jobs and Occupations: A Popular Evaluation," Class, Status, and Power, Reinhard Bendix and Seymour M. Lipset, editors (Glencoe, Ill.: The Free Press, 1953), p. 42.

[23]Howard W. Beers, "Rural-Urban Differences: Some Evidence From Public Opinion Polls," Rural Sociology, 18 (March, 1953), 1-11.

[24]S. B. Sarason, and T. Gladwin, "Psychological and Cultural Problems in Mental Subnormality: A Review of Research," Genetic Psychological Monographs, 57 (Feburary, 1958), 86; and Robert J. Havighurst and Fay H. Breese, "Relation between Ability and Social Status in a Midwestern Community, III. Primary Mental Mental Abilities," Journal of Educational Psychology, 40 (December, 1946), 241-247.

be accepted inasmuch as in many of the studies cited above, the intelligence of the student groups was held constant while the results continued to indicate the basic differences in orientations. Furthermore, what is referred to as intelligence in the above argument is the score obtained on some form of intelligence test. These tests have been shown to favor verbal and symbolic abilities. With this in mind, it is interesting to note that several studies have found the middle class to be more strongly oriented toward verbal and symbolic behavior than the lower class.[25] Even language is a matter of orientation; i.e., the patterning and redefining of a scattered set of possibilities.[26] Kagan, Sontag, Baker and Nelson have demonstrated that changes in achievement, competitive striving and curiosity orientations are correlated with gains in the intelligence quotient.[27] This entire question leads one to a considera-

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[25]Lee Rainwater, "A Study of Personality Differences between Middle and Lower Class Adolescents: The Szondi Test in Culture-personality Research," Genetic Psychological Monographs, 54 (August, 1956), 3-86; and M. C. Templin, "Relation of Speech and Language Development to Intelligence and Socioeconomic Status," Volta Review, 60 (September, 1958), 331-334.

[26]Clark L. Hull, Principles of Behavior (New York: Appleton-Century-Crofts, 1943), p. 397.

[27]J. Kagan, et al., "Personality and I.Q. Change," Journal of Abnormal and Social Psychology, 56 (1958), 261-266.

tion of the perenniel problem of heredity versus environment. This problem is too broad to be covered here. Suffice to say, that the position favoring heredity loses much strength when intelligence is defined as the score obtained on a so-called "intelligence test."

The point of the matter was well stated by Kluckholm as follows:

> From all the studies we have learned much that Americans have been unwilling to admit or discuss in past years. We know that there are great differences between the classes in attitudes toward education and politics, in association memberships, in family life, in occupational interests, and a host of other things. Yet in spite of all the differences observed and recorded, what is remarked is that the behavior and attitudes of some classes are harmoniously in tune with the generalized creed; whereas, those of other classes are off pitch and limited in range. That the value themes themselves might be different is seldom suggested.[28]

It is suggested here that they are both different and off pitch in some cases. Thinking along the same lines, Eells stated that "there are three types of culture in the United States."[29] These three cultures are found in the upper, middle, and lower socioeconomic class levels.

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[28]Clyde Kluckholm, "Dominant and Variant Value Orientations," Personality in Nature, Society and Culture, Clyde Kluckholm, Henry A. Murray, David M. Schneider, editors (New York: Alfred A. Knopf, 1959), p. 355.

[29]Kenneth Eells, et al., Intelligence and Cultural Differences (Chicago, Ill.: University of Chicago Press, 1951), p. 17.

This can all be taken "to indicate that the general socio-economic background of the child is an important factor in his honesty, attitudes, opinions, and knowledge of right and wrong."[30]

In summary, different orientations of individuals have been shown to be related to a number of different social factors. The family influence upon the development of an individual's value orientation is undoubtedly of prime importance.[31]

A second social system or institution, the school, has been the subject of some studies in this area. Although the family has exhibited an almost complete dominance in value development, some aspects of the school have been shown to be related to value orientation changes. The school friendship patterns have been examined with results indicating that to some extent attitudes are affected by such interactions.[32] The general socioeconomic level of the student body, a related variable,

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[30]Hugh Hartshorne, et al., Studies in the Organization of Character (New York: The Macmillan Co., 1930), p. 222.

[31]Ralph F. Berdie, "Why Don't They Go To College," Personnel and Guidance Journal, 31 (March, 1953), 352-356.

[32]Archie O. Haller and C. E. Butterworth, "Peer Influences on Levels of Occupational and Educational Aspiration," Social Forces, 38 (May, 1960), 289-295.

is influential in value development.[33]

What, if any, influence the general social interaction patterns within the school have upon the value orientations of individuals remains to be examined. Can the social system of the school play any part in the value orientation of its students? If so, under what conditions does this occur? Are there certain types of interaction patterns that are more conducive to this than others? Can the school exert an important influence upon individuals so as to better direct their energies? To these questions this study is addressed.

Importance of the Problem

Although this study was specifically concerned with occupational aspirations, the approach may lend itself to implications for other attitudes, values and aspirations. Occupational aspirations are attitudes that are basically given to the individual by the family orientation in which he was nurtured. Many other similar type attitudes, values and aspirations set the life orientation of the individual. The means by which the schools can alter the occupational aspirations of students may also indicate the means by which other important attitudes, values and aspirations of

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[33]Alan B. Wilson, "Residential Segregation of Social Classes and Aspirations of High School Boys," American Sociological Review, 24 (December, 1959), 836-845.

individuals may be changed. The implications of such an approach were found in several important areas.

Learning Theory

> Even before he has an adequate background of appropriate experience, a child may form many intense and lasting attitudes toward races and professions, toward religion and marriage, toward morality and sin. A parent's tone of voice in disapproving of the ragamuffins who live along the railroad track is enough to produce an uncritical attitude in the child who has no basis in his experience for the rational adoption of the parent's point of view. It frequently happens that subsequent experience is fitted into the attitude thus uncritically adopted, not -- as the mental hygienist advocates -- made the basis for the attitudes. In such cases every contact is prejudged, contrary evidence is not admitted, and the attitude which was borrowed second hand is triumphant.[34]

This background conditions the perceptions of an individual, and he responds to reality as he perceives it. If education is the process by which behavior is changed, it must then change perceptions. Means by which changes in the basic affective orientations of individuals can be brought about are vital if education institutions are to accomplish their purpose.

Social Mobility

"In the United States, in particular, the element of social mobility has taken on the character of a central

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[34]Leonard W. Doob, Social Psychology: An Analysis of Human Behavior (New York: Henry Holt and Co., 1952), p. 355.

tenet of the democratic faith. Our history makes this abundantly clear."[35] The underlying assumption is that individuals should be free to attain any position in the strata of society that is commensurate with their ability, worth, and performance. Social mobility is viewed as necessary in order to maintain a viable, dynamic society. It is aligned to the dearly held "freedom of opportunity." With the decreasing opportunities of realizing social mobility by means of property acquisition or by moving up the occupational ladder, the educational pathways have assumed even greater importance.[36] Lipset and Bendix made a similar point in stating:

> Our data show that Americans who have only graduated from high school spend the greater part of their careers in manual occupations,and that persons with at least some higher education spend more time in non-manual occupations.

and also:

> When we compared respondents whose educational attainments were the same, but whose family backgrounds differ, we find that the sons of manual workers most often enter the labor market in manual jobs, while the sons of non-manual workers usually enter the labor market in non-manual jobs. Only college education enables manual workers' sons to enter the labor market in a middle-class occupa-

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[35]Gordon C. Lee, "Government and Education Mobility in a Democracy," The Harvard Educational Review, 23 (no. 3, 1953), 211.

[36]Natalie Rogoff, "Recent Trends in Urban Occupational Mobility," Class Status and Power, Reinhard Bendix and Seymour M. Lipset, editors (Glencoe, Ill.: The Free Press, 1957), pp. 442-454.

tion.[37]

Although the educational systems have been broadened and made more accessible, a large number of talented students do not avail themselves of the educational opportunities. The lack of desire or lack of an appropriate orientation, on the part of the student, to advance in social status has offered a formidable answer to this occurrence.[38] Some have denied this and have asserted that the problem is simply one of financial ability. This position does not satisfactorily explain why students withdraw from free public high schools.[39] In a study of college enrollments, Mulligan stated his conclusions as follows:

> It appears the absence of talented students from the white collar and skilled groups in institutions of higher learning is due, on the whole, to economic factors, but that, in general, the absence of talented students from farming, semi-skilled and unskilled groups in institutions of higher learning is due, on the whole, to cultural factors rather than to purely economic factors.[40]

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[37]Seymour Martin Lipset, and Reinhard Bendix, Social Mobility in Industrial Society (Berkeley, Calif.: University of California Press, 1960), p. 197.

[38]Hyman, loc. cit.

[39]Joseph C. Bledsoe, "An Investigation of Six Correlates of Student Withdrawal from High School," Journal of Educational Research, 53 (September, 1959), 3-6.

[40]Mulligan, loc. cit.

These cultural factors are important and as noted above are related to socio-economic class and are nurtured in the family system. As these orientations are passed on from generation to generation the stratificatien of society solidifies or, conversely, social mobility stagnates. To break this cycle is conducive to continued social mobility.

Societal Talent

In order for a society to fulfill its highest potential, the highest development of all capable individuals is sine qua non. Yet, hundreds of thousands of talented and sometimes brilliant youngsters in the United States not only lack the means to go to college but do not even aspire to go. Sociologists sometimes refer to these youngsters as the "culturally deprived." They are usually Negroes, Puerto Ricans, and poor whites who do not know that they are bright. Others are slum and farm youths ignored by colleges because they go unacceptable schools. "Of the nation's 26,500 high schools, a mere 5,000 produce 82% of all college students."[41] Harvard College's Dean John Munro states: "In a 'rich and fat' country, we just cannot sit cheerfully any more and watch good young minds by the thousands shrivel away."[42]

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[41]"Wasted Talent," Time, 86 (November 21, 1960), 53.

[42]Ibid.

The nation's shameful waste of talent is no exaggeration. About 20% of those in the upper quarter of their class do not stay on through high school; about half of the top 10% of high school seniors do not go to college; 40% of all college students fail to graduate. In sum: each year 400,000 talented U. S. youngsters quit school and college.[43] The key to the waste is environment according to Dean Horace Mann Bond of Atlanta University, who compared opposite ends of the social scale and reported:

> "Culturally disadvantaged" families produce only one talented youngster for every 235 from "culturally advantaged" families. In affluent suburbs, 25% of all youngsters score 125 or above on I.Q. tests. In poor neighborhoods, only 6% do so. The reason is partly that I.Q. tests, though aimed at measuring intelligence rather than learning, necessarily reflect "normal" exposure to books, conversation and even material gadgets. Without such riches, the bright slum kid seems to get dumber as he grows older. Schools treat him accordingly. With a dwindling sense of worth, he accepts the verdict and quits schools.[44]

Whether or not the schools are capable of realigning the energies of these able students is not yet known. It is apparent that redirecting these students will require changes in their attitude and value orientations.

Cultural Lag

> The expression "cultural lag" . . . refers to the fact that in modern times material culture has

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[43] Ibid.

[44] Ibid.

> changed far more rapidly than the social setting. Progress in economic, political, and social relationships with our fellow men has lagged behind progress in science and technology . . . . Our institutions have changed far more slowly than our technical equipment.[45]

Also, in what is referred to as the Tandem Theory, the concept has been defined in a slightly different manner.

> Inventions are usually accepted into cultures in two stages. To begin with, people change their day-to-day behavior to accommodate the new device . . . . Then, considerably later on, people change their institutions and belief systems to allow for the invention, and arrange means for controlling its effects in the interest of society. The time between the first and the second stage is known as the cultural lag, a term invented by Ogburn.[46]

Stressed in these definitions is the adjustment to technology. Clearly, as the time between inventions is shortened and the inventions increase in magnitude the problem is aggravated. In relating this to modern times and attitudes, Sherif and Sherif set forth the following statement:

> In spite of all the forces in society that work toward social change, as a general rule the change in attitudes of individuals and groups tends to lag behind the change in actual conditions. Because of what the sociologists call "cultural lag," many prevalent attitudes are highly at variance with existing facts, social or otherwise.[47]

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[45]Harry Elmer Barnes and Oreen M. Ruedi, The American Way of Life: Our Institutional Patterns and Social Problems (Englewood Cliffs, New Jersey: Prentice-Hall Co., Inc., 1942-1950), p. 5.

[46]Stuart Chase, The Proper Study of Mankind (New York: Harper Bros., Inc., 1956), p. 115.

[47]Muzafer Sherif and Carolyn W. Sherif, An Outline of Social Psychology (New York: Harper Bros., 1956), p. 242.

People who have found security with their old attitudes are not willing to give them up readily. In some cases, these are positive attitudes toward certain types of occupations. Some occupations, due to the changing complexion of the labor force, are no longer needed. For example, with the increase of technology and automation, the needs for manual, unskilled, or semi-skilled laborers have decreased; whereas, the needs for technicians, managerial expertness, scientific efficiency, etc., have correspondingly increased.[48] People who are themselves and who in turn orient their children to laboring-type occupations are out-of-tune with reality if the numbers doing so do not reflect the changing complexion of the occupational distribution, but remain proportionate to the labor demands existing prior to the technological improvement. This situation does in fact exist in the United States today.

In relationship to this, Freedman made the observation that,

> In very small populations the division of labor rests largely on age and sex differences . . . . There are not enough age and sex differences to fully represent the numerous functional distinctions that develop in a large population. Specialization based upon attitudes is more important in large population groups.[49]

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[48]"Unemployables," Time, 77 (May 19, 1961), 93-94.

[49]Ronald Freedman, et al., Principles of Sociology (New York: Henry Holt and Co., 1956), pp. 210-211.

The relationship between urbanization and the distribution of occupations was presented by Lipset and Bendix in the following chart:[50]

Type of Community	Type of Occupations	
	Non-manual	Manual
Farm	41%	59%
Rural non-farm and urban to 250,000	53%	47%
Urban over 250,000	65%	35%

The effects of technology and the accompanying urbanization are not only to be found in the realignment of occupations.[51] It has also created a host of new social arrangements requiring the adaption of different values and attitudes. Rural people moving into the urban setting are confronted with societal schemes requiring drastically different approaches. This represents another dimension to cultural lag. Many of these people make inappropriate adjustments or fall into the state of anomie. It is not

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[50]Lipset, op. cit., p. 205 (A complete breakdown of occupations is also given; e.g., professional, self-employed, skilled, semi-skilled, unskilled, etc.)

[51]Francis R. Allen, et al., Technology and Social Change (New York: Appleton-Century-Crofts, Inc., 1957).

unrelated to this fact that approximately fifty per cent of the criminals imprisoned in Michigan in 1959-1960 were from the rural south. Here again, what is needed is some known means by which individuals can be reoriented to the demands of society.

Concerned with the same problematical area, Gordon W. Allport wrote:

> Our plea is for an accelerated development of social engineering based on social research, to the end that we may overtake and control the ravages of a rampant and amoral technology.[52]

The purposes placed upon education are not unrelated to this problem. That this problem should be attended to is implicit in Margaret Mead's statement.

> Civilization has long been in an unbalanced state due to the different rates of progress in the social and physical sciences, but now that the atomic age has arrived, the situation is becoming dangerous.[53]

Cross-Cultural Education

Invariably involved in cross cultural education are two different sets of cultural orientations. Many attempts to educate people of a different culture have failed because of an inability to cope with this problem, e.g., education of the American Plains Indians. Frequently, this aspect

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[52]Hornell Hart, "Social Theory and Social Change," Symposium on Sociological Theory, Llewellyn Gross, editor (Evanston, Ill.: Row-Peterson, 1959), p. 768.

[53]Margaret Mead, "Science and Civilization," New York Herald Tribune (June 16, 1946), p. 10.

has been completely overlooked, and programs in foreign cultures have consisted of dissiminating technological improvements, subsequently producing something akin to cultural lag. The United States has been engaged in a number of such programs of technical assistance with the view in mind of developing democratic nations. The results of these endeavors do not indicate that basic changes in the orientations of the people occur. In fact, the technological skills have been used to establish social and political arrangements that do not resemble a democracy. These problems indicate the need to understand the means by which value orientation changes occur. Following the study of an underdeveloped community in Italy, Banfield stated:

> In some underdeveloped lands, economic development can take place only when bonds of custom and tradition which prevent the individual from acting rationally in his self-interest are loosened or broken.[54]

For example, certain types of orientations are prerequisite to the articulation of a community development program. An orientation toward deferred goal gratification is needed rather than one aimed at obtaining short-run material advantage.[55]

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[54]Edward C. Banfield, The Moral Basis of a Backward Society (Glencoe, Ill.: The Free Press, 1958), p. 166.

[55]Ibid.

> It is one thing to engineer consent by the techniques of mass manipulation; to change a people's fundamental view of the world is quite a different thing, perhaps especially if the change is in the direction of a more complicated and demanding morality.[56]

Juvenile Delinquency

One viewpoint sees the delinquent subculture as arising out of the socially structured gap between the aspirations of lower-class boys and the means realistically available to them to realize these aspirations. According to this view, lower class socialization does not equip boys to perform according to the requirements of middle-class dominated institutions such as the school, and, consequently, the boys suffer "status deprivation" and low self-esteem. The presence of large numbers of such boys in "effective interaction" in urban areas leads to the generation of a set of group-held values which serve simultaneously to recoup the loss of self-esteem and to insulate the boys from further "status punishment." The delinquent subculture values precisely what middle-class institutions devalue; e.g., "hanging around" instead of industriousness; agressiveness instead of self-control.[57]

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[56] Ibid., p. 165.

[57] David J. Bordua, "Sociological Theories and Their Implications for Juvenile Delinquency," Juvenile Delinquency: Facts and Facets (Washington: U. S. Government Printing Office, 1960).

Similarly, Cohen advances the theory that juvenile delinquency sometimes takes the form of a subculture based upon the norms of the larger culture in reverse - what is "bad" in the major culture being "good" in the subculture. Although in this way members of the subculture derive satisfaction and status which might otherwise be denied them, they are ill-equipped to meet society's demands.[58]

In a very real sense, this is a form of inappropriate orientation which is related to the socio-economic status of the family.[59] Delinquents have been shown to have a present-time orientation rather than one of deferred goal gratification.[60] The relationship between this and the problems of community development and educational aspirations cited above is apparent. Related to this are students termed "alienated" by Havighurst and Stiles.

> Some 15 per cent of young people do not grow up in a satisfactory way . . . the "alienated" is an appropriate name for this group, because it expresses the fact that they are somehow alien to the larger society in which they live. Such youth have been unsuccessful in meeting the standards set by the society for them -- standards of behavior, of learning in school, of performance on

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[58]Albert K. Cohen, Delinquent Boys: The Culture of the Gang (Glencoe, Ill.: The Free Press, 1955).

[59]L. Burchinal, et al., "Children's Personality Adjustment and the Socio-Economic Status of Their Families," Journal of Genetic Psychology, 92 (June, 1958), 157.

[60]Robert J. Barndt, "Time Orientation in Delinquents," (unpublished Master's thesis, Michigan State University, East Lansing, 1953).

> a job. By the time they reach adolescence these boys and girls are visible as the misfits in school. Either they are hostile and unruly, or passive and apathetic. They have quit learning and have dropped out of school psychologically two or three years before they can drop out physically.
>
> It should be emphasized that alienated youth can be found in all IQ ranges and from middle and upper class homes, although the percentages are higher in the 75-90 IQ bracket and among groups which are culturally disadvantaged. Any child who lacks recognition at home or in the school, or who is emotionally insecure, can become alienated.
>
> Within this alienated group are found the majority of juvenile delinquents. Among the girls of this group are found the majority of 16 and 17 year old brides.
>
> The 15 per cent about whom we speak are found in a community which has a normal cross-section of American youth. But in the slum area of a big city the proportion may be doubled. As many as 30 or 40 per cent of the eighth or ninth graders in some of our city schools are alienated youth.[61]

Again, we find a relationship between this problem and that brought by urbanization described above.

Frequently proposed is the concept that these malaligned orientations of youth are due to a basic conflict between adolescent and adult values.[62] Adolescent gangs are an outgrowth of conflict between adolescent boys and adult society rather than a phenomenon of low socioeconomic status, according to Bloch and

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[61]Robert J. Havighurst and Lindley J. Stiles, "National Policy for Alienated Youth," Phi Delta Kappan, 42 (April, 1961), 283-291.

[62]Paul H. Mussen and Mary C. Jones, "Self-conceptions, Motivations, and Interpersonal Attitudes of Late and Early-maturing Boys," Child Development, 28 (June, 1957), 243-256; and Ausubel, op. cit., p. 336.

Niederhoffer.[63] The conflict between youth and adult arises in reaction to the prevailing culture's inability to let growing youth plan an adult part in family life, gainful employment, and sexual behavior.

An isolation between adults and adolescents is perceived which is dysfunctional to the society. This gap is described by Coleman as it appears in the modern American high school.[64] He found that the high school has become the center of the adolescent culture in its informal system. This system is social in nature and contributes strongly to the norms of behavior. The adolescent seeks status through these norms.[65] The formal system is still directed toward academic tasks and learning. Its norms are frequently in conflict with those of the informal group. Individual behavior which contributes to the "school" is given great prestige in the informal structure, e.g., athletic achievement. Individual achievement which is solely for the individual is rewarded by the formal system. Investigating the consequences of this conflict for the high school system, Coleman indicated that a possible effect of the

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[63]Herbert A. Bloch and Arthur Niederhoffer, The Gang: A Study in Adolescent Behavior (New York: Philosophical Library, 1958).

[64]James S. Coleman, "The Competition for Adolescent Energies, Phi Delta Kappan, 52 (March, 1961), 231-236.

[65]C. Wayne Gordon, The Social System of the High School: A Study in the Sociology of Adolescence (Glencoe, Ill.,: The Free Press, 1957.

student value system on education is the removal of highly intelligent students from an academic-achievement orientation to one that holds greater prestige among peers.[66] He contended that there may be need for restructuring educational programs in order that academic achievement can enjoy a status among students comparable to that of football, cheerleading, and other school-sponsored activities.

In essence, the problem is to incorporate the adolescent social life into the school and have it contribute to the goals of the institution, i.e., learning. Close social interaction between students and staff appears necessary if this is to occur. Newcomb makes the observation that,

> Individual hostility is most likely to be reduced when institutionalized barriers to communication with members of the group are crossed, with the shared support of members of one's own group.[67]

also

> The likelihood that a persistently hostile attitude will develop varies with the degree to which the perceived interpersonal relationship remains autistic -- its privacy maintained by some sort of barriers to communication.[68]

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[66]James C. Coleman, "The Adolescent Subculture and Academic Achievement," American Journal of Sociology, 65 (January, 1960), 337-347. (Note the relationship with the problems cited under "Cultural Lag" cited above).

[67]Theodore M. Newcomb, "Autistic Hostility and Social Reality," Human Relations, 1 (June, 1947), 81.

[68]Ibid., p. 69.

The need for research in this area has been recognized.[69] The juvenile delinquent, the "alienated," the adult-adolescent conflict revolves around problems of value and attitudinal orientations.

Educational Administration

Administration can be defined as the process of maintaining and enhancing a social system. Enhancing refers to the improved articulation of the social system's components toward the attainment of its purposes. The educational administrator is responsible for the social system of the school. The educational administrator is concerned with the grouping of students and teachers, their interactions and their effects upon the goal attainment of the school.[70] The educational administrator, through organizing the lines of communication, the decision-making process, and ways in which teachers and students are grouped, can guide the kinds of social interactions that develop. To do this on a rational basis, an understanding of the outcomes of various social interaction patterns is mandatory. Barriers to communication and informal subgroups that are dysfunctional to the social system must

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[69]Wilbur B. Brookover and Gottlieb, "Sociology of Education," Review of Educational Research, 31 (February, 1961), 38-56.

[70]Daniel E. Griffiths, Administrative Theory (New York: Appleton-Century-Crofts, Inc., 1959), p. 74.

be understood as well as the means by which they can be corrected.

Many such dysfunctional aspects have been discussed above. Whether or not the schools are to cope with the problems of the misdirected energies of adolescents and the many other problems of value and attitudinal orientations will, in large part, depend upon the social engineering abilities of the educational administrators. This ability will rely heavily upon an understanding of social interaction patterns and their implications.

In an analysis of the student social system in high schools, it was found that the formal system was at variance with the informal system. This observable problem is discussed in Griffiths' administrative theory,

> If the formal and informal organization approach congruency, then the total organization will approach maximum achievement. By "approaching congruency" is meant that the formal and informal organizations must perceive the task of the organization as being the same for both, and both must behave in much the same way to carry out the task. In all probability congruency could never be attained; in fact, it would be undesirable if it ever were attained since there would then exist a state of balance in which there would be no progress.[71]

Griffiths stresses the implications of the decision-making process upon the congruency or lack of congruence between the formal and informal systems. Viewing this problem from the individual's point of reference, Argyris

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[71] Ibid., p. 90.

and Bakke's concept of role-fusion is pertinent.[72]

> Since the individual lives to fulfill his needs and achieve his goals and cannot do this without the organization, and the organization exists to fulfill its needs and achieve its goals, a fusion of the two (individual and organization) is necessary.[73]

The fusion process is said to occur when the individual obtains the highest expression of his personality that is possible, and, simultaneously, the organization has its demands fulfilled at the highest possible level. When the individual finds his highest personality expression in the informal system and this informal system orients the energies of the individual in a way that is dysfunctional to the purposes of organization, the need for administrative expertness is apparent.

This problem and many other administrative problems are fraught with social interaction implications. A number of other implications will be discussed below.

Rationale of the Study

Culture is the pattern of learned behavior and the products of behavior shared by the members of a society and transmitted among them over a period of time.[74] These

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[72] Ibid., p. 56.

[73] Ibid., pp. 56-57.

[74] John F. Cuber, Sociology (New York: Appleton-Century-Crofts, 1959), pp. 60-67.

cultural patterns are acquired by socially interacting with other members of the society. Cultural patterns can be acquired through the close observation of roles that the individual will be required to perform at some later time, e.g., son observes father's role.[75] Ferals and isolates offer evidence that personality and culture are learned through interaction with the social patterns. It cannot be acquired without human contact.

> Indeed, culture seems to be internalized largely through assumption of roles in group living, or through covert internal rehearsal of observed roles in anticipation of enacting them overtly sometime in the future.[76]

Allen concluded that,

> There emerges a conception of personality as an internal organization of attitudes and roles, in dynamic equilibrium, structured by repeated gratification of organic and psycho-social needs, through social interaction largely culturally patterned. The roles which seem to leave the deepest imprint are these which, of the many tried, have been found satisfying or necessary to the social interaction in which one must participate, particularly those roles with which one has become most deeply ego-involved. These roles may have emerged from trial-and-error or they may have been adopted by way of one's identification with an admired other.[77]

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[75]Arnold W. Green, Sociology (New York: McGraw-Hill, 1952), p. 165.

[76]Philip J. Allen, "Childhood Background of Success in a Profession," American Sociological Review, 20 (April, 1955), 189.

[77]Ibid., p. 190.

> In looking at personality and character development as it is affected by the social class, all the general principles of culture and personality are pertinent. This means that in growing up, a child learns particular ways of satisfying needs and drives.[78]

Different social classes evaluate behaviors and orientations differently as more or less desirable.[79] In the basic socialization of the child, the membership group exerts a strong influence on the orientation of the individual. In role theory, we find that the most dynamic or need-satisfying groups influence the individual's perceptions. In reference group theory, the same relative influences as noted in role theory are found. Kelly states,

> The term "reference group" has been used in at least two different ways; we can utilize the convenient distinction of the comparative reference group and the normative reference group. To use a group of people as a comparative reference group is to use it as a frame of reference within which to make some judgment. To use a group as a normative reference group, on the other hand, is to take over its norms, to emulate its members. Applying the latter meaning specifically to social mobility, reference group theory suggests that the potentially upward mobile usually reveals anticipatory socialization, that is, they absorb the norms and behavior traits of higher strata long before they have actually changed their social position.[80]

With respect to this, Merton and Rossi noted that,

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[78]Loeb, loc. cit.

[79]Ibid.

[80]H. H. Kelly, "Two Functions of Reference Groups," Readings in Social Psychology, Guy E. Swanson, et al., editors (New York: Henry Holt and Co., 1952), p. 413.

". . . people who 'conform' to norms of groups of which they are not yet members, become 'non-conformists' within their group of origin."[81]

Hyman found that the standards people set for themselves are determined largely by reference groups to which they related themselves.[82] A considerable number of studies and reports have indicated the impact of dynamic and membership groups upon the perceptions, attitudes, values,and judgment of individuals.[83]

In studying the group behavior of boys and girls, Cunningham made the following observation: "Identification, the psychological merging of one's self with another person or group seems to carry with it the acceptance of the goals of the person or group."[84]

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[81]R. K. Merton and Alice S. Rossi, "Contributions to the Theory of Reference Group Behavior," Social Theory and Social Structure, R. K. Merton, editor (Glencoe, Ill.: The Free Press, 1957), p. 264.

[82]Herbert H. Hyman, "The Psychology of Status," Archives of Psychology, 269 (June, 1942), 49.

[83]Solomon E. Asch, "Studies of Independence and Conformity: A Minority of One Against a Unanimous Majority," Psychological Monographs, 70: No. 9, whole No. 416 (1956); Musafer Sherif, "A Study of Some Social Factors in Perceptions," Archives of Psychology, 27 (July, 1935), 5-60; and Solomon E. Asch, "Effects of Group Pressure Upon the Modification and Distortion of Judgments," Readings in Social Psychology, Guy E. Swanson, Theodore M. Newcomb and Eugene L. Hartley, editors (New York: Henry Holt, Co., 1952), p.286.

[84]Ruth Cunningham, et al., Understanding Group Behavior of Boys and Girls (New York: Teachers College; Columbia University, 1951), p. 74.

Sims and Patrick found that the attitudes of individuals changed once in contact with a group possessing strong attitudes which differed.[85] Informal groups have been of use in changing the values of inmates.[86] Konopka describes the effectiveness of group procedures in the treatment and rehabilitation of juvenile delinquents.[87] McCorkle, Alias, and Bixby describe the operation of a rehabilitation center for delinquent boys.[88] At the core of the treatment is a form of group therapy called "guided group interaction" which is designed to: (1) help the boys gain insight into their behavior; (2) to accept responsibility for it, and, (3) to change their attitudes and conduct. Rogers found informal groups to be very important influence in convincing farm people to accept new agricultural practices.[89]

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[85]V. M. Sims and J. R. Patrick, "Attitude Toward the Negro of Northern and Southern College Students," Journal of Social Psychology, 7 (May, 1956), 192-204.

[86]George H. Grosser, "The Role of Informal Inmate Groups in Change of Values," Children, 5 (January-February, 1958), 25-29.

[87]Gisela Konopka, "The Generic and the Specific in Group Work Practice in the Psychiatric Setting," Group Work in the Psychiatric Setting, Harleign B. Trecker, editor (New York: Whiteside Press, 1956), pp. 11-27.

[88]Lloyd W. McCorkle, Albert Elias, and F. Lowell Bixby, The Highfields Story: An Experimental Treatment Project for Youthful Offenders (New York: Henry Holt Co., 1958).

[89]Everett M. Rogers and George M. Beal, "The Importance of Personal Influence in the Adoption of Technological Changes," Social Forces, 36 (May, 1958), 329-335.

> The sentiments and habits of individuals which impede social change are derived from experience and can be modified most effectively by using a group approach to the problem.[90]

Sociological research during World War II established the importance of the primary group in motivating troops in combat situations. A soldier's buddies constituted a very primary group that was based on mutual dependence. Combat veterans in both the Pacific and Mediterranean theaters agreed that the feeling that you shouldn't let the other men down was rated as a major source of support in combat. Officers and enlisted men alike attached little importance to such idealistic motives as patriotism and concern about war aims.[91] Also noted was the fact that enlisted men whose attitudes on various military issues were closer to the attitudes of officers than to those of the average enlisted man, were much more likely to become officers than those who conformed to the enlisted man's scheme of values.[92]

In a study by Kurt Lewin, housewives were urged to serve sweetbreads and other variety meats such as tripe,

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[90]Meyer F. Nimkoff, "Obstacles to Innovation," Technology and Social Change, F. R. Allen, et al., editors (New York: Appleton-Century-Crofts, Inc., 1957), Ch. 4.

[91]Samuel A. Stouffer, et al., The American Soldier: Combat and Its Aftermath (Vol. II of Studies in Social Psychology in World War II, 2 vols. Princeton, New Jersey: Princeton University Press, 1949), p. 136.

[92]Samuel A. Stouffer, et al., The American Soldier: Adjustment During Army Life (Vol. I of Studies in Social Psychology in World War II, 2 vols. Princeton, New Jersey: Princeton University Press, 1949), pp. 259-265.

heart, and kidneys during the meat shortage in World War II. Some housewives were given lectures about sweetbreads, and others participated in group discussion about sweetbreads. In the lecture situation individuals seldom adopted the new meats--only 3% served sweetbreads; whereas, after group discussion 32% of the housewives served the sweetbreads.[93]

Similarly, industrial sociologists have generally found the primary or face-to-face group to be important in determining the productivity of factory workers. In Western Electric Company's Hawthorne Works in Chicago, the man who under-produced or over-produced (a "rate-buster") was ridiculed by his fellow workers. He might be punished by force of group opinion or even by "binging," that is, being hit on the arm muscle.[94]

Group acceptance of an individual entails his acceptance of the group's norms and aspirations.[95]

Levine and Butler compared the lecture method with group discussion in inducing factory supervisors to over-

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[93]Kurt Lewin, "Group Decisions and Social Change," Readings in Social Psychology, Guy E. Swanson, et al., editors (New York: Henry Holt and Co., 1952), pp. 459-473.

[94]F. J. Roethlisberger and Dickson, Management and the Worker (Cambridge, Mass.: Harvard University Press, 1939).

[95]Russell N. Cassel and Randolf G. Saugstad, "Level of Aspiration and Sociometric Distance," Sociometry, 15 August-November, 1952), 319-325.

come their biased performance in the ratings of workers. The lecture group did not change. Group decision was more effective than the lecture in overcoming resistance to change.[96]

Not only are group procedures more effective in influencing the orientations of individuals than are lectures, but certain types of groups are more effective than others.

> A general research finding is that greater group pressures are exerted in more primary groups.[97]

> The role of the primary group has been recognized in bringing about change among individuals. A common research finding is that group discussion is more effective in bringing about change than is the lecture or similar types of communications.[98]

> While lecture and one-way person-to-person communication are obviously more efficient where information is lacking, research findings indicate that group discussion is generally a better method for changing individual's attitudes and behavior.[99]

The type of leadership under which the group operates influences the nature of the group. Bovard studied "group-centered" leadership in which direction stemmed from the group and "leader-centered" in which direction was

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[96]Jacob Levine and John Butler, "Lecture vs. Group Decision in Changing Behavior," Journal of Applied Psychology, 36 (February, 1957), 29-32.

[97]Rogers, op. cit., p. 76.

[98]Ibid., p. 74.

[99]Ibid.

given by the leaders.[100] The "group-centered" leadership fostered member-to-member verbal interaction; whereas, the "leader-centered" curtailed it. His results show that the "group-centered" leadership was superior in its power to alter the perceptions of individuals in the direction of a common group norm than was the "leader-centered" leadership.

> The present experiment suggests that paradoxically enough the group having the widest initial latitude of behavior possible is also the one in which more conformity can be obtained from the individual in those areas where the group demands it. And it suggests that the fundamental process in the creation of such a permissive, yet basically powerful group is verbal interaction among its members.[101]

Not only do "group-centered" units enjoy more freedom due to a stronger normative base, but they also develop stronger positive feeling toward the group and greater communication of feelings among group members.[102]

> Group-centered process results in a significantly higher rating of interpersonal affects than leader-centered process.
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> The factor in group-centered process clearly related to the enhancement of interpersonal affect

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[100]Everett W. Bovard, Jr., "Group Structure and Perceptions," Journal of Abnormal and Social Psychology, 46 (1951), 398-405.

[101]Ibid., p. 404.

[102]Everett W. Bovard, Jr., "Clinical Insights as a Function of Group Process," Journal of Abnormal and Social Psychology, 47 (1952), 534-539.

> ratings is the high level of member-to-member verbal interaction maintained.
>
> While in both group-centered and leader-centered process, the group-as-a-whole is, on the averge, rated higher in affect than individuals comprising the group, this difference is significantly greater for group-centered process.[103]

It was also noted that human relations were improved under the "group-centered" process by correcting the perception the members had of one another.

> A faulty perception of the other implies a defect in taking the other's role. It seems to lead to predictive errors regarding the other's behavior and feelings because the hypotheses on which these predictions are based are erroneous.
>
> The value of verbal interaction, then, is that it corrects erroneous perceptions of the other's feelings and behavior because the derivative hypotheses are constantly subject to check through predictions made from them in the form of behavior. It may be said to correct the permanent drift toward distortion in interpersonal relationships arising from the field in which they occur and from the internal needs of the participants. Conversely, a reduction in the freedom of verbal interaction (such as is obtained in leader-centered process) reduces the likelihood that unrealistic self-other assumptions will be subject to corrective experience.[104]

Groups plan an important role in the orientations of individuals. Certain types of groups lend themselves more readily to a normative interplay than others.

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[103]Everett W. Bovard, Jr., "The Experimental Production of Interpersonal Affect," The Journal of Abnormal and Social Psychology, 46 (October, 1951), 528.

[104]Ibid., pp. 526-257.

> To the extent to which the behavior of members is coordinated with the requirements of its norms, the group possesses a mode of integration which may be called normative.[105]

Sherif and Sherif present a succinct overview of the area as follows:

> When individuals unite to act together in a situation brought about by common motives, interests, or deprivations, or by some turn of events, the interaction tends to produce some sort of new group formation.[106]

In this formation the values, norms, and aspirations of the group emerge. These are required for group membership.

> Men's socialization is revealed mainly in his attitudes formed in relation to the values or norms of his reference group or groups.
>
> His conception of the scope of his world, his standards of living, his aspirations toward wealth, women, and status are well regulated, his goals are set, by prevailing hierarchy of social organization and norms of his group.[107]

Kilpatrick dramatically states how man is intertwined with the group matrix as follows:

> Outwardly he behaves in the fashion upheld by the group culture. Inwardly, he thinks the group thoughts, feels the group values, accepts the group standards, and thus becomes the group-type person. His very self is built on the group model -- and he approves.[108]

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[105] Freedman, op. cit., p. 171.

[106] Sherif and Sherif, op. cit., p. 156.

[107] Ibid., p. 203.

[108] William H. Kilpatrick, "Culture and the Individual," The Social Aspects of Education (Illinois: Interstate Printers and Publishers, Inc., 1951), p. 32.

The evidence indicates that man acquires attitudes in social interaction with groups. Particular types of groups exert greater influence on the individual's orientations than others. These are characterized by a high frequency of verbal interaction, face-to-face relationships, and a dynamic function for the membership. Another characteristic must be noted which follows from the ensuing statement. "There is much documentation for the conclusion that people who have attitudes tend to acquire and retain information in their services." [109]

This implies that factual information in itself need not necessarily alter the opinions and attitudes of an individual.

> If the reality changes are not recognized, no opinion change can be expected; if factual material is presented in such a way that the individual is generally unaffected by it, his attitude will not be affected.
>
> It is important to recognize that the shifts in attitude are dependent upon changes in perception.
>
> It is a fact that much of the material available in the general community that contributes to the structuring of perceptions is not of the "factual" variety.[110]

People tend to reject information that does not agree with their perceptions. Facts which are in agreement with their perceptions are readily accepted.

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[109] Newcomb, op. cit., p. 82.

[110] Eugene L. Hartley and Ruth E. Hartley, Fundamentals of Social Psychology (New York: Alfred A. Knopf., 1955), p. 730.

> A person soon forgets the ideas he has which are not consonant with his predisposition but retains without loss or even with an increment those ideas consonant with his predisposition.[111]

Lewin and Grabe concluded, following a study of attitudes and behavior, that fundamental attitude change (re-education) was dependent on identification with a group.

> It is basic for re-education that this linkage between acceptance of new facts or values and acceptance of certain groups or roles is very intimate and that the second frequently is a prerequisite for the first.[112]

Research on educational films has obtained results which indicate that the predisposition of an audience to accept or reject an attitude or opinion operates to influence the individual's interpretation of the communication.[113]

In sum, this evidence leads to the conclusion that:

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[111]Carl I. Hovland, Arthur A. Lumsdaine, and Fred D. Sheffield, Experiments on Mass Communication (Princeton, New Jersey: Princeton University Press, 1959), pp. 192-193.

[112]Kurt Lewin and P. Grabbe, "Conduct, Knowledge, and Acceptance of New Values," Changing Attitudes and Behavior, Publication No. 3 (Cambridge, Mass.: Research Center for Group Dynamics, Department of Economics and Social Sciences, Massachusetts Institute of Technology, 1945),p. 12.

[113]John P. Kishler, "The Effects of Prestige and Identification Factors on Attitudes Restructuring and Learning from Sound Films," Technical Report SDC 269-7-10, Instructional Film Research Program (Pennsylvania State University, March, 1950); and Alice M. McFarlane, "A Study of the Influence of Educational Geographical Films Upon the Racial Attitudes of a Group of Elementary School Children," British Journal of Educational Psychology, 15 (November, 1945), p. 152-153.

"Attempts at changing attitudes or social prejudices experimentally by the dissemination of information of factual argument have been notably unrewarding."[114]

Consequently, groups in which interaction revolves around the exchange of factual information are unlikely to influence the orientations of individuals. Interactions of this sort can be referred to as cognitive. Interactions in which sentiment or feelings are involved can be referred to as affective.

Typologies have been established which reflect the different interaction patterns of groups. One such typology uses the term primary group for those characterized by face-to-face, affective relationships and secondary group for those characterized by impersonal, cognitive relationships. The concept primary group was first developed by the early American sociologist, Cooley. He regarded the neighborhood, the family, and the children's play group as primary. He chose the term primary for this kind of group (1) because these groups are the first in which a child finds membership, and (2) because of their importance in socialization and the development of personality.[115]

The differences between these types of groups have

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[114]Sherif and Sherif, op. cit., p. 238.

[115]Charles H. Cooley, Social Organization (New York: Scribner and Sons, 1909), pp. 23-24.

been viewed as follows:[116]

PRIMARY GROUPS	SECONDARY GROUPS
1. Personal and intimate relationships among members.	1. Impersonal and aloof relationships among members.
2. Small size.	2. Large size.
3. Much face-to-face communication.	3. Little face-to-face communication.
4. Permanency - members are together over a long period of time.	4. Temporary - members spend relatively little time together.
5. Members are well acquainted and have a strong sense of loyalty or "we-feeling"; a strong amount of group pressure is present.	5. Members are not as well-acquainted and anonymity prevails.
6. Informality is most common; the group usually does not have a name, officers, or a regular meeting place.	6. Formality prevails - group often has a name, officers, and a regular meeting place.
7. Group decisions are more traditional and non-rational.	7. Group decisions are more rational and the emphasis is on efficiency.

Although Rogers identifies a number of characteristics, not all of these are mandatory for the existence of a particular type of group. In brief, some of the given characteristics are more fundamental to the identification of a particular type of group than others. By the same token, a number of the characteristics are interrelated as was indicated in the research cited above. It should also be

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[116]Rogers, op. cit., p. 68.

be noted, that Rogers is mainly concerned with groups in which membership is voluntary.

Becker, in differentiating types of groups, termed them "Sacred" or "Secular."[117] "Sacred is roughly comparable to "Primary," and "Secular" is roughly comparable to "Secondary." Redfield used the terminology of "Folk" and "Urban." In this case, "Folk" is roughly comparable to "primary," and "Urban" is roughly comparable to "Secondary."[118] Although these typologies frequently refer to entire societies, the same dichotomy in types of human interaction is noted.

Williams labels the dichotomy with the terms "Associational" and "Communal."[119] He describes their differences in the following statements:

> The associational society has a large number and variety of specific associations, a loose articulation of the component units of the social structure, and few universally practiced behavioral codes; it gives an important place to law and administrative controls.[120]

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[117]Howard Becker, "Sacred and Secular Societies," Social Forces, 28 (May, 1950), 261-376; and Howard Becker, Through Values to Social Interpretation (Durham, N.C.: Duke University Press, 1950).

[118]Robert Redsfield, Tepotzlan, A Mexican Village (Chicago: University of Chicago Press, 1930); and Robert Redfield, The Folk Culture of Yucatan (Chicago: University of Chicago Press, 1941).

[119]Robin M. Williams, Jr., American Society: A Sociological Interpretation (New York: Alfred A. Knopf, Inc., 1956).

[120]Ibid., p. 451.

> The communal society, in pure type, would show relatively slow social change; few specialized, free-standing associations; rigid co-ordination or integration of subunits; many universally accepted values, goals, and norms of conduct; relative lack of specialized and impersonal mechanisms of social control.[121]

> In so far as relations are associational they are precisely instruments, a means in the pursuit of ends, not the ends themselves.[122]

> Communal relations are likely to stress diffuse attitudes (for example, respect, affection, loyalty, and so on) rather than rationally instrumental actions. Associational relations typically imply separateness of interacting persons; whereas, in communal relations it is presupposed that the participants are linked together by many common activities and values. Closely related to this is the specificity of associational relations: typically they are narrowly and explicitly defined and restricted to a specific interest or life area.[123]

> In associational relations the major emphasis tends to center upon objective rights and overt performance; in communal relations, and the stress moves toward questions of meaning, intent, motives, and feelings.[124]

> Implied in the schematic description given thus far is the tendency to define associational relations as emotionally neutral, or at least to consider the feelings of the participants as formally irrelevant.[125]

An interesting component of these two types of social arrangement is the nature of valuations. "Extrinsic

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[121] Ibid.

[122] Ibid.

[123] Ibid.

[124] Ibid., p. 452.

[125] Ibid.

valuations" are related to the "Associational" type, and "Intrinsic valuations" are characteristic of the "Communal" type.

> Extrinsic valuations are those judgments of value that depend upon generalized social categories and external symbols of status such as sex, age, nationality, occupation, rank, income, wealth, medals, race, authority. Intrinsic valuation has to do with the immediately personal qualities of the individual apart from any categorical social attributes, and its presence is demonstrated wherever one person feels an obligation to treat another person as - in any degree - an end in himself rather than purely as a means.[126]

> Extrinsic valuation focus upon what a person has; intrinsic valuation concerns what the person is qua individual.[127]

Gerdinand Toennies called the dichotomy "Gemeinschaft" and "Gesellschaft."[128] In dealing with societies in general Toennies states that "Gemeinschaft" is a

> . . . social order which - being based upon consensus of wills - rests on harmony and is developed and enobled by folkways, mores and religion.[129]

Gessellschaft is an,

> . . . order which - being based upon a union of

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[126] Ibid., p. 412.

[127] Ibid.

[128] Ferdinand Toennies, Community and Society-Gemeinschaft und Gesellschaft; translated and introduced by Charles P. Loomis (East Lansing, Michigan: Michigan State University Press, 1957).

[129] Ibid., p. 223.

> rational wills - rests on convention and agreement, is safeguarded by political legislation, and finds its ideological justification in public opinion.[130]

The "Gemienschaft" social arrangement is also characterized by other elements. Human relations are treated as ends in themselves. Intimacy and sentiment are expected among the actors. Norms are traditional and clearly understood. The knowledge of individual members is great. Capabilities and personality variations of members are known intimately and accounted for in interactions.[131]

In the "Gesellschaft" arrangement, relations and actors are used instrumentally. MacIver makes a similar observation: "The face-to-face group depends upon the congeniality of the members. The large association puts other requirements first."[132]

The "Gesellschaft" arrangement is also characterized by impersonal and affectively neutral interactions. The actors are not known in their entirety to each other. Norms are rational rather than traditional.[133]

It should be noted that the above dichotomy is conceptualized for the purpose of identifying differences.

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[130] Ibid.

[131] Charles P. Loomis, Social Systems: Essays on their Persistence and Change (Princeton, J.J.: D. Van Nostrand Co., 1960), Essay 2; Charles P. Loomis and J. Allan Beegle, Rural Social Systems (New York: Prentice-Hall Co., Inc., 1950); and Charles P. Loomis and J. Allan Beegle, Rural Sociology (Englewood Cliffs, New Jersey: Prentice Hall, Co., Inc., 1957).

[132] R. M. MacIver, Society (New York: Farrar and Rinehart, 1941).

In actuality, societies and groups may vary along a continuum between the two polar types.

In general, groups possessing certain types of interaction patterns have been more closely identified with the sentiments and orientations of its members. These differences have been expressed in various typologies. Research indicates that groups with affective inter-relationships influence the attitudes of its members. Sherif and Sherif relate this to the changing of attitudes as follows:

> Since attitudes are formed (learned) in relation to objects, persons, groups, or norms (values), it follows that they are not unchangeable.[134]
>
> Groups play a major role in shaping attitudes in man. In fact, it may be safe to assert that that formation and effectiveness of attitudes cannot be accounted for without relating them to their group matrix.[135]
>
> . . . attitudes are not acquired in a social vacuum. Their acquisition is a function of relating oneself to some group or groups, positively or negatively.[136]
>
> The process of attitude change involves the same factors as those in attitude formation.[137]

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[134]Sherif and Sherif, loc. cit.

[135]Ibid., p. 138.

[136]Ibid., p. 154.

[137]Ibid., p. 240.

> . . . the introduction of a standard or reference frame from some "congenial" group (reference group) effects a substantial change in individual judgment.[138]

Adding the power of identifying with the "congenial" group can create changes in previously held attitudes.[139]

One may contend that man "ought" to change his attitudes on the basis of a rational decision. Although this may be the case with some individuals and what will be required of man in the future, in general, this is not the case today. There is the possibility that man can be effectively changed to an orientation which espouses the rational determination of man. This remains to be seen. At present, even mass media rely in very large measure on affective responses in order to attract and to retain their audiences as well as to change attitudes and opinions.[140]

Be that as it may, the nature of social interactions bears upon the probability of an attitudinal change occurring. If the individual's relationship to a group of differing attitudinal orientation is cognitive, there is little likelihood of an attitudinal change ensuing. On

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[138] Ibid.

[139] Ibid.

[140] Gerhart D. Wiebe, "Mass Cummunications," Fundamentals of Social Psychology, Eugene L. Hartley and Ruth E. Hartley, editors (New York: Alfred A. Knopf, 1955), pp. 159-195.

the other hand, should the individual's relationship with the group of differing attitudinal orientation be affective, an attitudinal change is likely to occur. In this situation, the individual must reconcile his attitudes with those of the differing group if his identification with the group is to be secure. Changes of this nature can best be fostered in a group characterized by more personal or primary social interactions. For the purposes of this rationale, groups of this type will be called Integrative, inasmuch as the individual in some fashion is merged with the group and identifies with it. Groups with which the individual is not merged and with which he does not identify will be called Non-Integrative. The differences in the characteristics of the two groups can be listed as follows:

	Integrative		Non-integrative
1.	Gemeinschaft-like	1.	Gesellschaft-like
2.	primary	2.	secondary
3.	affective	3.	cognitive
4.	personal	4.	impersonal
5.	folk-like	5.	urban-like
6.	sacred-like	6.	secular-like
7.	accepting	7.	indifferent
8.	informal	8.	formal
9.	strong identification	9.	weak identification
10.	familistic	10.	contractual

11. sentiment	11. rational
12. intimate	12. aloof
13. communal	13. associational
14. intrinsic valuation	14. extrinsic valuation

Consequently, schools characterized as Integrative will exert a greater influence upon the attitudes of an individual student than schools characterized as Non-Integrative.

The direction of the attitudinal change of students remains to be considered. The above has simple indicated that certain types of social systems are conducive to influencing attitudes: whereas, others are not. As to the direction of the attitudinal change, one must consider the norms of the group with which the individual is socially interacting. In this case, the school or educational system is being considered. The schools and teachers have been traditionally and consistently "middle class" oriented.[141] This connotes a high valuation upon individual success, the acquiring of a respectable social status (prestige), striving to "better" oneself, etc. Concisely, this orientation

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[141]Frederick L. Whitney, "The Social and Economic Background of Teachers Colleges and University Students," Education, 47 (April, 1927), 449-456; John W. Best, "A Study of Certain Selected Factors Underlying the Choice of Teaching as a Profession," Journal of Experimental Education, 17 (September, 1948), 201-259; Willard S. Elsbee, The American Teacher (New York: American Book Co., 1939); Florence Greenhoe, "Community Contacts and Participation of Teachers," (Washington: American Council on Pupil Affairs, 1941); and Robert J. Havighurst and Hilda Taba, Adolescent Character and Personality (New York: John Wiley and Sons, Inc., 1949), p. 56.

places high value on financial and occupational achievement. No attitudinal change can be anticipated in an individual adhering to the same orientation as the social system (school) with which he is interacting. Consequently, attention is centered here upon the students of the "blue collar" or low socioeconomic class orientation. The attitudinal change of such students should be in the direction of middle class orientation of the school.

About the teacher's influence on students' attitudes, little evidence is present.

> Considering the central role which teachers occupy in the socialization process, the limited amount of systematic research regarding their impact on the lives of youth is surprising.[142]

By virtue of their dominant role in the educational system, teachers are in a position of influence once the proper relationships are established. As Jones and Thibaut state:

> By the very nature of the role relationship, normative evaluation and the application of sanctions will play a critical part in the interactions between superiors and subordinates.[143]

The general image of a teacher is that of an aloof and somehow different kind of person. Being a sterotype,

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[142]Elmer Van Egmond, "Socialization Process and Education," Review of Educational Research, 21 (February, 1961), 85.

[143]Edward E. Jones and John W. Thibaut, "Interaction Goals as Bases of Inference in Interpersonal Perception," Person Perception and Interpersonal Behavior, Renato Tagiuri and Luigi Petrullo, editors (Standord, California: Stanford University Press, 1958), p. 168.

it is an exaggerated and preconceived image of a category of people.[144] It is known that an increase in the freedom of verbal interchange increases the likelihood that unrealistic perceptions of others will be subjected to corrective experience.[145] Hence, this barrier is capable of being overcome in the appropriate social milieu.

Some research indicates that teachers frequently function in a manner that is not conducive to the development of close social interrelationships. Flanders, for example, observed that teachers use less than 3% of talking time in praise and encouragement and less than 5% of talking time in reacting to and using ideas initiated by students. He found that 85% to 95% of communications were devoted to intellectual (cognitive) aspects and only 5% to 15% to social-emotional (affective) aspects of the classroom experience.[146]

Other research related to the influence of teachers upon the attitudes of students is contradictory. Merton, Reader, and Kendall found that the faculty communicated the value and attitudes of students is contradictory.

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[144]William Buchanan, "How Others See Us," The Annals, 295 (1954), 1-11

[145]Stanley G. Estes, "Concerning the Therapeutic Relationship in the Dynamics of Cure," Journal of Consulting Psychology, 12 (March-April, 1948), 76-81.

[146]Ned A. Flanders,"Teacher-Pupil Contacts and Mental Hygiene," Journal of Social Issues, 15 (1959), 30-39.

Merton, Reader, and Kendall found that the faculty communicated the values and attitudes of the medical profession to the students in medical schools.[147] It should be added that medical schools are noted for small classes and an intimate relation between staff and students. Sanford, Freeman, and Jacob in separate studies concluded the changes in student attitudes or values were not the result of faculty or curricular influences.[148,149,150] In most cases, they felt that peer influences were more important. Goldsen, although not concerned with either faculty or peer influences specifically, concluded that the general social millieu affects the "academic educational values" of college students.

Certain teaching methods have been more sensitive to the role of the teachers in attitude change than others.

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[147]Robert K. Merton, George G. Reader, and Patricia L. Kendall, The Student Physician (Cambridge, Massachusetts: Harvard University Press, 1957)

[148]Nevitt, Sanford, "Knowledge of Students Through the Social Studies," Spotlight on the College Student (Washington: American Council on Education, 1959), pp. 47-89.

[149]Mervin W. Freedman, "The Passage Through College," Journal of Social Issues, 12 (November, 1956), 13-28.

[150]Philip E. Jacob, Changing Values in College: An Exploratory Study of the Impact of College Teaching (New York: Harper & Bros., 1957).

After reviewing the research on the subject, Birney and McKeachie stated that the goals of student-centered teaching are determined by the group, placed emphasis upon affective and attitudinal changes, and showed attempts to develop group cohesiveness.[151]

Homans sums up this entire topic by stating:

> . . . if the scheme of activities is changed, the scheme of interaction will, in general change, change also, and vice versa.[152]
>
> . . . people who interact frequently with one another tend to like one another.[153]
>
> If the interaction between the members of a group are frequent in the external (formal) system, sentiments of liking will grow up between them, and these sentiments will lead in turn to further interaction over and above the interactions of the external system.[154]
>
> . . . persons who feel sentiments of liking for one another will express those sentiments in activities over and above the activities of the external (formal) system, and these activities may further strengthen the sentiments of liking.[155]

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[151]Robert Birney and Wilbert McKeachie, "The Teaching of Psychology: A Survey of Research Since 1942," Psychological Bulletin, 52 (January, 1952), 51-68.

[152]George C. Homans, The Humar Group (New York: Harcourt, Brace and Co., Ind., 1950), p. 102.

[153]Ibid., p. 111.

[154]Ibid., p. 112.

[155]Ibid., p. 118.

> The more frequently persons interact with one another, the more alike in some respects both their activities and their sentiments tend to become.[156]

Statement of Main Hypothesis

Under the rationale of this study two dichotomous types of social arrangement were discussed. One in which the attitudes and sentiments of the members came into play and could be influenced was termed Integrative. Another in which the interactions were affectively neutral was termed Non-Integrative. It was also remarked that schools and teachers are of a "middle-class" orientation. This study was concerned with students of low socio-economic background and attitudes.

Therefore, the main hypothesis of this study is as follows:

The attitudes of students of low socio-economic background will more nearly approach the middle class orientation in Integrative schools than will the attitudes of students of low socio-economic background in Non-Integrative schools.

This main hypothesis undergirds the specific research hypotheses that is stated under Methodology.

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[156] Ibid., p. 120.

Definition of Terms

Aspiration

An aspiration is a desired future state of affairs. In terms of social position, it is a desired future social status. Social status is closely linked to occupations in our society. Therefore, occupational aspirations are fundamental to desired future social status.

Social Status

Social status is the position of an individual or group relative to others in a society. It is the position, rank standing, or locus of an individual or group in the social scale. Within the limits prescribed by an individual's status in society generally, he may occupy different statuses in different groups and institutions. The assignment of statuses and the definition of their duties and rewards are crystallized in and sanctioned by the culture. Some of the criteria by which status is judged are leadership, dominance, ability, accomplishment, occupation, or other means of recognition designated by title, degree, membership, dress, behavior or other devices for securing attention.[157]

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[157]Henry Pratt Fairchild (ed.), Dictionary of Sociology and Related Sciences (Paterson, J. J.: Littlefield, Adams and Co., 1961), p. 293.

Social Class

Social classes are abstract categories of persons arranged in levels according to the social status they possess. It is a stratum in society composed of groups of individuals of equal standing.

Family background, friendships, moral attitudes, amount and kinds of education, success in occupation, taste in consumption, possession of usable wealth, type of vocation, degree of prestige of one's political, religious, and racial affiliation all contribute to fixing or idenfifying one's social class.

Social Stratification

Social stratification is the arrangement of social classes in order of higher and lower. It need not refer to social classes only. It can refer to the arrangement of various societal elements into groups on different horizontal levels. The ordering of statuses in terms of varying superiority and inferiority can comprise a social stratification.

Social Mobility

Social mobility is the movement of individuals from social group to social group. It is specifically referred to as vertical social mobility when the movement of the individual is up and down through the social classes. This is the meaning most frequently intended in common usage.

It, in fact, comprises a change in social status when being so defined. Lateral social mobility refers to the movement of individuals from position to position within a social class.

Power

Power is the degree to which an individual can influence or control the actions of others. Every social order is a system of power relations with hierarchical super and subordination and regulated competition and cooperation.[158]

High School

For the purposes of this study, the high schools will be limited to those within the public educational systems. High schools are educational institutions which contain either grades ten through twelve or nine through twelve.

Teacher

A teacher is a person employed by an educational institution whose main duties consist of the instruction of students.

Student

A student is a person enrolled in an educational institution for the purpose of learning.

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[158] Ibid., p. 227.

Social Interaction

Social interaction is the reciprocal action which occurs when two or more individuals confront or communicate with one another. The interstimulation and responses of personalities and groups comprise social interaction.

Reference Group

A reference group is a group with which an individual identifies and from his perceptions is vital. It is a group that influences the behavior of an individual.

Norm

A norm specifies what action should be carried out in a given situation.[159] "A norm is a person's idea of what behavior ought to be in given circumstances, and norms can often be realized."[160]

Group Norm

A group norm is accepted or required behavior for a person in a particular situation which is commonly agreed upon by a number of socially interacting individuals.

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[159]Williams, op. cit., p. 380.

[160]Henry W. Riecken and George C. Homans, "Psychological Aspects of Social Structure," Handbook of Social Psychology, Gardner Lindsey, editor (Cambridge, Mass.: Addison-Wesley Publishing Co., Inc., 1956), p. 788.

Social Relation

A given interaction pattern which is repeated often enough to give rise to relatively stable expectancies among the actors is a social relation.[161]

Social System

A social system comprises, "all those social relations or complexes of relations that are clearly guided by culturally stylized rights and obligations shared by the participants."[162]

Deferred Gratification

Deferred gratification is the postponement of short-range rewards in order to secure more long-range rewards and the resulting satisfaction.[163] It is frequently called "deferred goal gratification."

Social Sanction

A social sanction is the sentiment of approval or disapproval which a society places upon various behavioral patterns. It is related to the punishment-reward system of

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[161] Williams, op. cit., p. 380.

[162] Ibid.

[163] Louis Schneider and S. Lysgaard, "The Deferred Gratification Pattern," American Sociological Review, 18 (April, 1953), 142-149.

the society.[164] It is the threat of punishment or the promise of reward set by or for a group upon the conduct of its members.

Belief

A belief is a conviction that something is or the acceptance of any given proposition as true. It establishes a mental condition in the individual which may serve as the basis for voluntary action. The reality of a particular belief may be based on sound factual evidence or upon prejudice, intuition, or misleading appearances. The perceptions of the individual influences the nature of his belief-disbelief system and vice versa. The nature of its derivation does not affect the potency of belief itself.

Values

> Values are thus "things" in which people are interested, things they want, desire to be or become, feel as obligatory, worship, enjoy. Values are modes or organizing conduct-meaningful, affectively invested pattern principles that guide human action.[165]

All values are cultural values by definition.[166]

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[164] Williams, op. cit., p. 380.

[165] Williams, op. cit., p. 375.

[166] Ibid.

> A value is a person's idea of what is desirable, what he or others ought to want, not necessarily what he actually wants.[167]

> Values are hardly every fully attainable.[168]

If gold or a big car are values, it is hard to be too rich or to get too big a car.

> Social values are abstract and often unconscious assumptions of what is right or important.[169]

> Social values, however, are not only shared by a number of individuals but are regarded as matters of collective welfare by an effective consensus of the group.[170]

> Values concern the goals or ends of action and are, as well, components in the selection of adequate means.[171]

Allport distinguishes between two types of values.[172] The "End-Value" refers to the type in which the object, as given, completely satisfies a characteristic need. The need intensity varies and the value object remains constant. In the second type of value, called "Mean-Value," the degree to which the object will satisfy a standard, or constant

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[167]Riecken, lec. cit.

[168]Ibid.

[169]Kimball Young and Raymond W. Mack, Sociology and Social Life (New York: American Book Co., 1959), p. 70.

[170]Williams, lec.cit.

[171]Ibid., p. 376.

[172]Floyd H. Allport, Theories of Perception and the Concept of Structure (New York: John Wiley and Sons, Inc., 1955), pp. 350-351.

need may be partial or incomplete. In this case, the need is held constant and the value objects may be arranged on a satisfaction hierarchy.

Williams' "Qualities of Values" indicates a varying interpretation of the concept from that of Allport. The "Qualities of Values" are as follows:

> (1) They have a conceptual element - they are more than pure sensations, emotions, reflexes, or so-called needs. Values are abstractions drawn from the flux of the individual's immediate experience. (2) They are affectively charged: they represent actual or potential emotional mobilization. (3) Values are not the concrete goals of action, but rather the criteria by which goals are chosen. (4) Values are important, not "trivial" or of slight concern.[173]

Attitudes

An Attitude is an affective orientation to an object.[174]

> Anything people define as real may be the object of an attitude.[175]
>
> Lacking a statement of behavior, this definition implies that an attitude may or may not be acted upon.[176]

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[173]Williams, op. cit., p. 374.

[174]Archie O. Haller, Some Principles of Attitudes and Behavior (East Lansing, Michigan: Michigan State University, 1960) Dittoed, p. 2.

[175]Ibid.

[176]Ibid.

By contrast, the two following definitions imply a "propensity to act" in one direction or another with respect to an object.

> An attitude is an acquired, or learned, and established tendency to react toward or against something or somebody. It is evidence by either approaching or withdrawing types of behavior, and the object of the reaction becomes thereby either a positive or negative value, respectfully, from the subject's viewpoint. An attitude may be social in the sense that it may be characteristic of a homogeneous group of persons.[177]

> An attitude is an abstraction used to refer to an individual's inferred characteristics that account for such consistency in his behavior and expressions as he may manifest, characteristics that are not prescribed by situational imperatives.[178]

Attitudes have four linear parameters: (1) direction, which may be negative or positive, (2) degree, that is, it may be weak or strong, (3) intensity, which refers to the degree of conviction, (4) salience, which refers to its relative importance to the individual.[179] "Social attitudes are group norms acquired by the individual as a function of his identification with the group."[180]

It should be noted that a value differs from an

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[177]Fairchild, op. cit., p. 18.

[178]Clyde W. Hart, "Attitudes and Opinions," Fundamentals of Social Psychology, Eugene L. Hartley and Ruth E. Hartley, editors (New York: Alfred A. Knopf, 1955), p. 683.

[179]Ibid.

[180]Ibid., p. 684.

attitude in that an attitude may be positive or negative; whereas, a value is always positive in the directional sense. Further relationships are brought out in the following statement.

> A cognitive consistent attitude is one which follows logically from the person's view of an event in relation to his goals. More precisely, an attitude is said to be cognitively consistent to the degree that (a) the value on which it must rest are not inherently contradictory, (b) the focal event is clearly perceived in relation to the values, and (c) the valence of the attitude (both direction and strength) is congruent with the individual's perception of the object-goal relationship.[181]

> . . . differential attitudes exist when two or more people invest an object with a different degree or direction of affect, or when an object is uncognized by one or more people but is cognized and invested with affect by one or more others.[182]

Inasmuch as they are of importance to the work that follows, two aspects of "The Behavioral Consequence of Attitudes" must be set forth.

> Principle 1. The Object Behavior Consequences of Differential Attitudes: <u>When persons differ in their attitudes toward an object, their attitudes will be positively correlated with their behavior with respect to the object</u>.[183]

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[181]William A. Scott, "Cognitive Consistency, Response Reinforcement and Attitude Change," <u>Sociometry</u>, 22 (September, 1959), 227.

[182]Haller, <u>op. cit.</u>, p. 3.

[183]<u>Ibid</u>.

> Principle 2. The means Behavior Consequence Differential Attitudes: When persons differ in their attitudes toward an object, their attitudes will be positively correlated with their behavior with respect to objects viewed as means for promoting their desired behavior toward the object of the attitude.[184]

Level of Occupational Aspiration

The level of occupational aspiration is a special type of aspiration. The desired future status, in this case, refers to a position in the occupational prestige hierarchy.

The level of occupational aspiration as an attitude and,

> Like all attitudes, level of occupational aspiration is personal orientation to action with respect to a social object. As an orientation to action, it represents the person's conception of and desire for a future state. The social object is the occupational structure, with particular occupations ranked from highest to lowest in terms of prestige. A person's level of occupational aspiration thus stands for his orientation to action with respect to a point or a limited range of points on the occupational prestige hierarchy.[185]

> Level of occupational aspiration is closely related to the concept goal. A goal may be considered to be a special kind of object toward an object conceived as a goal, but only in the degree to which they are favorable. They are not unfavorable. But the level of occupational aspiration's particular objects are more complex in that they

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[184] Ibid.

[185] Archie O. Haller, "The Occupational Aspiration Scale: Theory, Structure; and Correlates of an Instrument Designed to Measure Differential Levels of Occupational Aspiration" (Unpublished report to the United States Office of Education, Department of Health, Education and Welfare, February 28, 1961), p. 12.

> are alternatives. The particular one chosen may be considered a goal, but the rest of the alternatives are not necessarily viewed even as substitute goals by any one person. He will reject some altogether. Only the particular range to which the person is oriented may be considered to be a goal for him.[186]

Level of occupational aspiration may also be related to the concept value.

> The concept "value" is used in at least two different ways. For one it is sometimes used to indicate that which has positive affect for the person. Since a person's level of occupational aspiration is a desired level, it may be considered to be a value for him in this sense of the term. Level of occupational aspiration is also related to the concept of personal value orientation. In the writers' opinion the value orientation of the person may be considered to be his attitude toward a widely accepted cultural value. A cultural value, in turn, may be considered to be a societally-defined maxim holding that a certain behavior or object is inherently good. Insofar as high occupational prestige levels are cultural values, then a person's level of occupational aspiration may be considered to be his value orientation with respect to the higher levels.[187]

An Overview of the Study

This study was concerned with high schools as social systems and their influence upon the attitudes of their students. It identified a number of social interaction

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[186] Ibid, p. 13.

[187] Ibid., pp. 13-14.

patterns that occur within the schools and related these to one specific attitude of the student. Considerable emphasis was given to social interactions between the staff and student personnel. The interaction patterns were not observed directly in a manner that would produce a sociogram. Rather, information was obtained that reveals the nature of a number of modal patterns of social interaction.

This study was conducted concurrently with a research project being conducted by the College of Education, Michigan State University, under a grant from the United States Office of Education, Department of Health, Education and Welfare (Project 918, Contract SAE 8687). The Project Director was Dr. Karl T. Hereford, Co-Investigators were Dr. Floyd G. Parker and Dr. Donald J. Leu. The author was Assistant Director for the project.

This sponsored research project was mainly concerned with studying the relationships between school building design and the social interaction patterns of student and staff personnel. It was also concerned with certain attitudes of the student and staff personnel and their evaluation of their physical environment.

This area of the sponsored research project and that of the present study were sufficiently related to make the design and procedures suitable to both. The research project related school building design characteristics to social interactions and attitudes; whereas, this study

related social interactions to attitudes.

Summary

This chapter began by presenting a brief introduction to study for the purpose of orienting the reader to the entire study. A definition of the problem was then given with pertinent references. Basically, the problem was whether or not the school can change some of the fundamental attitudes of students, e.g., occupational aspirations. This was followed by a discussion in detail of the importance of the study in a number of areas, e.g., learning theory, social mobility, societal talent, cultural lag, cross cultural education, juvenile delinquency, and educational administration.

The rationale of the study emphasized the role of social interaction in attitude formation and change. It developed a classification of social systems following well known typologies. This classification identified social systems in which social interactions involved the interplay into play.

The general hypothesis of the study was then stated. This was followed by a definition of terms and an overview of the study which described the relationship of this study to a sponsored research project. This classification identified social systems in which social interactions involved the interplay of attitudes and those in which attitudes do not come into play.

CHAPTER II

METHODOLOGY OF THE STUDY

Introduction

This chapter first describes the sampling procedure used in the selection of the high schools used in this study. The relevant characteristics of these schools are given.

The instrumentation used in this study is presented, and the rationale of each instrument is discussed. Correlations between the various instruments are examined.

Two control variables are identified, and the design of the study is developed. The application of the design is made using pertinent statistical data. The dependent variable and the eight independent variables are defined.

The research hypotheses are stated, followed by the statistical procedures that were employed. The chapter concludes with a summary.

Selection of Schools

The school population used in this study consisted of senior high schools. Several junior-senior high school combinations were also incorporated, but only the senior high portions of these schools were used. None of the schools involved was constructed prior to 1950, and the

majority were not constructed prior to 1955. The size of school enrollment was delimited so as to include only those schools that have a minimum of one hundred fifty students per grade.

The sampling procedure reflected the interest of the sponsored research along with which the data for this study were collected. This procedure sought a sampling which lent itself well to the purposes of this study. Interesting design and utilization features which increased the likelihood of obtaining noteworthy differences in social interaction patterns were sought. Efforts were made to obtain a nationwide representation.

State departments of public instruction in all forty-eight continental states of the United States, leading school building architects and noted school building consultants were sent a letter introducing them to the study.* They were requested to submit a list of new and interesting high schools. A form was enclosed for this purpose. The state departments were requested to recommend high schools within their respective states. The architects and consultants made recommendations on a nationwide basis. All forty-eight state departments of public instruction responded.

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*Appendix A presents all the letters and forms referred to in this section.

Two of these indicated they did not feel they could recommend any of the new high schools in their states. A return of approximately eighty per cent was obtained from the architects and consultants.

From a review of pertinent journals (The Overview, Architectural Review, American School Board Journal, The Nation's Schools, American School and University, Architectural Forum) a list of schools receiving awards or citations was compiled.

From these sources, a list of four hundred-one different high schools was obtained. These four hundred-one schools were sent an introductory letter and a questionnaire. The state departments were informed of this contact. An eighty per cent return was obtained, and ninety-four and three tenths per cent of these schools indicated a positive interest in the study.

On the basis of the information that was obtained, many schools were eliminated from further consideration. Eighty-two schools were surveyed by members of the staff of the College of Education, Michigan State University. Verification of information previously obtained and the accumulation of further information were accomplished during these surveys. Additional secondary information was also obtained during the testing phase of the study.

Thirty-four high schools were selected for study on the basis of the accumulated information. Efforts were

made to obtain schools that were comparable on the basis of per pupil expenditure, pupil-teacher ratio, and size of the administrative staff. High schools within a range of community types were sought. The characteristics of these schools and the code number assigned to each school are given in Appendix B.

Delimitations of the Study

The study was limited to public high schools. Although a nationwide sample was sought, a bias favoring the northeast seaboard states is noted. High schools with fewer than one hundred-fifty students per grade were not incorporated. High schools located in suburban-type communities are over-represented in the sample. The study concerned itself with one attitude which is that of level of occupational aspirations. Male senior and junior high school students who had been enrolled in the particular school for a minimum of two years and are of low socioeconomic background were used with respect to this variable.

Eight interaction variables were considered in the study. A twenty-five per cent stratified sample from the student body and the entire teaching staff was used with respect to these variables. The student sample was stratified on the basis of sex and socioeconomic level.

These intereaction variables were not observed directly. It is assumed that the self-reporting procedures

used for this and other information obtained an honest response.

It should be noted that the schools used in this study are above average in socioeconomic level. The national average on the Duncan Socio-Economic Index used in this study is 38. The average socioeconomic level for the students in the schools used in this study was 46.

Instrumentation

Level of Occupational Aspiration

The level of occupational aspiration was measured with the Occupational Aspiration Scale. The scale has been extensively studied and is of proven validity and reliability.[1]

This variable was selected for a number of reasons. Its importance is found in the fact that "The status of the white male in America depends primarily on occupation."[2] Within the rationale above are contained a number of implications for the importance of this dimension. Man's

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[1]Archie O. Haller, "The Occupational Aspiration Scale: Theory, Structure, and Correlates of an Instrument Designed to Measure Differential Levels of Occupational Aspiration" (unpublished report to the United States Office of Education, Department of Health, Education and Welfare, February 28, 1961), p. 134; I. W. Miller, "The Measurement of Level of Occupational Aspiration" (paper presented at the meeting of the Rural Sociological Society, University Park, Pennsylvania, August 26, 1960).

[2]August B. Hollingshead, "Class Difference in Family Stability," The Annals of the American Academy of Social Science, CCLXXII (November, 1950), 39.

status in society depends upon such dimensions. As Homans states,

> . . . in an informal group a man wins status through his direct exchange with the other members, while he gets status in the larger society by inheritance, wealth, occupation, office, legal authority--in every case by his position in some institutional scheme, often one with a long history behind it.[3]

The specific measure of level of occupational aspirations, the Occupational Aspiration Scale, is related to the educational achievement of students and the number of years of formal education they will seek to attain.[4]

Education is a means by which the attainment of occupational status is possible. That is, education can supply the avenue by which a given occupation can be attained. The higher the occupational level desired, the greater is the need for educational achievement. More specifically, a student aspiring to the position of truck driver will view as necessary the limited range of factual information required for the attainment of this occupation; whereas, a student aspiring to the position of chemical engineer will view as pertinent to his purposes a much

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[3]George C. Homans, Social Behavior: Its Elementary Forms (New York: Harcourt, Brace and World, Inc., 1961), p. 379.

[4]Haller, op. cit., Chapter IV.

larger array of factual information. This relationship is stated in theoretical form under the definition of "attitude" above (Principle 2). The implications of this to the educator in the classroom are quite clear. The fundamental motivation to achieve is related to the level of occupational aspirations.[5]

The instrument used to measure occupational aspirations is presented in Appendix C.

> The Occupational Aspiration Scale consists of eight questions, in each of which the subjects is instructed to select any of ten alternative occupations. The eight questions are designed to tap the person's realistic and idealistic levels of aspiration at each of two career periods, initial and mature. In questions referring to realistic levels the subject is instructed to choose the job "I'm sure I can get," while in questions referring to idealistic levels he is instructed to choose "the job I'd prefer if I had my choice." In questions referring to the initial career period the subject is instructed to choose a job for the time "when my schooling is finished," while in questions referring to the mature career period he is instructed to choose a job for the time "when I'm 30 years old." Each question simultaneously taps one level and one career period. This means that four questions exhaust all the possible combinations. This number is doubled by repeating each once, to give the total of eight questions.

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[5]C. A. Miner and R. G. Neel, "The Relationship Between Achievement Motive and Occupational Preference," Journal of Counseling Psychology, 5 (1958), 39-43.

> Eighty appropriate occupations, taken from the National Opinion Research Center study of the prestige of 90 occupations, were distributed among the 8 questions, 10 occupations per question. The highest prestige occupation is in question 1, the second highest is in Question 2. and so on down to the 80th which is in Question 8. Thus the alternatives for each question systematically span the entire range of occupational prestige. On any one question a person scores zero points if he chooses the lowest-ranked occupation, or up to nine points if he chooses the highest-ranked. The highest possible score 72 and the lowest possible score is zero.[6]

It should be noted that the occupations within the possible responses for each of the questions are not in rank order from high to low. They are arranged in the same unranked order in each of the eight questions.

Because the above instrument is based upon the prestige hierarchy of occupations, the international aspects of this dimension deserve mention. It has been found that similar consensus concerning the prestige of occupations exists among samples taken in twelve societies: Great Britain, New Zealand, Germany, Japan, the Soviet Union, The United States, The Netherlands, Australia, Brazil, the philippines , Mexico, and Okinawa.[7]

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[6]Archie O. Haller and C. E. Butterworth, op. cit., p. 292.

[7]Alex Inkeles and Peter Rossi, "National Comparisons of Occupational Prestige," American Journal of Sociology, 61 (1956), 329-339; Ronald Taft, "The Social Gradings of Occupations in Australia," British Journal of Sociology, 4 (1953), 181-187; Bertram Hutchinson, "The Social Gradings of Occupations in Brazil," British Journal of Sociology, 8 (1957), 176-189; Edward A. Tiryakin, "The Prestige Evaluation of Occupations in an Underdeveloped Country: The Philippines," American Journal of Sociology, 63 (1958), 390-399; and F. Van Heek, et al., Sociale Stijging en daling in Nederland, Vol. I (Leyden: H. E. Stanfert Kreese N. V., 1958), pp. 25-26.

Socioeconomic Level

In order to determine the socioeconomic background of the students, information concerning the occupation of the student's father was obtained. The questions used to obtain this information from the students are found under item 5 of the general information questions in the student instruments. (Appendix C) On the basis of the information obtained from these questions, the father's occupation was rated according to the Duncan Socioeconomic Index.[8]

Parent Educational Orientation

Information concerning the educational plans that parents held for children was obtained from self reports of the students. In this way, the students' perceptions of the plans were revealed. The students were asked to respond to the following question:

Do your parents hope you will go to college? Yes___ No___ A double check or a non-response was taken as an indication of indecision.

Social Interaction Variables

Six social interaction variables were measured. These were used as the independent variables in the study.

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[8]Otis Dudley Duncan, "A Socio-Economic Index for All Occupations" (Population and Research Training Center, University of Chicago, 1960) (Dittoed).

All information was obtained from self-reports of the students.

Sources of Peer Friendships. When the school functions as a dynamic social system in the life of the student, a larger number of friendships should be made within its context. On this basis, the following question was asked:

> List the name of your best friend that is of your own age group. (Please print)
>
> _____ Where did you get to know
> Last Name First Name
>
> this friend? (Check one)
>
> _____ Classes together
>
> _____ Lives in my neighborhood
>
> _____ Church
>
> _____ School club or activities
>
> _____ Out-of-school club
>
> Other (name)_____

"Classes together" and "School club or activities" were scored as in-school sources of friendships. The three other given alternatives were scored as out-of-school sources of friendships. When the student responded by indicating an "other," it was scored according to its appropriate category. Obviously, a student may become acquainted with another student enroute to and from school as well as have classes with the same student in school. This would supply a dual source of friendship, but what is important is the point of activities at which the student

perceives of this student as a friend.

Sources of Adult Friendships. When the school functions as a dynamic social system in the life of the student, a larger number of adult friendships should be made within its context. This obviously related directly to teachers for the most part. On this basis, students were asked the following questions:

> List the name of the adult you like best. Not parents or relatives. (Please print)
>
> _____ Where did you get to know
> Last Name First Name
>
> this person? (check one)
>
> _____ In-school activities
>
> _____ Out-of-school activities.
>
> What does this person do for a living?_____

The name of the person was of no particular interest except as it served to cause the student to think of one particular person. The person's occupation is used to estimate the socioeconomic status of the individual.

Frequency of Interaction. The more frequently people interact, the more likely is the development of primary relationships. The instrument is aimed at revealing the interaction between staff and students. The instrument is presented with the student instruments in Appendix C.

General Sources of Help. If a high school is characterized by close, friendly relationships, students are more likely to turn to in-school sources. On this assumption,

an instrument was constructed which is presented with the student instruments in Appendix C.

In scoring this instrument, certain responses are considered as in-school sources of help and others as out-of-school sources.

Faculty Sources of Help. In order to determine this factor, the "Sources of Help Inventory" discussed above was used. In this case, the scoring procedure was changed. Responses 1, 3, 4, and 5 were considered as faculty sources of help. Responses 2, 6, 7, and 8 were considered as other than faculty sources of help. The identity of the individual given when response 9 was used to differentiate faculty sources from other sources. In effect, the adolescent peer group was separated from faculty sources of help as a dynamic element in the school social system.

Teacher Knowledge of Students. Teachers who work closely with students are more likely to acquire both impersonal and personal information concerning the students than are teachers who remain aloof from the student body. On this assumption, an instrument was constructed to determine the extent of knowledge a teacher possessed concerning a student which the teacher felt he knew best. This instrument asks the teacher to identify a student whom he feels he knows best. He was then asked to respond to a number of questions that seek information about the student. The student was asked to give the same information concerning

himself as was requested from the teacher. The questions used are given in Appendix C.

These questions were contained on separate forms and administered to both students and teachers simultaneously. The information provided by the teacher was scored against that provided by the student. The teachers responses were marked either right or wrong on all questions except the one requesting the father's occupation and the one concerning the student's hobbies. That is, no credit was given for answers that approximated that given by the student on questions other than the two exceptions just noted. On the question requesting the father's occupation, teachers were given full credit for occupations which were closely related to that provided by the student, e.g., carpenter and cabinet-maker. On the question concerning hobbies, teachers were given full credit for hobbies when they were closely related to those provided by the student, e.g., sewing and clothesmaking, checkers and chess, etc.

Student Sources of Help. The degree to which students work closely together can indicate the degree to which their student associations are important in their life activity. On this basis, the degree to which students turned to themselves for the solution of problem was measured. This was obtained from the "Sources of Help Inventory" cited above. In this case, items 2 and 7 were scored as student sources of help and all others scored as

other-than-student sources of help.

Sources of Best Known Students. The teachers were first requested to identify the student whom they felt they knew best. They were then asked the following question: "Do you know this student from out-of-school contacts? yes_____ no_____." From the reply to this question, the teachers indicated whether they knew the students better from out of school contacts rather than from contacts within the school. If the school's interaction patterns afford teachers many close relationships with students, more teachers will identify students from within-the-school contacts as best known rather than from out-of-school contacts.

Administration of Instruments

All of the above instruments were administrered to both the students and teachers in a booklet which also included the instruments used in the sponsored research project being simultaneously conducted. The booklet containing the instruments used in this study are given in Appendix C.

The booklets were administered to the students by the regular classroom teachers in each of the schools at which time the teachers also completed their booklets. They were administered in the school classrooms during the morning portion of the school day. All the schools were tested during the months of November and December of 1960.

Reliability and Validity of Instruments

The social interaction instruments listed above are sociometric in nature. The reliability and validity of such instruments are difficult to establish, and no information concerning these factors is available for the social interaction instruments used in this study. It is apparent that an observation procedure for establishing social interaction patterns would have greater validity and reliability than can be obtained on a self-reporting instrument.

Correlations of Social Interaction Factors

The average scores for each high school on each of the social interaction factors were correlated. Table I presents the results of these correlations.

The table indicates that the social interaction factors are not all positively or significantly related. Consequently, the factors are not additive.

Procedures

Socioeconomic Level

The average socioeconomic level was determined on the basis of the Duncan Socio-economic Ratings of the students' fathers occupations. The entire student body was used for this purpose. The results of this procedure are presented in Appendix D.

Using the mean socioeconomic rating for the entire thirty-four schools (46.3), the schools were divided into two groups. Those schools whose mean socio-economic level was above the mean for the entire thirty-four schools were placed into the "high" group; those schools whose mean socioeconomic level was below the mean for the entire thirty-four schools were placed into the "low" group.

This procedure was necessary because the socio-economic level of the student body was found to be related significantly to the average Occupational Aspiration score (r = .41). This was anticipated inasmuch as Wilson had reported a similar correlation in his study.[9]

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[9]Alan B. Wilson, "Residential Segregation of Social Classes and Aspirations of High School Boys," American Sociological Review, 24 (1959), 836-845.

Table I

Correlation of Interaction Factors

	A	B	C	D	E	F	G	H
A	X	X	X	X	X	X	X	X
B	.578	X	X	X	X	X	X	X
C	.368	.286	X	X	X	X	X	X
D	-.013	.133	.136	X	X	X	X	X
E	-.029	.104	.403	.777	X	X	X	X
F	.185	.331	.362	-.006	.099	X	X	X
G	-.119	-.118	-.341	.276	-.311	-.196	X	X
H	.360	.222	.528	.095	.138	-.263	.020	X

A = Sources of Peer Friendships
B = Sources of Adult Friendships
C = Frequency of Interactions
D = General Sources of Help
E = Faculty Sources of Help
F = Teacher Knowledge of Students
G = Student Sources of Help
H = Sources of Best Known Student

This resulted in the breakdown given in Table II.

Table II

Socieeconomic Breakdown of Schools

		School Number
Socio-economic Level	High	7 8 9 17 18 20 21 22 23 24 28 29 30 31 33
	Low	1 2 3 4 5 6 10 11 12 13 14 15 16 19 25 26 27 32 34

Because of a skewed distribution, fifteen schools are found in the "high" group and nineteen are found in the "low" group.

Parent College Hopes

From the findings of Kahl's study,[10] it was anticipated that the educational aspiration that parents had for the students would influence the level of occupational aspirations of the students. As measured, this influence was related to the findings of Bordua[11] which indicate that parental stress on a college education for their children is related to educational aspirations of the children. Then correlating the mean occupational aspiration scores

[10]Kahl, loc. cit.

[11]Bordua, loc. cit.

of the low socio-economic students in each of the thirty-four schools to the percentage of parents having hopes of a college education for these students a positive relationship resulted (r= .698).

Appendix E presents the data on each school concerning the percentage of parents having hope of a college education for the student as perceived by the students.

Due to a high correlation noted above between the parental hopes for a college education for the students and the occupational aspirations of the students, the thirty-four high schools were divided into two groups to control for this influence. This division was made on the basis of the average percentage of parents having hopes of a college education for the students in the entire thirty-four high schools (Average = 88.4). Schools that had an average above this average percentage were placed in the "high" group; schools that had a percentage below this average percentage were placed into the "low" group. Table III presents the results of this breakdown.

Table III

School Breakdown on Parent Hopes for College

	School Code Number
Parental Hopes: High	1 2 3 4 5 6 7 9 10 11 12 14 18 19 20 24 27 29 32
Parental Hopes: Low	8 13 15 16 17 21 22 23 25 26 28 30 31 33

Table III reveals that nineteen schools fall into the "high" group and fifteen schools fall into the "low" group on the factor of parental college hopes for students as perceived by students.

When combining the breakdown of schools on the basis of socioeconomic level of the student body with the breakdown of schools on the basis of parental hopes for college, four possible combinations emerged. These combinations are given in Table IV.

Table IV

Possible Combinations Resulting From Breakdown of Schools on Socioeconomic Level of Student Body and Parent Hopes for College

Socioeconomic Level of Student Body	Parental College Hopes
High	High
High	Low
Low	High
Low	Low

Table V presents the schools divided into the combinations given in Table VI. This procedure was feasible because the correlation between the Parental Hopes for College and the Socioeconomic Level of the Student Body is low for the thirty-four high schools (r = .109).

Table V

School Breakdown on Socioeconomic Level of Student Body and Parent College Hopes

Socioeconomic Level of Student Body	Parental Hopes for College	School Code Number
High	High	7 9 18 20 24 29
High	Low	8 17 21 22 23 28 30 31 33
Low	High	1 2 3 4 5 6 10 11 12 14 19 27 32
Low	Low	13 15 16 25 26 34

Table V reveals that there are six schools in the "high-high" group, nine schools in the "high-low" group, thirteen schools in the "low-high" group, and six in the "low-low" group.

Design of the Study

The socioeconomic level of the student body and the parent hopes for a college education for the students are two variables for which this study must control. The above school breakdowns are for the purposes of meeting this need.

From this, the design of the study was made. Table VI presents the design of this study.

Table VI

Design of the Study

Control Variables		Independent Variables	Dependent Variables
Socioeconomic Level of Student Body	Parent Hopes for College	Eight Social Interaction Factors	Occupational Aspirations
High	High	Schools divided into "High" and "Low" on each of the factors	Test
	Low	Schools divided into "high" and "Low" on each of the factors	Test
Low	High	Schools divided into "High" and "Low" on each of the factors	Test
	Low	Schools divided into "High" and "Low" on each of the factors	Test

Design Implementation

The design indicates that the schools were first divided on the basis of the socioeconomic level of their student bodies. Next, they were divided on the basis of parent college hopes for the students. The groups obtained

were then divided on each of the eight interaction factors. Before doing this it was necessary to determine whether or not the control variables were correlated with the independent variables. Table VII presents these correlations.

Table VII

Correlations between Control Variables and Independent Variables

	Parent Hopes for College	Socieeconomic Level of Student Body
Sources of Peer Friendships	r = .124	r = -.068
Sources of Adult Friendships	r = .082	r = .204
Frequency of Interaction	r = .031	r = -.181
General Sources of Help	r = -.189	r = -.243
Faculty Sources of Help	r = -.213	r = -.112
Peer Sources of Help	r = .171	r = -.266
Teacher Knowledge of Students	r = .140	r = -.013
Sources of Best Known Student	r = .022	r = .393

Table VII shows that one of the independent variables was significantly related to a control variable. To be significant a correlation had to be greater than .34.

This made it necessary to divide the schools on the average for the independent variables within each of the school groups. That is, the schools in the "high-high" group were divided on the average of the "high-high" group on each of the independent variables; the "high-low" group of schools was divided on the average of the "high-low" group on each of the independent variables, etc.

The data for each of the independent variables upon which these divisions were made are presented in Appendix F along with the average for each of the school groups.

Dividing the schools on the average score on each of the social interaction factors for each of their respective groups, Table VIII resulted.

Maintaining the breakdown of schools on the basis of the socioeconomic level of the student body and parent college hopes, the above information is reorganized. Tables IX, X, XI, and XII present this organization of this information.

The schools were then divided on the basis of the number of social interaction factors on which they were "high" for their group.

Table VIII

Breakdown of Schools on Social Interaction Factors

School Number	Sources of Best Known Student	Sources of Adult Friends	General Sources of Help	Student Sources of Help	Faculty Sources of Help	Sources of Peer Friends	Teacher knowledge	Frequency of interaction
1	H	L	H	L	H	H	H	L
2	H	L	H	H	H	H	H	H
3	H	L	L	L	L	H	L	H
4	H	L	L	L	L	H	H	L
5	L	H	L	L	L	H	H	H
6	L	H	L	H	L	H	L	L
7	H	H	H	L	H	L	H	L
8	H	H	H	L	H	L	L	H
9	L	L	L	H	L	L	H	L
10	H	H	H	H	H	L	H	H
11	L	H	L	L	L	H	L	H
12	L	H	L	H	L	H	L	L
13	L	H	H	L	H	H	L	H
14	L	L	H	H	H	H	H	H
15	L	H	H	H	H	H	L	H
16	H	H	L	H	L	L	H	L
17	H	L	L	H	L	L	L	L
18	H	L	H	L	H	L	L	L
19	L	L	L	L	H	H	L	H
20	L	H	L	L	H	H	L	H
21	H	H	L	H	L	H	L	H
22	H	H	H	H	L	H	H	L
23	H	L	L	H	L	H	H	L
24	L	L	L	L	H	L	H	H
25	H	L	L	H	L	L	L	H
26	L	L	L	L	H	H	H	H
27	L	L	H	H	L	L	H	L
28	L	L	H	L	H	L	L	H
29	L	H	H	L	H	H	H	H
30	L	L	L	L	H	L	H	H
31	L	H	H	H	H	H	L	H
32	H	H	H	L	H	H	L	L
33	L	H	H	H	H	H	L	H
34	H	L	L	L	L	H	H	H

Note: "H" stands for high and "L" stands for low.

Table IX

Breakdown of Schools on Social Interaction Factors: High-High Group

Social Interaction Factors	Division	School Code Number
Sources of Peer Friendships	High	20, 29
	Low	7, 9, 18, 24
Sources of Adult Friendships	High	7, 20, 29
	Low	9, 18, 24
Frequency of Interaction	High	20, 24, 29
	Low	7, 9, 18
General Sources of Help	High	7, 18, 29
	Low	9, 20, 24
Faculty Sources of Help	High	7, 18, 20, 24, 29
	Low	9
Teacher Knowledge of Students	High	7, 9, 24, 29
	Low	18, 20
Peer Sources of Help	High	9
	Low	7, 18, 20, 24, 29
Sources of Best Known Student	High	9, 20, 24, 29
	Low	7, 18

Table X

Breakdown of Schools on Social Interaction Factors: High-Low Group

Social Interaction Factors	Division	School Code Number
Sources of Peer Friendships	High	21, 22, 23, 31, 33
	Low	8, 17, 28, 30
Sources of Adult Friendships	High	8, 21, 22, 31, 33
	Low	17, 23, 28, 30
Frequency of Interaction	High	8, 21, 28, 30, 31, 33
	Low	17, 22, 23
General Sources of Help	High	8, 22, 28, 31, 33
	Low	17, 21, 23, 30
Faculty Sources of Help	High	8, 28, 30, 31, 33
	Low	17, 21, 22, 23
Teacher Knowledge of Students	High	22, 23, 30
	Low	8, 17, 21, 28, 31, 33
Peer Sources of Help	High	17, 21, 22, 23, 31, 33
	Low	8, 28, 30
Sources of Best Known Student	High	28, 30, 31, 33
	Low	8, 17, 21, 22, 23

Table XI

Breakdown of Schools on Social Interaction Factors
Low-High Group

Social Interaction Factors	Division	School Code Number
Sources of Peer Friendships	High	1,2,3,4,5,6,11,12,14,19,32
	Low	10, 27
Sources of Adult Friendships	High	5, 6, 10, 11, 12, 32
	Low	1, 2, 3, 4, 14, 19, 27
Frequency of Interaction	High	2, 3, 5, 10, 11, 14,19
	Low	1, 4, 6, 12, 27, 32
General Sources of Help	High	1, 2, 10, 14, 27, 32
	Low	3, 4, 5, 6, 11, 12, 19
Faculty Sources of Help	High	1, 2, 10, 14, 19, 32
	Low	3, 4, 5, 6, 11, 12, 27
Teacher Knowledge of Students	High	1, 2, 4, 5, 10, 14, 27
	Low	3, 6, 11, 12, 19, 32
Peer Sources of Help of Help	High	2, 6, 10, 12, 14, 27
	Low	1, 3, 4, 5, 11, 19,32
Sources of Best Known Student	High	5, 6, 11, 12, 14,19,27
	Low	1, 2, 3, 4, 10, 32

Table XII

Breakdown of Schools on Social Interaction Factors: Low-High Group

Social Interaction Factors	Division	School Code Number
Sources of Peer Friendships	High	13, 15, 26, 34
	Low	16, 25
Sources of Adult Friendships	High	13, 15, 16
	Low	25, 26, 34
Frequency of Interaction	High	13, 15, 25, 26, 34
	Low	16
General Sources of Help	High	13, 15
	Low	16, 25, 26, 34
Faculty Sources of Help	High	13, 15, 26
	Low	16, 25, 34
Teacher Knowledge of Students	High	16, 26, 34
	Low	13, 15, 25
Peer Sources of Help	High	15, 16, 25
	Low	13, 26, 34
Sources of Best Known Student	High	13, 15, 26
	Low	16, 25, 34

That is, schools that placed "High" on five or more social interaction factors were placed into one group, and schools that placed "High" on fewer than five social interaction factors were placed into another group. The schools that placed "High" on five or more social interaction factors can be called "Integrative." The term "Integrative" is used here in the sense described in the rationale. It is intended to denote schools that are characterized by primary, affective personal relationships. Schools that placed "High" on fewer than five social interaction action factors can be called "Non-Integrative." Maintaining the grouping of schools on the basis of Socioeconomic Level of the Student Body and Parent Hopes for College, Table XIII presents the division of schools into Integrative and Non-Integrative types.

It was mentioned in the rationale that particular attention would be given to teacher-student social interactions. In order to do this, five of the eight social interaction factors were identified as measures of teacher-student social interactions. These factors are the following: (1) Teacher Knowledge of Students, (2) Sources of Faculty Help, (3) Frequency of Interaction, (4) Sources of Adult Friendships, and (5) Sources of Best Known Student. Schools that placed "High" on three or more of these social interaction factors are termed "Teacher Integrative"; schools that placed "High" on fewer than three of these

Table XIII

Division of Schools Into Integrative And Non-Integrative Types

School Groups	Number of High Factors	School Code Number	Total
High-High	1-4	18, 9, 20, 24	4
	5-8	7, 29	2
High-Low	1-4	17, 23, 28, 30	4
	5-8	8, 21, 22, 31, 33	5
Low-High	1-4	3, 4, 5, 6, 11, 12, 19, 27	8
	5-8	1, 2, 10, 14, 32	5
Low-Low	1-4	25, 16, 34	3
	5-8	26, 13, 15	3
	Total Non-Integrative		19
	Total Integrative		15

factors are termed "Teacher Non-Integrative." Maintaining the grouping of schools on the basis of Socioeconomic Level of the Student Body and Parent Hopes for College, Table XIV presents the division of schools into "Teacher Integrative" and "Teacher Non-Integrative" types.

Table XIV

Division of Schools Into "Teacher-Integrative" And "Teacher-Non-Integrative" Types

School Groups	Number of High Teacher Factors	School Code Number	Total
High-High	0-2	18, 9	2
	3-5	7, 20, 24, 29	4
High-Low	0-2	17, 23, 28	3
	3-5	8, 21, 22, 30, 31, 33	6
Low-High	0-2	3, 4, 6, 11, 12, 19, 27	7
	3-5	1, 2, 5, 10, 14, 32	6
Low-Low	0-2	25	1
	3-5	13, 15, 16, 26, 34	5
		Total Teacher Non-Integrative	13
		Total Teacher Integrative	21

Student Samples

It was reported above that the Socioeconomic Level of the Student Body was determined by using the socioeconomic ratings of the fathers' occupations of the entire student body. In brief, a one hundred per cent sample was used for this purpose. A total of thirty-six thousand, four hundred sixty-seven students was involved.

A twenty-five per cent stratified sample of the student body was used to determine the social interaction patterns of the schools. This sample was stratified on the basis of sex and socioeconomic composition of the student bodies in each of the schools. A total of over nine thousand students was used in this sample.

The occupational aspirations were measured on all junior and senior boys that had been enrolled in the particular high school for a minimum of two years. All of these boys were of low socioeconomic background, i.e., below a rating of 44 on the Duncan Socioeconomic Ratings for their fathers' occupations. Boys were used on this factor because more is known concerning the occupational aspirations of males. This sample was limited to students that had been enrolled in the particular high school for a minimum of two years on the assumption that these students would better reflect the nature of the school social system than students that were recent enrollees. This sample was made up of four

thousand, two hundred fifty-six students.

All of the teachers in each of the schools were used in the measurement of variables related to the instructional staff. The administrative personnel was not included in this group. Those defined as administrators were principals, vice-principals, librarians and full-time guidance counselors.

Research Hypotheses

The hypotheses of this study are presented in three different groupings. One set of hypotheses is concerned with the comparisons of the occupational aspirations of students enrolled in high schools of differing social interaction patterns. Another set is concerned with the comparison of schools as units of comparison. The third set of hypotheses is concerned with a comparison of related factors. The students referred to in all of the hypotheses are of low socioeconomic background.

Student Hypotheses

These hypotheses are so stated as to refer to the students as individuals interacting in schools characterized by differing types of social interaction.

Student Hypothesis Number One. Students socially interacting in schools that have a high average for Sources of Peer Friendships will have higher Occupational Aspirations than students socially interacting in schools that have a

low average for Sources of Peer Friendships.

Student Hypothesis Number Two. Students socially interacting in schools that have a high average for Sources of Adult Friendships will have higher Occupational Aspirations than students socially interacting in schools that have a low average for Sources of Adult Friendships.

Student Hypothesis Number Three. Students socially interacting in schools that have a high Frequency of Interaction will have higher Occupational Aspirations than students socially interacting in schools that are low in Frequency of Interaction.

Student Hypothesis Number Four. Students socially interacting in schools that have a high average for General Sources of Help will have higher Occupational Aspirations than students socially interacting in schools that have a low average for General Sources of Help.

Student Hypothesis Number Five. Students socially interacting in schools that have a high average for Faculty Sources of Help will have higher Occupational Aspirations than students socially interacting in schools that have a low average for Faculty Sources of Help.

Student Hypothesis Number Six. Students socially interacting in schools characterized by a high Teacher Knowledge of Students will have higher Occupational Aspirations than students socially interacting in schools characterized by a low Teacher Knowledge of Students.

Student Hypothesis Number Seven. Students socially interacting in schools that have a high average for Peer Sources of Help will have higher Occupational Aspirations than students socially interacting in schools that have a low average for Peer Sources of Help.

Student Hypothesis Number Eight. Students socially interacting in schools that have a high average for Sources of Best Known Students will have higher Occupational Aspirations that students socially interacting in schools that have a low average for Sources of Best Known Students.

Student Hypothesis Number Nine. Students socially interacting in schools that are Integrative will have higher Occupational Aspirations than students socially interacting in schools that are Non-Integrative.

Student Hypothesis Number Ten. Students socially interacting in schools that are Teacher Integrative will have higher Occupational Aspirations than students socially interacting in schools that are Teacher Non-Integrative.

Each of the above hypotheses are applied to the four school groupings, e.g., High-High, High-Low, Low-High, Low-Low. It will be recalled that these school groupings are based on the Socioeconomic Level of the Student Body and the Parent Hopes for College. The use of these groupings required that forty tests be applied to the above ten hypotheses.

School Hypotheses

These hypotheses refer to the schools as units. In

this case, the average score of the students on the different variables was used as a score for the schools as a unit.

School Hypothesis Number One. Schools which have a high average for Sources of Peer Friendships will have students with a high average for Occupational Aspirations; whereas, schools with a low average for Sources of Peer Friendships will have students with a low average for Occupational Aspirations.

School Hypothesis Number Two. Schools which have a high average for Sources of Adult Friendships will have students with a high average for Occupational Aspirations; whereas, schools which have a low average for Sources of Adult Friendships will have students with a low average for Occupational Aspirations.

School Hypothesis Number Three. Schools which have a high Frequency of Interaction will have students with a high average for Occupational Aspirations; whereas, schools which have a low Frequency of Interaction will have students with a low average for Occupational Aspirations.

School Hypothesis Number Four. Schools which have a high average for General Sources of Help will have students with a high average for Occupational Aspirations; whereas, schools which have a low average for General Sources of Help will have students with a low average for Occupational Aspirations.

School Hypothesis Number Five. Schools which have a

high average for Faculty Sources of Help will have students with a high average for Occupational Aspirations; whereas, schools which have a low average for Faculty Sources of Help will have students with a low average for Occupational Aspirations.

School Hypothesis Number Six. Schools which are characterized by a high Teacher Knowledge of Students will have students with a high average for Occupational Aspirations; whereas, schools which are characterized by a low Teacher Knowledge of Students will have students with a low average for Occupational Aspirations.

School Hypothesis Number Seven. Schools which have a high average for Peer Sources of Help will have students with a high average for Occupational Aspirations; whereas, schools with a low average for Peer Sources of Help will have students with a low average for Occupational Aspirations.

School Hypothesis Number Eight. Schools which have a high average for Sources of Best Known Students will have students with a high average for Occupational Aspirations; whereas, schools which have a low average for Sources of Best Known Students will have students with a low average for Occupational Aspirations.

School Hypothesis Number Nine. Schools which are Integrative will have students with a high average for Occupational Aspirations; whereas, schools which are Non-Integrative will have students with a low average for

Occupational Aspirations.

School Hypothesis Number Ten. Schools which are Teacher Integrative will have students with a high average for Occupational Aspirations; whereas, schools which are Teacher Non-Integrative will have students with a low average for Occupational Aspirations.

The groupings of the schools on the basis of the Socioeconomic Level of the Student Body and Parent Hopes for College were used to establish the average upon which the schools were dichotomized into "High" and "Low" on the social interaction factors within their respective groups, but all thirty-four schools were used in testing each of the hypotheses.

Related Hypotheses

These hypotheses do not fall within the main thesis of this study but are intended to explore the data for related findings and relationships.

Related Hypothesis Number One. Students will have higher Occupational Aspirations in schools that have a student body with a high socioeconomic average than will students in schools that have a student body with a low socioeconomic average.

Related Hypothesis Number Two. Students in schools characterized by high Parent Hopes for College will have higher Occupational Aspirations than students in schools characterized by low Parent Hopes for College.

Related Hypothesis Number Three. Students in schools characterized by high Parent Hopes for College and a high Socioeconomic Student Body Level will have higher Occupational Aspirations than students in schools characterized by high Parent Hopes for College and a low Socioeconomic Student Body Level.

Related Hypothesis Number Four. Students in schools characterized by high Parent Hopes for College and a low Socioeconomic Student Body Level will have higher Occupational Aspirations than students in schools characterized by low Parent Hopes for College and a high Socioeconomic Student Body Level.

Related Hypothesis Number Five. Students in schools characterized by low Parent Hopes for College and a high Socioeconomic Level of the Student Body will have higher Occupational Aspirations than students in schools characterized by low Parent Hopes for College and a low Socioeconomic Student Body Level.

Statistical Methods

All of the correlations in this study were computed by the use of the following formula:

$$r = \frac{\Sigma XY - \frac{(X)\ (Y)}{N}}{(\Sigma X^2 - \frac{(\Sigma X)^2}{N})\ (\Sigma Y - \frac{(\Sigma Y)^2}{N})}$$

The Student Hypotheses were tested by a "T" test of the means. The variances were computed using the following

formula:

$$S_x^2 = \frac{\Sigma x^2 - \frac{(\Sigma x)^2}{N}}{N - 1}$$

Assuming:

$$\sigma_1^2 = \sigma_2^2 = \sigma^2$$

The pooled variance was computed by the use of the following formula:

$$S_p^2 = \frac{(N_1 - 1)\, S_1^2 + (N_2 - 1)\, S_2^2}{N_1 + N_2 - 2}$$

The formula for the "T" is:

$$T = \frac{\bar{X}_1 - \bar{X}_2}{S_p^2 \left(\frac{1}{N_1} + \frac{1}{N_2}\right)}$$

The Degrees of Freedom were computed using the formula:

$$d.f = N_1 + N_2 - 2$$

The School Hypotheses were tested by the use of Chi Square. The following formula was used:

$$X^2 = \frac{N \left[(AD - CB) - N/2\right]^2}{(A + B)(C + D)(A + C)(B + D)}$$

The Related Hypotheses were tested by a "T" test of the means. The formulas used were the same as those used for testing the Student Hypotheses.

Summary

The procedures used in the selection of the sample of high schools used in this study were presented with relevant characteristics of these schools. The schools in

the sample are located in twenty-three different states.

The instrumentation used in this study was presented. The form, administration and scoring of the instruments was discussed along with the rationale of the instrumentation. The correlations among the instruments used for the social interaction factors were not all positive or significant. Hence, these factors were not additive.

Two variables were found to be significantly correlated to the Occupational Aspirations of the students in the different high schools. These were the average Socio-economic Level of the Student Body and the Parent Hopes for a College education for the students. The design of the study was developed which controlled for these two variables. The independent variables were defined and the breakdown of the schools on these variables was given.

The research hypotheses of the study were stated in three groupings: (1) Student Hypotheses, (2) School Hypotheses, and (3) Related Hypotheses. The statistical procedures used in testing each group of hypotheses were then stated.

CHAPTER III

RESULTS

The results of this study are presented in the same order in which the hypotheses were stated in the previous chapter. The Student Hypotheses are considered first followed by the School Hypotheses and Related Hypotheses, respectively.

Student Hypotheses

The Student Hypotheses refer to the students as individuals interacting in schools characterized by differing types of social interaction. Each of these hypotheses is tested within each of the school groupings, i.e., High-High, High-Low, Low-High, and Low-Low. These groupings were made on the basis of the Socioeconomic Level of the Study Body and the Parent Hopes for College. The hypotheses are accepted or rejected at the five per cent level of significance. This means that the difference in the means of an accepted hypothesis could occur by chance five per cent or less of the time.

The following ten tables present the tests of each of the student hypotheses. The tables identify each of the four school groupings. For each of these groups, the test of the hypothesis is made and the statistical information is given. It should be noted that each of the hypotheses

Student Hypothesis Number One. Students socially interacting in schools that have a high average for Sources of Peer Friendships will have higher Occupational Aspirations than students socially interacting in schools that have a low average for Sources of Peer Friendships.

Table XV

Test of Student Hypothesis Number One

School Group	Sources of Friendships	Sum of OAS Scores*	Number of Students	Mean	T	Level of Significance	Results
High-High	High	5589	131	42.7	0.15	---	Rejected
	Low	10489	247	42.5			
High-Low	High	23352	579	40.3	0.45	0.40	Rejected
	Low	22849	572	40.0			
Low-High	High	60839	1523	39.9	---	---	Rejected
	Low	18946	454	41.7			
Low-Low	High	12091	320	37.8	1.19	0.20	Rejected
	Low	15795	430	36.7			

*Sum of OAS Scores = Sum of student scores on the Occupational Aspiration Scale.

Student Hypothesis Number Two. Students socially interacting in schools that have a high average for Sources of Adult Friendships will have higher Occupational Aspirations than students socially interacting in schools that have a low average for Sources of Adult Friendships.

Table XVI

Test of Student Hypothesis Number Two

School Group	Sources of Adult Friendships	Sum of OAS Scores*	Number of Students	Mean	T	Level of Significance	Results
High-High	High	8153	192	42.5	---	---	Rejected
	Low	7925	186	42.6			
High-Low	High	21176	525	40.3	0.45	.40	Rejected
	Low	25025	626	40.0			
Low-High	High	35807	904	39.6	---	---	Rejected
	Low	43978	1073	41.0			
Low-Low	High	10561	271	39.0	2.98	.005	Accepted
	Low	17325	479	36.2			

*Sum of OAS Scores = Sum of student scores on the Occupational Aspirations Scale.

Student Hypothesis Number Three. Students socially interacting in schools that have a high Frequency of Interaction will have higher Occupational Aspirations than students socially interacting in schools that are low in Frequency of Interaction.

Table XVII

Test of Student Hypothesis Number Three

School Group	Frequency of Interaction	Sum of OAS Scores*	Number of Students	Mean	T	Level of Significance	Results
High-High	High	6126	142	43.1	0.73	0.30	Rejected
	Low	9952	236	42.2			
High-Low	High	24277	611	39.7	---	---	Rejected
	Low	21924	540	40.6			
Low-High	High	29245	724	40.4	0.19	0.40	Rejected
	Low	50540	1253	40.3			
Low-Low	High	22795	610	37.4	---	---	Rejected
	Low	5091	130	39.2			

*Sum of OAS Scores = Sum of student scores on the Occupational Aspiration Scale.

Student Hypothesis Number Four. Students socially interacting in schools that have a high average for General Sources of Help will have higher Occupational Aspirations than students socially interacting in schools that have a low average for General Sources of Help.

Table XVIII

Test of Student Hypothesis Number Four

School Group	General Sources of Help	Sum of OAS Scores*	Number of Students	Mean	T	Level of Significance	Results
High-High	High	6752	162	41.7	---	---	Rejected
	Low	9326	216	43.2			
High-Low	High	24041	597	40.3	0.45	0.40	Rejected
	Low	22160	554	40.0			
Low-High	High	44228	1097	40.3	---	---	Rejected
	Low	25557	880	40.4			
Low-Low	High	5470	141	38.8	1.73	0.05	Accepted
	Low	22416	609	36.8			

*Sum of OAS Scores = Sum of student scores on the Occupational Aspirations Scale.

Student Hypothesis Number Five. Students socially interacting in schools that have a high average for Faculty Sources of Help will have higher Occupational Aspirations than students socially interacting in schools that have a low average for Faculty Sources of Help.

Table XIX

Test of Student Hypothesis Number Five

School Group	Faculty Sources of Help	Sum of OAS Scores*	Number of Students	Mean	T	Level of Significance	Results
High-High	High	11938	284	42.0	---	---	Rejected
	Low	4140	94	44.0			
High-Low	High	21398	552	38.8	---	---	Rejected
	Low	24203	599	40.0			
Low-High	High	35016	879	39.8	---	---	Rejected
	Low	44769	1098	40.8			
Low-Low	High	10259	272	37.7	0.85	0.20	Rejected
	Low	17627	478	36.9			

*Sum of OAS Scores = Sum of student scores on the Occupational Aspirations Scale.

Student Hypothesis Number Six. Students socially interacting in schools characterized by a high Teacher Knowledge of Students will have higher Occupational Aspirations than students socially interacting in schools characterized by a low Teacher Knowledge of Students.

Table XX

Test of Study Hypothesis Number Six

School Group	Teacher Knowledge of Students	Sum of OAS Scores*	Number of Students	Mean	T	Level of Significance	Results
High-High	High	8181	186	44.8	2.46	.01	Accepted
	Low	7897	192	41.1			
High-Low	High	20838	516	40.4	0.75	.30	Rejected
	Low	25363	635	39.0			
Low-High	High	47061	1156	40.7	1.52	.10	Rejected
	Low	32724	821	39.9			
Low-Low	High	11712	309	37.9	1.30	.10	Rejected
	Low	16174	441	36.7			

*Sum of OAS Scores = Sum of student scores on the Occupational Aspirations Scale.

Student Hypothesis Number Seven. Students socially interacting in schools that have a high average for Peer Sources of Help will have higher Occupation Aspirations than students socially interacting in schools that have a low average for Peer Sources of Help.

Table XXI

Test of Student Hypothesis Number Seven

School Group	Peer Sources of Help	Sum of OAS Scores*	Number of Students	Mean	T	Level of Significance	Results
High-High	High	4140	94	44.0	1.45	.10	Rejected
	Low	11938	284	42.0			
High-Low	High	31307	774	40.4	1.29	.10	Rejected
	Low	14894	377	39.5			
Low-High	High	42136	1040	40.5	0.58	.30	Rejected
	Low	37649	937	40.2			
Low-Low	High	17907	481	37.2	0.11	.20	Rejected
	Low	9979	269	37.1			

*Sum of OAS = Sum of Student scores on the Occupational Aspirations Scale.

Student Hypothesis Number Eight. Students socially interacting in schools that have a high average for Sources of Best Known Students will have higher Occupational Aspirations than students socially interacting in schools that have a low average for Sources of Best Known Students.

Table XXII

Test of Student Hypothesis Number Eight

School Group	Sources of Best Known Student	Sum of OAS Scores*	Number of Students	Mean	T	Level of Significance	Results
High-High	High	5812	142	40.9	---	---	Rejected
	Low	10266	236	43.5			
High-Low	High	27084	674	40.2	0.15	---	Rejected
	Low	19117	477	40.1			
Low-High	High	41876	1036	40.3	---	---	Rejected
	Low	37909	939	40.4			
Low-Low	High	17627	478	36.9	---	---	Rejected
	Low	10295	272	37.7			

*Sum of OAS Scores = Sum of student scores on the Occupational Aspirations Scale

Student Hypothesis Number Nine. Students socially interacting in schools that are Integrative will have higher Occupational Aspirations than students socially interacting in schools that are Non-Integrative.

Table XXIII

Test of Student Hypothesis Number Nine

School Group	Integrative	Sum of OAS Scores*	Number of Students	Mean	T	Level of Significance	Results
High-High	High	3504	81	43.3	0.69	0.30	Rejected
	Low	12574	297	42.3			
High-Low	High	21176	525	40.3	0.45	0.40	Rejected
	Low	25025	626	40.0			
Low-High	High	32667	827	39.5	---	---	Rejected
	Low	47118	1150	41.3			
Low-Low	High	10259	272	37.7	0.85	0.20	Rejected
	Low	17627	478	36.9			

*Sum of OAS Scores = Sum of student scores on the Occupational Aspirations Scale.

Student Hypothesis Number Ten. Students socially interacting in schools that are Teacher Integrative will have higher Occupational Aspirations than students socially interacting in schools that are Teacher Non-Integrative.

Table XXIV

Test of Student Hypothesis Number Ten

School Group	Teacher Integrative	Sum of OAS Scores*	Number of Students	Mean	T	Level of Significance	Results
High-High	High	8690	203	42.8	0.50	.40	Rejected
	Low	7388	175	42.3			
High-Low	High	28045	696	40.3	0.60	.30	Rejected
	Low	18156	455	39.9			
Low-High	High	35311	892	39.6	---	---	Rejected
	Low	44474	1085	41.0			
Low-Low	High	17282	450	38.4	3.05	.005	Accepted
	Low	10704	300	35.7			

*Sum of OAS Scores = Sum of student scores on the Occupational Aspirations Scale.

is directional; i.e., they state the nature of a predicted relationship. When the differences in the means being tested is contrary to the predicted direction of the hypothesis, a test of significance is unnecessary. Consequently, the hypothesis is rejected, and no information is given for a test of significance.

The hypothesis being tested is restated above each of the tables (See Tables XV through XXIV). The results of these tests of significant differences are summarized in Table XXV. This table identifies each student hypothesis by number and lists the results for each school grouping.

School Hypotheses

The school hypotheses refer to the schools as units. For these hypotheses, the average score of the students on the different variables is used as a score for the school as a unit. The grouping of schools on the basis of Socio-economic Level of the Student Body and Parent Hopes for College are not used for these hypotheses. In fact, these hypotheses were constructed so as to use all thirty-four schools together. The Chi Square method is used to test these hypotheses. The five per cent level of significance is set for the rejection or acceptance of the hypotheses.

Before proceeding with this analysis, the schools must be divided on the basis of the Occupational Aspirations of their students. This was done by dividing the schools on the

Table XXV

Summary of Tests of Student Hypotheses

Student Hypothesis Number	School Groups			
	High-High	High-Low	Low-High	Low-Low
1	Rejected	Rejected	Rejected	Rejected
2	Rejected	Rejected	Rejected	Accepted
3	Rejected	Rejected	Rejected	Rejected
4	Rejected	Rejected	Rejected	Accepted
5	Rejected	Rejected	Rejected	Rejected
6	Accepted	Rejected	Rejected	Rejected
7	Rejected	Rejected	Rejected	Rejected
8	Rejected	Rejected	Rejected	Rejected
9	Rejected	Rejected	Rejected	Rejected
10	Rejected	Rejected	Rejected	Accepted

average for their respective schools groupings. (The groupings referred to here are those based upon the Socioeconomic Level of the Student Body and Parent Hopes for College.) Appendix G presents the Occupational Aspirations data upon which these divisions are made. Table XXVI presents the breakdown of schools on Occupational Aspirations.

Table XXVI

Breakdown of Schools on Occupational Aspirations

		School Code Numbers
Occupational Aspirations	High	2 3 4 6 9 11 13 15 16 17 19 22 24 27 29 30 31 34
	Low	1 5 7 8 10 12 14 18 20 21 23 25 26 28 32 33

School Hypothesis Number One. Schools which have a high average for Sources of Peer Friendships will have students with a high average for Occupational Aspirations; whereas, schools with a low average for Sources of Peer Friendships will have students with a low average for Occupational Aspirations.

Table XXVII

Test of School Hypothesis
Number One

		Occupational Aspirations		
		High	Low	
Sources of Peer Friendships	High	13	10	23
	Low	5	6	11
		18	16	34

Chi Square = .0564
Result = Rejected

School Hypothesis Number Two. Schools which have a high average for Sources of Adult Friendships will have students with a high average for Occupational Aspirations; whereas, Schools which have a low average for Sources of Adult Friendships will have students with a low average for Occupational Aspirations.

Table XXVIII

Test of School Hypothesis Number Two

		Occupational Aspirations		
		High	Low	
Sources of Adult Friendships	High	8	9	17
	Low	10	7	17
		18	16	34

Chi Square = .1180
Result = Rejected

School Hypothesis Number Three. Schools which have a high Frequency of Interaction will have students with a high average for Occupational Aspirations; whereas, schools which have a low Frequency of Interaction will have students with a low average for Occupational Aspirations.

Table XXIX

Test of School Hypothesis Number Three

		Occupational Aspirations		
		High	Low	
Frequency of Interaction	High	11	10	21
	Low	7	6	13
		18	16	34

Chi Square = .0730
Result = Rejected

School Hypothesis Number Four. Schools which have a high average for general Sources of Help will have students with a high average for Occupational Aspirations; whereas, schools which have a low average for General Sources of Help will have students with a low average for Occupational Aspirations.

Table XXX

Test of School Hypothesis Number Four

		Occupational Aspirations		
		High	Low	
General Sources of Help	High	7	9	16
	Low	11	7	18
		18	16	34

Chi Square = .4463
Result = Rejected

School Hypothesis Number Five. Schools which have a high average for Faculty Sources of Help will have students with a high average for Occupational Aspirations; whereas, schools which have a low average for Faculty Sources of Help will have students with a low average for Occupational Aspirations.

Table XXXI

Test of School Hypothesis Number Five

		Occupational Aspirations		
		High	Low	
Faculty Sources of Help	High	8	11	19
	Low	10	5	15
		18	16	34

Chi Square = 1.1635
Result = Rejected

School Hypothesis Number Six. Schools which are characterized by a high Teacher Knowledge of Students will have students with a high average for Occupational Aspirations; whereas, schools which are characterized by a low Teacher Knowledge of Students will have students with a low average for Occupational Aspirations.

Table XXXII

Test of School Hypothesis Number Six

		Occupational Aspirations		
		High	Low	
Teacher Knowledge of Students	High	10	7	17
	Low	8	9	17
		18	16	34

Chi Square = .1180
Result = Rejected

School Hypothesis Number Seven. Schools which have a high average for Peer Sources of Help will have students with a high average for Occupational Aspirations; whereas, schools with a low average for Peer Sources of Help will have students with a low average for Occupational Aspirations.

Table XXXIII

Test of School Hypothesis Number Seven

		Occupational Aspirations		
		High	Low	
Peer Sources of Help	High	9	7	16
	Low	9	9	18
		18	16	34

Chi Square = .0004
Result = Rejected

School Hypothesis Number Eight. Schools which have a high average for Sources of Best Known Students will have students with a high average for Occupational Aspirations; whereas, schools which have a low average for Sources of Best Known Students will have students with a low average for Occupational Aspirations.

Table XXXIV

Test of School Hypothesis Number Eight

		Occupational Aspirations		
		High	Low	
Sources of Best Known Students	High	7	9	16
	Low	11	7	18
		18	16	34

Chi Square = .4463
Result = Rejected

School Hypothesis Number Nine. Schools which are Integrative will have students with a high average for Occupational Aspirations; whereas, schools which are Non-Integrative will have students with a low average for Occupational Aspirations.

Table XXXV

Test of School Hypothesis Number Nine

		Occupational Aspirations		
		High	Low	
Integrative	High	6	9	15
	Low	12	7	19
		18	16	34

Chi Square = 1.8043
Result = Rejected

School Hypothesis Number Ten. Schools which are Teacher Integrative will have students with a high average for Occupational Aspirations; whereas, schools which are Teacher Non-Integrative will have students with a low average for Occupational Aspirations.

Table XXXVI

Test of School Hypothesis Number Ten

		Occupational Aspirations		
		High	Low	
Teacher Integrative	High	10	11	21
	Low	8	5	13
		18	16	34

Chi Square = .6244
Result = Rejected

Ten hypotheses have been tested which used the average scores of the students within each of the schools as a score for the school as a unit. These hypotheses were tested by the use of the Chi Square method. The results indicate that none of the ten hypotheses are accepted. That is, the relationship between the social interaction factors and the occupational aspirations of the students predicted by the hypotheses is rejected by the results of each of the ten tests.

Related Hypotheses

These hypotheses are intended to explore the data for relationships that are not the main concern of this study but are related to it. A test of significance between the means is used to test these hypotheses. There are five such hypotheses. The statistical test of hypothesis Number One is presented in Table XLVII and that of hypothesis Number Two in Table XLVIII. The statistical tests of hypotheses Number Three, Four and Five are presented in Table XLIX. The hypotheses being tested are restated under the tables. The hypotheses are accepted or rejected at the five per cent level of significance. The acceptance or rejection of a hypothesis is noted under results in each of the tables.

These hypotheses are concerned with the relationships of two different variables to the occupational aspirations of students. The first is the socioeconomic level of the student body in the high schools. This is determined by the Duncan Socio-Economic Ratings of the occupations of the students' fathers. The second is the parents' hopes for a college education for the students. This is determined by the percentage of parents having such aspirations for the students in each of the high schools. It should be recalled that students referred to in the hypotheses with respect to Occupational Aspirations are of low socioeconomic background.

Table XXXVII

Test of Related Hypothesis Number One

Hypothesis Number	Socioeconomic Level of Student Body	Level of OAS Scores	Number of Students	Mean	T	Level of Significance	Result
1	High	62279	1529	40.73	22.5	.005	Accepted
	Low	107671	2686	40.09			

Related Hypothesis Number One. Students will have higher Occupational Aspirations in schools that have a student body with a high socioeconomic average than will students in schools that have a student body with a low socioeconomic average.

Table XXXVIII

Test of Related Hypotheses Number Two

Hypothesis Number	Parent Hopes For College	Sum of OAS Scores	Number of Students	Mean	T	Level of Significance	Result
2	High	95863	2331	41.1	5.22	.005	Accepted
	Low	74087	1884	39.3			

Related Hypothesis Number Two. Students in schools characterized by high Parent Hopes for College will have higher Occupational Aspirations than students in schools characterized by low Parent Hopes for College.

Table XXXIX

Tests of Related Hypotheses Numbers Three, Four and Five

Hypothesis Number	School Groups	Sum of OAS Scores	Number of Students	Mean	T	Level of Significance	Result
3	High-High	16078	378	42.5	2.6	.005	Accepted
4	High-Low	79785	1953	40.9	1.6	.05	Accepted
5	Low-High	46201	1151	40.1	5.8	.005	Accepted
	Low-Low	27886	733	38.0			

Related Hypothesis Number Three. Students in schools characterized by high Parent Hopes for College and a high Socioeconomic Student Body Level will have higher Occupational Aspirations than students in schools characterized by high Parent Hopes for College and a low Socioeconomic Student Body Level.

Student Hypothesis Number Four. Students in schools characterized by high Parent Hopes for College and a low Socioeconomic Student Body Level will have higher Occupational Aspirations than students in schools characterized by low Parent Hopes for College and a high Socio-economic Student Body Level.

Student Hypothesis Number Five. Students in schools characterized by low Parent Hopes for College and a high Socioeconomic Student Body Level will have higher Occupational Aspirations than students in schools characterized by low Parent Hopes for College and a low Socioeconomic Student Body Level.

Summary

This chapter has presented the results of the statistical tests of all of the hypotheses. These hypotheses were divided into three groups: (1) those which were concerned with the students as individuals interacting in schools of differing social interaction patterns, (2) those which were concerned with the schools as units, and (3) those that were not within the main thesis of this study but related to it. Of the forty hypotheses in the first group, four were accepted. There were ten hypotheses in the second group, and none of these was accepted. The third group consisted of five hypotheses, all of which were accepted. The statement of the hypotheses predicted a positive relationship between the occupational aspirations of students and the other variables. A test of significant differences between the means was used with the first and third groups of hypotheses. The second group of hypotheses was tested by the Chi Square method.

CHAPTER IV

SUMMARY AND CONCLUSIONS

Summary

This study has been concerned with the social interaction patterns in high schools and the attitudes of students. Certain attitudes which individual students have are primarily set for them in early childhood by parental influences. The student acquires the attitudes held by his parents and maintains these as part of his life's orientation. The problem which was considered in this study is whether or not schools can, in any way, redirect or change dysfunctional attitudes held by some students.

The importance of this problem was related to a number of societal and school problems. Its importance was also noted in terms of educational administration and learning theory.

The rationale of this study stated that attitudes are both acquired and changed through social interactions with other individuals on a personal and affective level. It also stated that social interactions that are cognitive and impersonal do not affect the attitudes of the individuals involved. This position was supported with numerous research findings and theoretical statements.

Using well-known typologies for social systems, two dichotomous social systems were identified. In one of these,

the social interaction patterns are described as personal, affective, informal, and accepting. This type was termed Integrative for the purpose of this study. The second of these types of social systems is characterized by social interaction patterns that are impersonal, cognitive, indifferent and formal. This type was termed Non-Integrative for the purpose of this study.

It was hypothesized that the attitudes of students were most likely to be influenced by schools having social interaction patterns approaching that of the Integrative social system. By consequence, the hypothesis implied that the attitudes of students would not be influenced in schools having social interaction patterns approaching that of the Non-Integrative type of social system.

The rationale also identified the orientation of the public schools as that of the middle class. Considerable evidence was given to support this contention. This would mean that the schools place a high value upon achievement and social and occupational attainment. With this orientation of the school social system in mind, an attitude was selected for study which had been shown to be related to socioeconomic class background. The attitude selected was that of occupational aspirations. Inasmuch as students with low socioeconomic background would have occupational aspirations that differed from those valued in the school, the study concentrated its attention upon this group of

students. This enabled the study to look at social systems of middle class orientation with students of lower class orientation interacting within them. If the school social systems were Integrative, the attitudes of low socioeconomic class students should tend to be influenced in the direction of the middle class orientation. In terms of the attitude under study, this would mean that the occupational aspirations of the low socioeconomic background would be raised.

To assess the nature of the social interaction patterns in the schools, eight social interaction factors were measured. These social interaction factors determined: (1) the degree to which the school social system served as a source of peer friendships for students, (2) the degree to which the school social system served as a source of adult friendships, (3) how well and personally did teachers know students, (4) the degree to which students turned to people within the school social system when encountering problems, (5) the degree to which students turned to fellow students for assistance with problems, (7) how frequently students socially interacted with staff personnel, and (8) the degree to which teachers relied upon within-the-school contacts when identifying students whom they felt they knew best.

These factors were measured in thirty-four high schools in twenty-three states. The occupational aspirations of the low socioeconomic class, male students were also

measured.

Schools which measured high on the majority of the social interaction factors were called Integrative. Those that measured low on the majority of the interaction factors were called Non-Integrative. In addition, five of these factors were primarily concerned with teacher-student social interaction. Schools measuring high on the majority of these factors were termed Teacher Integrative, and those scoring low on the majority of these factors were termed Teacher Non-Integrative.

The design of the study controlled for two variables. These variables were: (1) the general socioeconomic level of the student body in each of the high schools, and (2) the parent hopes that the students would attain a college education.

Statistical tests were made on fifty hypotheses to determine whether or not the occupational aspirations of the low socioeconomic students were significantly different in the high schools of differing social interaction patterns. This included tests on each of the social interaction factors separately. Five hypotheses were tested which did not fall within the main thesis of the study but were related to it. The results of the tests were presented with the pertinent data.

Conclusions

This study tested fifty hypotheses which predicted a relationship between the social interaction patterns in thirty-four high schools and the occupational aspirations of students with low socioeconomic backgrounds. Only four of these hypotheses were upheld by the data. On the basis of these findings, it must be concluded that, in general, the social interaction patterns as measured in this study are not related to the occupational aspirations of the low socioeconomic class, male students in these thirty-four high schools.

Forty of these hypotheses were concerned with students as individuals socially interacting in schools possessing differing social interaction patterns. It is within this group of hypotheses that the four which were upheld are found. The data were in a positive direction but not significantly so in twenty-two of the remaining thirty-six hypotheses. Although this disposition of the data is worthy of note, no conclusions can be drawn from it.

Of the four hypotheses that were upheld by the data, three were found in schools characterized by a low socioeconomic student body level and low parental college aspirations for the students. The data were favorably disposed but not significantly so in five of the remaining seven hypotheses tested on this group of schools. Although these results do

indicate that, to a limited degree, a relationship between the social interaction patterns and the occupational aspirations of the students in this group of schools exists, no conclusion can be made.

The tests also attempted to determine the relationship, if any, between each of the eight social interaction factors separately and the occupational aspirations of the low socioeconomic class students. These tests were made on each of the factors separately in all of the four different school groupings. None of the eight factors was shown to be significantly related to the occupational aspirations of the students in all of the four school groupings. This would indicate that no one of the social interaction factors is more related to the occupational aspirations of low socioeconomic class, male students than any other.

The results do indicate that parents influence upon the occupational aspirations of students is very important. Low socioeconomic class students do have higher occupational aspirations in high schools in which a high percentage of the parents have college aspirations for the students than in high schools in which but a low percentage of the parents have college aspirations for the students.

It can also be concluded from the results that the general socioeconomic level of the study body in these thirty-four high schools is related to the occupational aspirations of the low socioeconomic class, male students.

In general, low socioeconomic class, male students have higher occupational aspirations in high schools in which the socioeconomic level of the student body is high than in high schools in which the socioeconomic level of the student body is low.

The general hypothesis of this study stated that the attitudes of students of low socioeconomic background will be more like the attitudes of the middle class in schools characterized by affective, personal, social interaction patterns than in schools characterized by cognitive, impersonal social interaction patterns. On the basis of the results obtaining in this study, this hypothesis is rejected.

Implications for Further Study

Future studies in this area will have to reckon with two factors: (1) the degree and direction of parental influences, and (2) the general socioeconomic level of the student peer group. Both of these factors have exhibited a clear relationship to the occupational aspirations of students. Future research should not only determine the level of orientation of these factors, but should be concerned with the extent to which the sources of these influences are accepted or rejected. For example, parents may have high educational aspirations for the students but the students may be related more closely to the peer group than to the parents. In this case, the influence of the parental

orientation is limited and the influence of the peer group is enhanced. By accounting for these interrelationships, the role of the school may be more clearly understood.

The general socioeconomic level of the student body is not only related to the aspirations of students, but there is some evidence that differing social interaction patterns are also related to this aspect. In attempting to relate social interaction patterns and attitudes, this dual relationship cannot be overlooked.

Two other approaches are feasible for studies within this general area. One method might be to approach the problem by studying each individual student and his interaction patterns. This procedure would identify the nature of the individual's relationship with the school social system and, controlling for pertinent personality variables, seek to establish the relationships between these patterns and the aspirations of the individuals. This procedure would lend itself well to statistical analysis, but the results would not be generalizable to the impact of the school social system.

A second approach would be experimental in nature. This approach would use two groups of students that are matched on relevant personality characteristics. A group leader of known cultural orientation would then develop differing social interaction patterns within each of the two groups. In one group, cognitive, impersonal social

interaction patterns would be established, in the second, affective, personal social interaction patterns would be established. Following a period of time, the orientations of the members in both groups could be compared. The results of such an experiment could have important implications for educational institutions.

The relationship between occupational aspirations and educational aspirations has been established in several studies. Education is a means by which an individual can attain his occupational goals. In brief, occupational aspirations are an "end" attitude with respect to educational aspirations which are a "means" attitude. It should be noted, that the implications of occupational aspirations go beyond that of formal education. The importance of this attitude in terms of certain societal changes was discussed in Chapter One. With these relationships and considerations in mind, occupational aspirations appear to be an important dimension for further consideration in educational research.

The social interaction factors of this study were measured for the most part with self-reporting instrumentation. Determining the social interaction patterns by direct observation has advantages of validity and reliability not obtainable by the self-reporting method. Although the direct observation method is difficult to use, the results of this study indicate that such a procedure may yield

significant findings. The results of this study also suggest that significant results are most likely to be obtained in schools characterized by a low socioeconomic student body and a low percentage of parents having college aspirations for the students.

Insofar as the social interaction factors as measured in this study are not all positively related, future research may find it advisable to distinguish the related groups of factors for the purpose of working under a unitary construct.

Whether or not schools can influence the students' occupational aspirations or any other attitudes of similar nature, is tentatively answered in the negative. It is hoped that future research may uncover the school social components which lend themselves to this process. Whether or not we can cope with some of the problems of our times may depend on it. The engineering of social change may prove to be one of man's most important challenges.

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APPENDIX A

Selection of Schools

Letters and Forms

Letter to State Department of Public Instruction

Dear

With a grant from the U. S. Office of Education, members of the Michigan State University staff are conducting a study of new high school buildings in the United States. Specifically we are interested in determining the effects of school building design and utilization upon the people who use the buildings. During the year, approximately thirty high schools will be selected throughout the country for study. These buildings will have been completed and occupied during the four year period of 1955-1958. Examples will be selected from among conventional compact buildings and among those which are decentralized in a campus arrangement. Within the compact and campus types, we will seek those which are organized along a "School-Within-School" pattern and those which are organized along more conventional lines. All buildings should be "outstanding examples" of school architecture regardless of basic design scheme or pattern of organization. Comparisons will then be made in the patterns of interaction of school personnel and students among the extreme types.

As a person with recognized ability and judgment in the school plant field, you can assist us greatly in the selection of schools to be studied. Would you compile a list of not more than six high schools completed and occupied between 1955 and 1958 which you believe to be among the best buildings in your state? It would facilitate our efforts if you could also identify the superintendent of the school districts involved.

We should like to forward you a copy of the final report of our study for your files.

Very cordially yours,

RECOMMENDATION OF SCHOOLS

MICHIGAN STATE UNIVERSITY

Ref.: U. S. Office of Education March, 1960
Project No. 918

No.	Name of High School	Location	Superintendent of District
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____
6.	_____	_____	_____

Signature: _____

Letter to Superintendent of Schools

Dear_____:

The United States Office of Education is supporting a study to determine the effects, if any, of school building design and utilization upon the interactions and attitudes of the staff and students of thirty of the nation's outstanding high schools. The study will be conducted by a research team from Michigan State University during the fall of 1960. Many non-building factors obviously affect patterns of interaction; therefore, schools will be chosen from every region of the country and from each major type of school-community in order to obtain the necessary representation in our sample.

Earlier this year, each state department of public instruction gave us a list of the six most outstanding new high schools in its state. The _____high school of your district was so recommended to us as a possible example for study; hence, our letter to you. The study would involve approximately two hours of testing among staff and students spread over a two day period in the Fall of 1960. In addition, the study team would conduct a complete survey of the building itself. The district will of course share in the results and attendant publicity associated with the study.

If you would like to discuss the possibilities of participating in the study, we would like to have a member of our staff visit with you personally at your convenience in May. The staff member will be prepared to discuss all details of the study with you at that time, and to make final selection of the schools for our sample of thirty.

Meantime, our initial selection of schools to be visited would be greatly facilitated if you could direct a member of your staff to complete the following inventory of your school district and of the characteristics of the new high school.

We should appreciate very much your early reply.

Very cordially yours,

MICHIGAN STATE UNIVERSITY

Study of Effects of Building Design and Utilization

Upon High School Staff and Student Personnel

Financed Under Public Law 531

U.S. Office of Education, Project No. 918

I. SCHOOL DISTRICT INFORMATION

A. What grades are taught in the school district? (Check)

( ) K-12 ( ) 7-12 ( ) 9-12 ( ) 10-12 ( ) Other_____
Specify

B. What is the total enrollment of the school district?_____

C. What was the approximate per pupil current expenditure excluding capital outlay of the school district during 1958-59? (Check)

( ) less than $250 ( ) $250-299 ( ) $300-349
( ) $350-399 ( ) $400-499 ( ) $500-or more

D. In what general type of community or area is the school district located? (Check)

( ) urban center ( ) village ( ) industrial suburb
( ) "bedroom" suburb ( ) non-farm rural ( ) rural farm
( ) Other_____
specify

E. How many public high schools are located in the district? (Check)
( ) 1 ( ) 2 ( ) 3 ( ) 4 or more

F. Approximately how many square miles are enclosed by the school district? (Check)

( ) less than five ( ) 5-10 ( ) 11-15 ( ) 16-20
( ) 21-25 ( ) 26-30 ( ) more than thirty

II. INFORMATION ABOUT THE _____HIGH SCHOOL

A. What grades are included in the high school? (Check)

( ) 7-12 ( ) 8-12 ( ) 9-12 ( ) 10-12 ( ) 10-14

B. What is the current enrollment per grade?

7	8	9	10	11	12	Total

C. From approximately what radius does the school draw its students? (Check)

( ) less than 1 mile ( ) 1-3 miles ( ) 4-6 miles
( ) 7-9 miles ( ) 10-15 miles ( ) more than 15 miles

D. Approximately what proportion of the student body is transported by school buses? (Check)

( ) none ( ) less than 10% ( ) 10-25% ( ) 26-40%
( ) 41-70% ( ) more than 70%

E. How many full time non-teaching certicated personnel (e.g. librarian, administrators, counselors) are employed in the high schools?_____
(Include combination teacher-counselors, etc. under F below)

F. How many full time classroom teachers are employed in the high school? _____

G. Approximately what number of the professional staff are males? _____

III. INFORMATION CONCERNING HIGH SCHOOL ORGANIZATION AND PROGRAM

A. Approximately what proportion of the high school's graduates attend college? (Check)

( ) less than 25% ( ) 25-49% ( ) 50-74% ( ) 75% or more

B. Into how many class periods is the typical school day divided?

_____A.M. _____P.M. _____Total

C. How many minutes are alloted to the typical class period? (Check)

( ) 45 ( ) 50 ( ) 55 ( ) 60 ( ) 70 Other:_____
specify

D. How many minutes are typically alloted to period changes? (Check)

( ) 3 ( ) 4 ( ) 5 ( ) 6 ( ) 7 Other:_____
specify

E. Approximately how many students are currently enrolled in each of the following types of high school programs?

Type of Program	Number Enrolled
1. College Preparatory:	_____
2. Commerical:	_____
3. General:	_____
4. Other (Specify):	_____
_____	_____
_____	_____

F. Is a copy of the course schedule for the current semester available? If so, would you please attach a copy to this questionnaire? IF NOT, would you answer the following questions?

1. How many one semester courses are currently taught?____
2. How many two-semester courses are currently taught?____
3. Is there a "homeroom" provided each student ? _____ If so, how frequently does "homeroom" meet each week? _____
4. Is there a study hall provided? _____
5. Is there an "activity" or "extra-curricular" period scheduled at some time during the regular school week? _____

G. Which of the following two statements most closely describes your high school plan of operation? If neither, please describe briefly how your plan operates.

( ) 1. Students move each 45-70 minutes from class to class in order to pursue a course of 4-6 subjects with different teachers. Teachers normally remain in their subject area classrooms.

( ) 2. Students remain in one area of the building for "blocks of time" (longer than one period) with the same teacher or team of teachers in order to pursue their "basic" or "general education" subjects.

( ) 3. Other: (Please describe briefly) _____

_____

_____

IV. INFORMATION CONCERNING THE HIGH SCHOOL BUILDING AND SITE

A. Approximately how many acres are contained in the school site? (Check)
( ) less than 10 ( ) 11-20 ( ) 21-30 ( ) 31-40
( ) 41-60 ( ) more than 60

B. How many stories are provided in the classroom sections of the building? (Check)
( ) 1 ( ) 2 ( ) 3 or more

C. When was the building first occupied? (Check)
( ) 1954 ( ) 1955 ( ) 1956 ( ) 1957 ( ) 1958
( ) 1959

D. Is a descriptive brochure (e.g. dedication program) which contains a rough floor plan of the building available? If so, please attach a copy to the questionnaire.

E. Which of the following statements most closely describes the manner in which pupils are distributed within your buildings? Please recognize that some portions of the building (e.g., gym or lunchroom) may be used by all pupils.

( ) 1. "Grade Level Distribution": Pupils are grouped on separate floors, in separate wings, or in separate "little schools" according to separate grade levels (i.e. each grade has its own floor, wing, or "little school.")

( ) 2. "School-Within-School Distribution": pupils in groups from ALL GRADE LEVELS (e.g. 100 pupils from each grade 10, 11, 12) are housed on separate floors, in separate wings, or in separate "little schools" for substantial portions of the total school program.

( ) 3. "Subject Area Distribution": each floor, wing or "little school" houses a different subject area or combination of subject areas. Pupils normally move from area to area throughout the building.

( ) 4. Other: (Please describe briefly)

APPENDIX B

Characteristics of Schools

School Code Numbers

Code Number	Name of High School	Location
1	Hiram Johnson	Sacramento, California
2	Mayfair	Bellflower, California
3	Glendora	Azusa, California
4	Bellflower	Bellflower, California
5	Sunnyside	Tucson, Arizona
6	San Angelo	San Angelo, Texas
7	Syosset	Syosset, Long Island, New York
8	Hanover Park	Hanover, New Jersey
9	Northwest Classen	Oklahoma City, Oklahoma
10	Hueytown	Birmingham, Alabama
11	West Charlotte	Charlotte, North Carolina
12	Garinger	Charlotte, North Carolina
13	Columbus	Columbus, Nebraska
14	Mandan	Mandan, North Dakota
15	Kennett	Kennett, Missouri
16	Riverview Gardens	St. Louis, Missouri
17	Shoreline	Seattle, Washington
18	Mt. Rainier	Seattle, Washington
19	Mark Morris	Longvier, Washington
20	Woodrow Wilson	Portland, Oregon
21	Brookfield	Brookfield, Wisconsin
22	Maine Township West	Des Plaines, Illinois
23	Kimball	Royal Oak, Michigan
24	A. C. Flora	Columbia, South Carolina
25	Hempfield	Greensburg, Pennsylvania
26	North Hagerstown	Hagerstown, Maryland
27	Hampton	Hampton, Virginia
28	Andrew Warde	Fairfield, Connecticut
29	John Jay	Katonah, New York
30	Fairmont	Kettering, Ohio
31	Glenwood	Canton, Ohio
32	Linton	Schenectady, New York
33	Shaker	Newtonville, New York
34	Middlebury	Middlebury, Vermont

CHARACTERISTICS OF SCHOOLS

CODE	ENROLLMENT	GRADES IN SCHOOL	NUMBER OF TEACHERS	TEACHER PUPIL RATIO	AVERAGE ENROLLMENT PER GRADE
1	1,997	10-12	92	21.71	665.67
2	1,160	9-12	45	25.78	290.00
3	1,583	9-12	52	30.44	395.75
4	1,783	9-12	65	27.43	445.75
5	620	9-12	29.5	21.02	155.00
6	1,406	10-12	73	19.26	468.67
7	1,239	9-12	76	16.30	309.75
8	925	9-12	55	16.82	231.25
9	2,053	9-12	73	28.12	513.25
10	1,150	10-12	43	26.74	383.33
11	854	10-12	34	25.12	284.67
12	1,641	10-12	58	28.29	547.00
13	452	10-12	21.5	21.02	150.67
14	471	10-12	18.5	25.46	157.00
15	564	9-12	20.5	27.51	141.00
16	1,404	9-12	67.5	20.80	351.00
17	1,569	10-12	66	23.77	523.00
18	708	9-12	27	26.22	177.00
19	992	7-12	41	24.20	165.33
20	1,813	9-12	74.5	24.34	453.25
21	1,200	9-12	69	17.39	300.00
22	2,387	9-12	118.5	20.14	596.75
23	1,851	9-12	81.5	22.71	462.75
24	830	9-12	41	20.24	207.50
25	1,500	10-12	66	22.73	500.00
26	1,490	9-12	56.5	26.37	372.50
27	2,254	10-12	85.5	26.36	751.33
28	1,442	9-12	82	17.59	360.50
29	668	7-12	46	14.52	111.33
30	1,826	10-12	90	20.29	608.67
31	1,007	10-12	45	22.38	335.67
32	1,562	10-12	94	16.62	520.67
33	1,369	7-12	78	17.55	228.17
34	599	7-12	31.5	19.02	99.83

APPENDIX C

INSTRUMENTATION

STUDENT INSTRUMENTS

GENERAL INFORMATION

1. Name _____
   Last First Middle

2. Number of years in this school (count present year as one) (check) 1_____ 2_____ 3_____ 4_____

3. Age_____ Grade (check) 9_____ 10_____ 11_____ 12_____
   (Check one) Male_____ Female_____

4. Number of brothers_____ sisters_____.

5. What is your father's occupation? (If deceased, what was it?) _____

   a. Does he get paid by salary? Yes_____ No_____

   b. If yes, who does he work for? _____

   c. Does he own a business? Yes_____ No_____

   d. Does he have any people under him? Yes_____ No_____

   e. If yes, about how many? _____

6. Do you plan to go to college? (check) Yes_____ No_____

7. Do your parents hope you will go to college? (check) Yes_____ No_____

8. Of the following subjects, which do find easiest? (check one) English____ Mathematics____ History____ Science____ Art____

9. Of the following subjects, which do you find hardest? (check one) English____ Mathematics____ History____ Science____ Art____

10. Do you have a hobby? Yes____ No____ If yes, what is it?

_____

If you have more than one, give the one in which you are most interested.

SOURCES OF HELP INVENTORY

Students, like everyone else, frequently turn to other persons for assistance on problems and personal concerns. In each of the following imaginary problem situations, would you indicate the one person to whom you would most likely turn for assistance. Remember that your responses will not be seen by any person other than the Michigan State University research team.

---

1. If you were having difficulty with your studies, to whom would you most likely turn for advice or assistance. (check one)

_____1. house or homeroom teacher
_____2. student friend
_____3. principal
_____4. vice-principal
_____5. counselor
_____6. a friend from out of school
_____7. student organization
_____8. parents
_____9. other (please identify)
_____

2. If you were having difficulty in getting teacher understanding to whom would you most likely turn for advice or assistance. (check one)

_____1. house or homeroom teacher
_____2. student friend
_____3. principal
_____4. vice-principal
_____5. counselor
_____6. a friend from out of school
_____7. student organization
_____8. parents
_____9. other (please identify)
_____

3. If you were having difficulty in getting along with other students, to whom would you most likely turn for advice or assistance. (check one)

_____1. house or homeroom teacher
_____2. student friend
_____3. principal
_____4. vice-principal
_____6. a friend from out of school
_____7. student organization
_____8. parents
_____9. other (please identify)
_____

4. If you were having difficulty in participating in student activities, to whom would you turn for advice or assistance. (check one)

_____1. house or homeroom teacher
_____2. student friend
_____3. principal
_____4. vice-principal
_____6. a friend from out of school
_____7. a student organization
_____8. parents
_____9. other (please identify)_____
_____

5. If you were having difficulty deciding on a high school course to take, to whom would you turn for advice or assistance. (check one)

_____1. house or homeroom teacher
_____2. student friend
_____3. principal
_____4. vice-principal
_____6. a friend from out of school
_____7. a student organization
_____8. parents
_____9. other (please identify)_____
_____

6. If you were having difficulty in selecting a college or vocation to whom would you turn for advice or assistance. (check one)

_____1. house or homeroom teacher
_____2. student friend
_____3. principal
_____4. vice-principal
_____5. counselor
_____6. a friend from out of school
_____7. student organization
_____8. parents
_____9. other (please identify)_____
_____

OCCUPATIONAL ASPIRATION SCALE

THIS SET OF QUESTIONS CONCERNS YOUR INTEREST IN DIFFERENT KINDS OF JOBS. THERE ARE EIGHT QUESTIONS. EACH ONE ASKS YOU TO CHOOSE ONE JOB OUT OF TEN PRESENTED.

READ EACH QUESTION CAREFULLY. THEY ARE ALL DIFFERENT. ANSWER EACH ONE THE BEST YOU CAN. DON'T OMIT ANY.

1. Of the jobs listed in this question, which is the BEST ONE you are REALLY SURE YOU CAN GET when your SCHOOLING IS OVER?

2. Of the jobs listed in this question, which ONE would you choose if you were FREE TO CHOOSE ANY of them you wished when your SCHOOLING IS OVER?

1.1	____ Lawyer	2.1	____ Member of the board of directors of a large corporation
1.2	____ Welfare worker for a city government	2.2	____ Undertaker
1.3	____ United States representative in Congress	2.3	____ Banker
1.4	____ Corporal in the Army	2.4	____ Machine operator in a factory
1.5	____ United States Supreme Court Justice	2.5	____ Physician (doctor)
1.6	____ Night watchman	2.6	____ Clothes presser in a laundry
1.7	____ Sociologist	2.7	____ Accountant for a large business
1.8	____ Policeman	2.8	____ Railroad conductor
1.9	____ County agricultural agent	2.9	____ Railroad engineer
1.10	____ Filling station attendant	2.10	____ Singer in a night club

3. Of the jobs listed in this question, which is the BEST ONE you are REALLY SURE YOU CAN GET when your SCHOOLING IS OVER?

4. Of the jobs listed in this question, which ONE would you choose if you were FREE TO CHOOSE ANY of them you wished when your SCHOOLING IS OVER?

3.1	____ Nuclear physicist	4.1	____ Psychologist
3.2	____ Reporter for a daily newspaper	4.2	____ Manager of a small store in a city
3.3	____ County judge	4.3	____ Head of a department in state government
3.4	____ Barber	4.4	____ Clerk in a store
3.5	____ State governor	4.5	____ Cabinet member in the federal government
3.6	____ Soda fountain clerk	4.6	____ Janitor
3.7	____ Biologist	4.7	____ Musician in a symphony orchestra
3.8	____ Mail carrier	4.8	____ Carpenter
3.9	____ Official of an international labor	4.9	____ Radio announcer
3.10	____ Farm hand	4.10	____ Coal miner

5. Of the jobs listed in this questions, which is the BEST ONE you are REALLY SURE YOU CAN HAVE by the time you are 30 YEARS OLD?

5.1 ____ Civil engineer
5.2 ____ Bookkeeper
5.3 ____ Minister or priest
5.4 ____ Streetcar motorman or a city bus driver
5.5 ____ Diplomat in the United States Foreign Service
5.6 ____ Sharecropper (one who owns no livestock or farm machinery, and does not manage the farm)
5.7 ____ Author of novels
5.8 ____ Plumber
5.9 ____ Newspaper columnist
5.10____ Taxi driver

6. Of the jobs listed in this question, which ONE would you choose to have when you are 30 YEARS OLD, if you were FREE TO HAVE ANY of them you wished?

6.1 ____ Airline pilot
6.2 ____ Insurance agent
6.3 ____ Architect
6.4 ____ Milk route man
6.5 ____ Mayor of a large city
6.6 ____ Garbage collector
6.7 ____ Captain in the Army
6.8 ____ Garage Mechanic
6.9 ____ Owner-operator
6.10____ Railroad section hand

7. Of the jobs listed in this question, which is the BEST ONE you are REALLY SURE YOU CAN HAVE by the time you are 30 YEARS OLD?

7.1 ____ Artist who paints pictures that are exhibited in galleries
7.2 ____ Traveling salesman for a wholesale concern
7.3 ____ Chemist
7.4 ____ Truck driver
7.5 ____ College professor
7.6 ____ Street sweeper
7.7 ____ Building contractor
7.8 ____ Local official of a labor union
7.9 ____ Electrician
7.10____ Restaurant waiter

8. Of the jobs listed in this question, which ONE would you choose to have when you are 30 YEARS OLD, if you were FREE TO HAVE ANY of them you wished?

8.1 ____ Owner of a factory that employs about 100 people
8.2 ____ Playground director
8.3 ____ Dentist
8.4 ____ Lumberjack
8.5 ____ Scientist
8.6 ____ Shoeshiner
8.7 ____ Public School teacher
8.8 ____ Owner-operater of a lunch stand
8.9 ____ Trained machinist
8.10____ Dock worker

SOCIAL SCALE

A. List the name of your best friend that is of your own age group. (Please Print)

_____ Where did you get to know
Last Name First Name this friend?
(check one)
Classes together___ Live in my neighborhood___ Church___
Other (name)_____

B. List the name of the adult you like best. Not a parent or relative. (Please Print)

_____ Where did you get to know this
Last Name First Name person?
(check one)
In-school activities___ Out-of-school activities___

C. How frequently do you get to talk with each of the following persons about your school work or personal problems? (check one response for each person)

	2 or 3 Times Each Day	Nearly Everyday	Frequently	Occasionally	Rarely
Principal	____	____	____	____	____
Assistant Principal	____	____	____	____	____
Homeroom Teacher	____	____	____	____	____
Guidance Counselor	____	____	____	____	____
Librarian	____	____	____	____	____

TEACHER INSTRUMENTS

HOW WELL DO WE KNOW STUDENTS?

As a simple challenge to your own knowledge of your students, would you please choose the one (1) student from all of those you are now teaching in grades 9, 10, 11 or 12 whom you feel you knew best.

Please try to supply the requested information about this student from memory. Please do not consult your cumulative records or other sources for help. The questions are so designed that it will be impossible for most teachers to supply all requested information accurately. Please, therefore, do not feel embarrassed if you cannot answer all questions to your satisfaction from memory.

1. Name of student _____
   Last First Middle

2. Do you know this student from out-of-school contacts?
   Yes____ No____

3. Age of student (check) ___14 ___15 ___16 ___17 ___18;
   Grade of student (check) ___9 ___10 ___11 ___12

4. Occupation of student's father_____

5. Number of children in student's family. Boys___ Girls___

6. Do the parents hope this student will go to college?
   Yes____ No____

7. Does this student plan to go to college? Yes___ No___

8. Which of the following subjects does this student find easiest? (Check one) English___ Mathematics___ History___ Science___ Art___

9. Which of the following subjects does this student find hardest? (check one)
   English___ Mathematics___ History___ Science___ Art___

10. Does this student have a hobby? Yes___ No___ If yes, what is it?_____
    If there are several, give the one in which he or she is most interested.

APPENDIX D

SOCIOECONOMIC DATA

SOCIOECONOMIC DATA

School Code Number	Sum of X	Mean	Number of Students	Variance
1	64437	39.1	1648	501.24
2	38048	38.3	993	451.82
3	72309	44.5	1460	555.59
4	48874	36.9	1324	425.69
5	20628	35.1	588	467.78
6	54379	42.6	1277	767.08
7	70767	57.5	1230	453.65
8	45608	51.4	887	581.77
9	102316	56.3	1817	447.05
10	23584	31.0	761	390.81
11	12827	25.5	503	416.52
12	54879	46.2	1189	506.49
13	15266	36.6	417	587.46
14	13068	31.0	421	500.82
15	16851	39.4	428	528.47
16	56874	44.0	1292	507.23
17	70157	48.5	1447	566.28
18	28029	48.0	584	575.98
19	15622	36.9	423	659.91
20	89348	55.5	1611	566.44
21	65222	57.6	1132	468.03
22	104802	50.0	2100	515.09
23	89300	52.3	1706	528.72
24	41243	62.4	661	378.26
25	40792	32.8	1242	499.30
26	48413	40.2	1203	575.06
27	74803	43.4	1723	477.32
28	65925	48.6	1356	554.29
29	17746	56.0	317	534.80
30	82411	53.1	1552	525.55
31	39956	46.5	859	617.07
32	54935	45.5	1207	570.02
33	36820	50.2	734	585.74
34	12114	32.3	375	557.71
TOTAL	1688353	46.3	36467	579.17

APPENDIX E

DATA ON PARENT HOPES FOR COLLEGE

PARENT HOPES FOR COLLEGE

School Code Number	Yes	No	Total	Percentage Yes
1	225	20	245	91.8
2	123	6	129	95.3
3	109	3	112	97.3
4	162	10	172	94.2
5	61	3	64	95.3
6	200	5	205	97.6
7	55	5	60	91.7
8	57	16	73	78.1
9	92	1	93	98.9
10	162	20	182	89.0
11	94	2	96	97.9
12	149	16	165	90.3
13	72	14	86	83.7
14	73	8	81	90.1
15	45	6	51	88.2
16	108	19	127	85.0
17	167	26	193	86.5
18	76	4	80	95.0
19	81	3	84	95.3
20	100	11	111	90.1
21	50	9	59	84.7
22	185	26	211	87.7
23	98	24	122	80.3
24	11	0	11	100.0
25	207	86	293	70.6
26	85	44	129	65.9
27	241	20	261	92.3
28	105	22	217	82.7
29	19	1	20	95.0
30	149	21	170	87.6
31	98	18	116	84.5
32	161	19	180	89.4
33	43	11	53	79.2
34	36	12	48	75.0
Total	3698	511	4209	88.4

APPENDIX F

DATA ON SOCIAL INTERACTION FORMS

SOURCES OF PEER FRIENDSHIPS

School Code Number	Total	Number In	Percentage In
1	750	426	56.8
2	475	259	54.5
3	428	251	58.6
4	603	344	57.0
5	270	150	55.6
6	610	336	55.0
7	363	174	47.9
8	410	219	50.1
9	812	417	51.4
10	346	156	45.1
11	211	110	52.1
12	543	293	54.0
13	86	48	55.8
14	200	126	63.0
15	216	111	51.4
16	609	310	50.9
17	673	357	53.0
18	265	140	52.8
19	178	104	58.4
20	681	395	58.0
21	243	143	58.8
22	1112	574	51.6
23	805	438	54.4
24	304	161	53.0
25	550	282	51.3
26	515	276	53.6
27	826	372	45.0
28	621	296	47.7
29	97	68	70.1
30	767	423	55.1
31	322	188	58.4
32	548	264	48.2
33	182	90	49.5
34	127	74	58.3
Total	15748	8375	53.18

High-High Group Average = 53.7
High-Low Group Average = 53.1
Low-High Group Average = 53.3
Low-Low Group Average = 52.4

SOURCES OF ADULT FRIENDSHIPS

School Code Number	Total In	Total Out	Percentage In
1	90	266	25.3
2	62	164	27.4
3	47	161	22.6
4	79	213	24.5
5	44	86	33.8
6	113	187	37.7
7	62	100	38.3
8	68	133	33.8
9	89	308	22.4
10	57	115	33.1
11	53	47	53.0
12	85	182	31.8
13	21	20	51.2
14	25	74	25.3
15	42	62	40.4
16	92	203	31.2
17	84	247	25.4
18	37	91	28.9
19	26	63	29.2
20	111	228	32.7
21	44	74	37.3
22	189	350	35.1
23	120	268	30.9
24	20	126	13.7
25	75	197	27.6
26	70	181	27.9
27	89	317	21.9
28	81	212	27.6
29	17	32	34.7
30	98	277	26.1
31	53	105	33.5
32	109	160	40.5
33	38	52	42.2
34	12	49	24.5
Total	2292	5350	30.0

High-High Group Average = 27.5
High-Low Group Average = 31.1
Low-High Group Average = 29.9
Low-Low Group Average = 30.5

FREQUENCY OF INTERACTION

School Code Number	Actual Frequency	Possible Frequency	Percentage
1	3,039	9,345	32.5
2	2,062	5,720	36.0
3	1,819	3,065	35.9
4	2,568	7,465	34.4
5	1,184	3,145	37.6
6	2,537	7,500	33.8
7	1,494	4,280	34.9
8	1,928	5,055	38.1
9	3,373	10,065	33.5
10	1,757	4,265	41.2
11	915	2,125	43.1
12	2,288	6,485	35.3
13	410	1,085	37.8
14	909	2,280	39.9
15	944	2,345	40.3
16	2,365	7,410	31.9
17	2,962	8,295	35.7
18	1,077	3,180	33.9
19	873	2,150	40.6
20	3,124	8,415	37.1
21	1,203	3,060	39.3
22	5,018	13,860	36.2
23	3,282	9,905	33.1
24	1,536	3,775	40.7
25	2,436	6,785	35.9
26	2,341	6,430	36.4
27	3,511	10,235	34.31
28	2,936	7,735	38.0
29	491	1,155	42.5
30	3,544	9,550	37.1
31	1,488	3,935	37.8
32	2,394	6,755	35.4
33	868	2,235	38.8
34	602	1,540	39.1
Total	69,278	192,630	36.0

High-High Group Average = 35.9
High-Low Group Average = 36.5
Low-High Group Average = 35.6
Low-Low Group Average = 35.5

GENERAL SOURCES OF HELP

School Code Number	In	Out	Total	Percentage In
1	1681	560	2241	75.0
2	982	59	1041	94.3
3	872	399	1271	68.6
4	1227	604	1831	67.0
5	569	251	820	69.3
6	1318	499	1817	72.5
7	765	310	1075	71.2
8	950	290	1240	76.6
9	1653	757	2410	68.6
10	821	210	1031	79.6
11	452	165	671	67.4
12	1176	458	1634	72.0
13	223	36	259	82.1
14	472	122	594	79.5
15	495	148	693	77.0
16	1306	506	1812	72.1
17	1475	537	2012	73.3
18	563	222	785	71.7
19	391	139	530	73.8
20	1430	631	2061	69.4
21	531	201	732	72.5
22	2547	817	3364	75.7
23	1649	765	2414	68.3
24	608	283	891	68.2
25	1229	420	1649	74.5
26	1161	398	1559	74.5
27	1876	600	2476	75.8
28	1482	382	1864	79.5
29	220	72	292	75.3
30	1666	609	2275	73.2
31	742	217	959	77.4
32	1268	368	1636	77.5
33	410	127	537	76.4
34	248	91	339	73.2
Total	34458	12307	46765	73.68

High-High Group Average = 69.7
High-Low Group Average = 74.4
Low-High Group Average = 74.5
Low-Low Group Average = 74.5

FACULTY SOURCES OF HELP

School Code Number	Total	Faculty	Percent Faculty
1	2241	1180	52.7
2	1041	662	63.6
3	1271	618	48.6
4	1831	820	44.8
5	820	388	47.3
6	1817	835	46.0
7	1075	573	53.3
8	1240	718	57.9
9	2410	1022	42.4
10	1031	588	57.0
11	671	325	48.4
12	1634	776	47.5
13	259	159	61.4
14	594	336	56.6
15	643	349	54.3
16	1812	939	51.8
17	2012	1041	51.7
18	785	410	52.2
19	530	320	60.4
20	2061	1045	50.7
21	732	366	50.0
22	3364	1715	51.0
23	2414	1120	46.4
24	891	429	55.2
25	1649	857	52.0
26	1559	847	54.3
27	2476	1264	51.1
28	1864	1164	62.4
29	292	163	55.8
30	2275	1222	53.7
31	959	515	53.7
32	1636	929	56.8
33	537	291	54.2
34	339	178	52.2
Total	46765	24164	51.7

High-High Group Average = 48.5
High-Low Group Average = 52.9
Low-High Group Average = 51.4
Low-Low Group Average = 53.2

TEACHER KNOWLEDGE OF STUDENTS

School Code Number	Number of Teachers	Total Incorrect	Average Number Wrong
1	102	375	3.68
2	43	135	3.14
3	71	194	2.73
4	70	230	3.28
5	34	111	3.26
6	66	184	2.79
7	70	225	3.21
8	54	147	2.72
9	68	220	3.23
10	42	138	3.29
11	43	100	2.32
12	56	123	2.20
13	24	69	2.88
14	20	76	3.80
15	20	25	1.25
16	63	215	3.41
17	70	177	2.52
18	30	78	2.60
19	33	82	2.48
20	76	208	2.74
21	63	163	2.59
22	107	334	3.12
23	80	326	4.08
24	35	105	3.00
25	68	178	2.62
26	51	190	3.72
27	82	304	3.71
28	78	194	2.49
29	29	87	3.00
30	87	283	3.25
31	45	132	2.93
32	83	250	3.01
33	61	197	3.23
34	70	225	3.21
Total	1994	6080	3.05

High-High Group Average = 3.00
High-Low Group Average = 3.03
Low-High Group Average = 3.09
Low-Low Group Average = 3.05
Note: This instrument is scored negatively, e.g. the higher the number wrong the lower is the teacher knowledge of students.

PEER SOURCES OF HELP

School Code Number	Total	Peer Sources	Percentage Peer
1	2241	427	19.1
2	1041	258	24.8
3	1271	229	18.0
4	1831	354	19.3
5	820	160	19.5
6	1817	421	23.2
7	1075	174	16.2
8	1240	196	15.8
9	2410	534	22.2
10	1031	217	21.0
11	671	112	16.7
12	1634	370	22.6
13	259	45	17.6
14	594	125	21.0
15	643	122	19.0
16	1812	334	18.4
17	2012	349	17.3
18	785	136	17.3
19	530	66	12.4
20	2061	282	13.7
21	732	130	17.8
22	3364	632	18.8
23	2414	449	18.6
24	891	149	16.7
25	1649	328	19.9
26	1559	272	17.4
27	2476	519	21.0
28	1864	253	13.6
29	292	47	16.1
30	2275	361	15.8
31	959	186	19.4
32	1636	270	16.5
33	537	58	17.1
34	337	58	17.1
Total	46765	8716	18.5

High-High Group Averages = 17.5
High-Low Group Averages = 17.2
Low-High Group Averages = 20.1
Low-Low Group Averages = 18.5

SOURCES OF BEST KNOWN STUDENTS

School Code Number	Number Out	Number In	Percentage Out
1	20	80	20.0
2	8	32	20.0
3	20	50	28.6
4	10	57	14.9
5	13	21	38.2
6	26	37	40.6
7	11	55	11.7
8	12	42	22.2
9	20	46	30.3
10	13	29	31.0
11	21	22	48.8
12	19	36	34.5
13	10	14	41.7
14	12	8	60.0
15	15	5	75.0
16	17	43	28.3
17	13	57	18.6
18	5	25	16.7
19	13	17	43.3
20	9	51	15.0
21	9	51	15.0
22	17	88	16.2
23	16	59	21.3
24	10	24	29.4
25	23	42	35.4
26	24	25	49.0
27	32	50	39.0
28	21	55	27.6
29	16	12	57.1
30	25	55	31.3
31	15	30	33.3
32	20	62	24.4
33	19	44	30.2
34	7	12	36.8
Total	555	1334	29.4

High-High Group Average = 28.7
High-Low Group Average = 23.4
Low-High Group Average = 31.2
Low-Low Group Average = 40.5

APPENDIX G

OCCUPATIONAL ASPIRATIONS DATA

OCCUPATIONAL ASPIRATIONS DATA

School Code Number	Sum of OAS Scores	Number of Students	Average
1	9647	247	39.1
2	5366	131	41.0
3	4697	114	41.2
4	7485	178	42.1
5	2544	65	39.1
6	8627	206	41.9
7	2564	61	42.0
8	2881	75	38.4
9	4140	94	44.0
10	7485	184	40.7
11	3831	93	41.2
12	6124	154	40.0
13	3358	86	39.0
14	3073	81	37.9
15	2112	51	41.4
16	5091	130	39.2
17	7955	195	40.8
18	3248	81	40.1
19	2249	52	43.2
20	4649	111	41.9
21	2279	59	38.6
22	8912	216	41.3
23	5057	129	39.2
24	537	11	48.8
25	10704	287	37.3
26	4789	131	36.6
27	11461	264	43.4
28	5144	131	39.3
29	940	20	47.0
30	6869	171	40.2
31	5081	121	42.0
32	7196	184	39.1
33	2023	54	37.4
34	1832	48	38.1
Total	169950	4215	40.3

High-High Group Average = 42.5
High-Low Group Average = 40.1
Low-High Group Average = 40.9
Low-Low Group Average = 38.0
Variance = 122.4