

This dissertation has been
microfilmed exactly as received 69-1977

BIRD, Henry Bouton, 1940-
SOME SELECTED FACTORS RELATING TO
ADOLESCENT GROUP FUNCTIONING.

The University of Oklahoma, Ph.D., 1968
Social Psychology

University Microfilms, Inc., Ann Arbor, Michigan

© HENRY BOUTON BIRD 1969

ALL RIGHTS RESERVED

THE UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

SOME SELECTED FACTORS RELATING TO
ADOLESCENT GROUP FUNCTIONING

A DISSERTATION

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for the

degree of

DOCTOR OF PHILOSOPHY

BY

HENRY BOUTON BIRD

Norman, Oklahoma

1968

SOME SELECTED FACTORS RELATING TO
ADOLESCENT GROUP FUNCTIONING

APPROVED BY

William R. Hood
John G. Bruhn
W. Jack Kanak
Jim E. Reese
Adelmy

DISSERTATION COMMITTEE

PLEASE NOTE:

Not original copy. Several pages
have indistinct print. Filmed as
received.

University Microfilms.

ACKNOWLEDGMENTS

I would first like to give special thanks to Bob Hood, without whose encouragement and cooperation this dissertation would never have gotten off the ground.

I would also like to thank Drs. John Bruhn, Jack Kanak, Jim Reese, and Richard Terry for serving on my committee and providing helpful criticism along the way.

For help in collection of the data, special thanks must be given to Tim Barclay, whose assistance permitted samples to be gathered in Boston. I would also like to express appreciation for the cooperation of the Oklahoma City School Board in allowing the questionnaire to be given in Oklahoma.

To Barbara Altstatt, for typing, grammatical assistance and general optimism, there cannot be thanks enough.

This work would also not have been possible without the love and understanding of my wife Nicky and my family, who bore the brunt of much of my frustration along the way.

Lastly, there is a unique appreciation on my part of all that was done for me while I was employed by Dr. Muzafer Sherif. Without the motivation I received from him, I would never have been able to complete this work.

TABLE OF CONTENTS

	Page
LIST OF TABLES	v
 Chapter	
I. A GENERAL INTRODUCTION TO THE PROBLEM AREA	
AND SOME RELATED VARIABLES	1
Introduction	1
Historical Background	2
The Hypotheses	26
II. METHOD	30
Subjects	30
Instrument	34
Procedure	45
III. RESULTS	50
Samples Obtained	50
Results and Analysis	53
IV. SUMMARY AND CONCLUSIONS	69
REFERENCES	73
APPENDIX A	78
APPENDIX B	88

LIST OF TABLES

Table	Page
1. An Example of Five Most Important Activities and Members Thereof	46
2. An Example of Five Most Important Activities and Status Positions Therein	48
3. Number of Activity Groups Per Respondent by Social Class	55
4. Number of Activity Groups Per Respondent by Conceptual Levels	55
5. Number of Activities (A) by Social Class	57
6. Number of Activities (A) by Conceptual Levels	57
7. Number of Friends by Social Class	58
8. Number of Friends by Conceptual Levels	58
9. Membership Consistency by Social Class	60
10. Membership Consistency by Conceptual Levels	60
11. Status Consistency by Social Class	61
12. Status Consistency by Conceptual Levels	61
13. Social Class by Conceptual Levels	64
14. Summary of Results	68

SOME SELECTED FACTORS RELATING TO
ADOLESCENT GROUP FUNCTIONING

CHAPTER I

A GENERAL INTRODUCTION TO THE PROBLEM AREA
AND SOME RELATED VARIABLES

Introduction

This study examines the relationships between certain social characteristics of adolescents, their educational environments and their behavior in small groups. More specifically, the present study attempts to elucidate the manner in which the socio-economic status and level of conceptual functioning of adolescents are related to consistency in group membership and status positions, the number of their friends, and the number of groups to which they belong.

These factors are not easy measures to obtain, nor are they measures which can normally be obtained for large numbers of subjects with a pencil and paper test device. Traditional measures of adolescent behavior, such as participant observation and sociometrics, have limitations which this study is designed to minimize. There is a limited amount of theoretical discussion involved, the assumption being that the measures used have meaning in and by themselves, and need not be extended beyond their operations.

Historical Background

Small Groups. There is a relatively short, but intensive history to the research of the social behavior of the adolescent, beginning in large part with the studies in the 1920's and 1930's of adolescent gangs in the Chicago area. Before this time there was a growth and development of small group studies in broader terms, as indicated to some extent by the bibliography compiled by Strodbeck and Hare (1954) of small group research. Prior to this time the way had been prepared for small group research by trends of thought in industry, biology, psychoanalysis, psychology, ethics, and sociology. Karl Marx's (1904) studies of industry resulted in an early awareness of the effects of co-worker groups and led to a variety of social-psychological experiments. Studies of suggestibility done by Bernheim (1884) led to increased interest in group psychology on the part of the investigators such as Tarde (1890), Binet (1900), and Freud (1922).

Although these earlier studies concerned groups, it was not until the Chicago studies that adolescents became a major focus for small group research. Under the impetus of Robert Park, investigations of this period were conducted by men such as Anderson (1923), Thrasher (1927), Hiller (1928), Zorbaugh (1929), Shaw (1930), and Whyte (1943), all of whom turned to empirical studies within large city slum areas. Frederic Thrasher (1927), in his study of Chicago gangs, inquired into the organization of the juvenile gang, its environment, the relationships which

help to form and stabilize it. The most important conclusion which he reached concerning the location and distribution of these gangs was that "gangland represents a geographically and socially interstitial area in the city" (Thrasher, 1927, p. 22). By use of the term "interstitial," he meant those "spaces that intervene between one thing and another" (Thrasher, 1927, p. 22). Much in the way foreign matter collects in cracks and other open spaces, the gang takes its place in between those areas which are more settled and stable. The gang arises in the slum areas where children are crowded together. The unity of the gang is maintained over time through conflict with outside forces. Disintegration of the gang usually takes the form of new and more attractive alternatives for the individual, the moving of the family to other areas, the intentional break-up by police, or dissension within the group itself.

For the purposes of this paper, it is important to point out the developing concern with the relationships between individuals and the external forces which precipitate their forming a unity of a group or a gang. Group formation often results when individuals simultaneously face difficult common problems. This unity tends to break down after the problems have been solved, or are removed in some other way, or other problems arise which are of greater importance to the individuals involved.

The study of leadership-followership relations has long been focal to the social sciences, and became an integral part

of adolescent study with the rise in interest in adolescent groups. Some investigations have pointed to the necessity of viewing leadership in relation to the situation in which it is found, and have concluded that a successful leader is one who can best adjust to the situation at hand. Thus, if the situation changes greatly, and different behavior or ability is required of the leader, he will either change his behavior to meet the new situation or will step down and let another person assume leadership. Bogardus (1934), discusses this process of leadership control in the light of several studies conducted in leadership situations. Bass (1960), discusses two general types of leadership, one where it depends more on the situation, and the other where it is a function of individual differences. Paul Hare (1964), has introduced the notion of consistency into leadership behavior, noting that "individuals who receive a high rating in one situation are generally expected to take the leader role in other situations" (Hare, 1964, p. 244). He states that consistency will be high if such factors as "the social characteristics of the members, group size, and task remain the same even though specific group members may be changed" (Hare, 1964, p. 244). If there is variance among these factors there is likely to be low consistency.

Social Class. While researchers may speak of stressful conditions which relate to group formation, and the relevance of the situation in leadership behavior, there seems to be only a minor emphasis on the class position of the adolescent, as well as other variables which change with a change in class

position. One aspect of social class, usually associated with members of the lower class levels, has been termed "cultural deprivation." There are a variety of ways in which this term may be defined. Descriptively, Frank Riessman (1962), has characterized the deprived child as

- (a) physical and visual rather than aural,
- (b) content-centered rather than form-centered,
- (c) externally oriented rather than introspective,
- (d) problem-centered rather than abstract-centered,
- (e) inductive rather than deductive,
- (f) spatial rather than temporal,
- (g) slow, careful, persevering (in areas of importance), rather than quick, facile, flexible,
- (h) definite lack of formal language skills, but high development of informal language and gestures (Riessman, 1962).

He further points out that there are differences between the goals of a system, such as the schools, and those of the culturally deprived child. The school values learning for learning's sake, achievement of a high level of abstract thinking and self-expression, whereas the culturally deprived child is more apt to be looking for specific vocational training and training to cope with day-to-day problems.

Kerber and Smith (1964), describe culturally deprived children as those who

...do not know enough of our cultural heritage, do not have the possessions, rewards, competencies, or knowledge which are too much taken for granted as given everybody in the American society. The cultural poor child has some of the following characteristics:

- (1) He comes from a blighted, segregated, or socially disorganized area.
- (2) His family has little education and are often hostile and abusive.

- (3) The socio-economic status of the home is low. Employment and money to pay bills are constant insecurities.
- (4) The cultural traits of home and neighborhood - the arts, ideational resources, social organizations and recreational outlets, and esthetic surroundings are squalid and inadequate.
- (5) The cultural environment conditions him to violence and degradation. He has few opportunities to experience the meanings of the spoken American ideals (Kerber & Smith, 1964, p. 155).

Although cultural deprivation may be thus characterized in terms of certain descriptive phrases, it is yet difficult to apply an operational definition to it. On the other hand, the allied concept of social class has received a good deal of intensive investigation which has led to several operational definitions of social class. Among others, scales have been developed by Warner, et al., (1941-1947), Warner, Meeker and Eells (1949), Warner, Havighurst and Loeb (1944), Davis, Gardner and Gardner (1941), Centers (1949), Hollingshead (1949), and Hyman (1942). Though measures differ, there is agreement that several hierarchical class distinctions do exist. On the upper levels there is more material wealth, more education, and better housing than on the lower levels. In general, it may be assumed that children from the upper classes stand a greater chance of being culturally enriched, whereas children from the lower classes might tend to be more culturally deprived. It might be argued that upper-class children could be found who would be classified as culturally deprived, yet these could probably be considered exceptions. Acceptance of this assumption simply

permits the use of one of these scales in operationally defining the concept of cultural deprivation. The use of this concept in conjunction with that of social class may help to make clear the psychological implications of social class which are of consequence in this study.

August Hollingshead (1949), stands out prominently in his effort to evaluate some of the variables associated with class position, and how these variables affect adolescent groupings. In his study of Elmtown (Hollingshead, 1949), he was able to differentiate five class positions, and related number of activity groups, types of cliques, educational goals, and several other variables to class position. He divided all of the adolescent cliques which he studied in Elmtown into three categories: school cliques, recreational cliques, and institutional cliques. This categorization simply represents a special common interest on the part of the clique members in either school activities, recreational activities, or interests centered around some form of institution such as a church or youth group. Membership may change from one clique to another so that, i.e., members of a recreational clique may be composed of the members of more than one school clique or institutional clique, and vice-versa. Hollingshead (1949), also points out that adolescents tend to behave in ways appropriate to the training they have had within the family setting.

If an adolescent has been trained in the home and in the neighborhood to act, let us say, like a class I person¹, and his clique associations are with class I boys or girls, that adolescent will reveal a class I behavior pattern in his non-family social activities (Hollingshead, 1949, p. 446).

If this is indeed true, then there will be differences among all of the adolescent cliques of a given area such as Elmtown, and these differences will be related to class position of the members. Some of these differences will constitute the problems to be discussed in the next section.

Conceptual Levels. Another variable which may or may not be directly related to socio-economic class position is the level of conceptual functioning of the individual. The term, "levels of conceptual functioning," is here defined along the same lines as used by Harvey, Hunt and Schroder (1961), Harvey (1963), and Harvey (1967), in work on this topic. The significance of this concept arises from a series of studies of the impact of certain stimuli upon the individual.

In accordance with Helson's (1959) theory of adaptation level, there is a necessity of viewing the effect of any given reinforcing agent in relation to present stimuli (simultaneous pooling) as well as a combination of present and past stimuli (successive pooling) (Harvey, 1963, p. 20). The adaptation level is differentially sensitive to stimuli above and below it, and may change as a result of changing inputs.

¹Class I refers to upper class.

Thus, "performance efficiency relates directly to the judged, in contrast to the physical, magnitude of the reinforcing agent (Harvey, 1963, p. 25). Citing a series of experimental results, in particular the work of Helson, Bevan (1963), demonstrates his notion that variability of reinforcement is a more crucial variable than degree of reinforcement. By means of successive pooling, a subject derives an adaptation level, or an average of all relevant past experiences, by which a given stimulus is compared. If the stimulus is perceptually greater than the subject's adaptation level, there is a greater likelihood of response to that stimulus than if it is on the same level or below. Use of a steady reinforcement, then will alter the adaptation level in the direction of the reinforcement until, increment by increment, there is no perceptual difference between the reinforcement and the adaptation level. At this point the reinforcement ceases to serve its purpose. If, on the other hand, the reinforcement is randomly presented about a mean level of intensity, there will, each time, be a differential between the reinforcement and the adaptation level, the reinforcement will be perceived, and will produce the desired stimulus. Similarly, there is an optimal level of tension at which performance is highest. If tension falls off or increases from this level, performance is adversely affected.

The effectiveness of a reinforcement, therefore, is a function of the tension level, which is maintained, or affected, in turn, by the perceived stimuli or reinforcement. The conceptual

system of any given individual sets limits as to the range of possible stimuli which will be allowed to impinge upon the organism. Alternative interpretations and courses of action are limited by the capacity of the system to incorporate and integrate them. A simultaneous, evolutionary process of development of conceptual systems and sensory capabilities seems in order. The product of this evolutionary process may be termed the self, synonymous, according to Harvey and Schroder (1963),

with an individual's interrelated totality of modes of ordering his psychological universe, with one's concatenation of more or less standardized cognitive tendencies or conceptual system(s) (Harvey & Schroder, 1963, p. 97).

Placing limits upon interaction with the environment limits the formation of concepts, which in turn restricts the development of a self system (Harvey & Schroder, 1963, p. 100). On the other hand, there are mechanisms which the organism itself brings into use in order to limit interaction with the environment to levels consonant with the established system within the organism. More explicitly, on the basis of prior experience, the organism seeks that which it expects. An unfamiliar stimulus, being in a sense unexpected, meets resistance by an organism.

The significance of the previous literature review to the present study should be made explicit. As a group is composed of a number of persons, it must in some way reflect the characteristics of those persons. Thus, if all of the persons are authoritarian in outlook, then it is unlikely that

the behavior of the group they form will be of a democratic nature. If a person is highly conservative, it is unlikely that he will choose to belong to a liberal organization, unless of course, there is some ulterior motive for his membership. If one wishes to understand the behavior of groups, then, it becomes important to define the groups under study in terms of the types of persons who constitute their membership. The variable of social class has already been investigated (Bird, 1967), and has been found to relate to specific aspects of the groups at different class levels. This relationship between social class and group characteristics covers a gap which may be too wide to permit interpretation other than by way of inference. Knowing the background of an individual and the types of groups to which he belongs may say something about these two variables, but says little or nothing about the individual himself, nor what factors within the individual are derived from and interact with these two variables. This study is aimed at bridging the gap which is seen to exist between environmental factors on the one hand, and group processes on the other. The device employed here to accomplish this will be one which has been developed largely by O. J. Harvey. The basis of this device will be briefly discussed.

There are two aspects of the functioning of an individual which seem to be of great importance, which are the amount of material available within the storage of past experience, and the ability to integrate this and other materials. Harvey

and Schroder (1963) have developed one view of the self system which relies heavily upon the inclusion of these two factors. In talking about "concreteness" versus "abstractness" (Harvey & Schroder, 1963, p. 113), they are referring to a dimension which is defined, at the concrete end, as a "state of minimal differentiation of the relevant situation," and at the abstract end as a "state of maximal differentiation and integration" (Harvey & Schroder, 1963, p. 114). Attainment of the abstract level infers having passed from the concrete level through several intermediate stages. These stages are enumerated by Harvey and Schroder (1963), as basically four different levels, from what they call Stage 1 (concrete) to Stage 4 (abstract).

An individual at the Stage 1 level of conceptual development is characterized by dependence upon external authority, lack of differentiation and integration, categorical (Good vs. Bad) evaluative schemata, a need for highly structured situations, and resistance to change and environmental inputs. "Criteria of conduct are those gained from some authority: the parent, the teacher, God, the group, conventional norms, or the organization" (Harvey & Schroder, 1963, p. 119). Such an individual experiences conflict when external rules and authority are violated, and avoids this conflict through strict conformity.

The individual at Stage 2 is structurally very similar to the individual at Stage 1 level of development. The training of the Stage 2 person, however, is seen to be less consistent than at the Stage 1 level. This inconsistency leads to dependency

more upon the self than others, and eventually leads to rebellion from external efforts at control and denunciation of those things which serve as criteria of conduct for the Stage 1 person. The conceptual structure of this person, while focused in a direction opposite to the Stage 1 individual, is in its own way just as restricted in that there is only one direction to travel.

With more consistency and reciprocity between the individual and his environment comes the development of a Stage 3 level of conceptual functioning. Here the person is reinforced in his interaction with extrinsic elements, but there is congruently an overprotection, a guarding by the training agent from excess involvement. A Stage 3 individual thus finds himself dependent upon others, seeking interaction with others to gain their help, and becoming conformant so as to achieve these ends. As is pointed out, his dependency is on individuals rather than on rules, as is the case for Stage 1 and 2 individuals (Harvey & Schroder, 1963, p. 121). This person, due to his frequent interactions and relative autonomy, attains more conceptual categories and a greater integration of these categories.

The Stage 4 person matures in a world where he is intentionally given the autonomy to find his own solutions to problems. He neither dominates nor is dominated by the training agent. His experience is problem-solving and consequent development of personal skills allows him to disassociate himself from external criterion of self-worth. He "is able to try alternate

approaches to his environment without fear of rejection or punishment (Harvey & Schroder, 1963, p. 122). To this individual, information, per se, is more highly valued than either external authority or individuals:

More than any of the previously described systems, the individual possessed of a Stage 4 capacity is more truly independent, an individual in his own right, committed neither negatively nor positively to particular external criteria; neither in control of others nor controlled by others. He is both autonomous and interdependent. His conclusions are made conditional upon relativistic premises. And his approach to problems is more varied and adaptive (Harvey & Schroder, 1963, p. 122).

It should be apparent that this notion of conceptual levels is immediately relevant to several aspects of group structure and group functioning. If there are indeed discrete levels of conceptual function, then the consequences of group membership should be different for each level. An individual at the Stage 4 level of conceptual functioning will not have the same needs, and will not look for the same things in group membership as an individual at the Stage 1 level. As Harvey and Schroder (1963) point out, individuals on the Stage 4 level of functioning should not only be capable of assuming more role relationships, but should be less committed to those roles than individuals on lower levels (Harvey & Schroder, 1963, p. 123).

Some contrast to this theoretical framework is provided by several current positions, especially that of Sherif and Sherif (1964):

...the relevant implication is that underlying the individual's membership in informally organized groups through his own choosing, there is a motivational base in terms of the individual's sense of identity, the stability of this identity, his need for human company and mutual support, his felt need to act in concert with the fellow group members for the effective attainment of his cherished goals (Sherif & Sherif, 1964, p. 55).

They also state that "one of the strongest promptings of human beings is to establish stable, secure social ties with others" (Sherif & Sherif, 1964, p. 270). If the present theoretical formulation has any validity at all, it should be seen that what is being discussed by Sherif and Sherif (1964), is phenomena which may be more or less restricted to lower conceptual functioning individuals. It may be that in fact, social scientists have been restricted to the study of a specific population, i.e., persons on lower levels of conceptual functioning or lower social class levels. Persons who function on abstract levels, or who are members of the upper classes may either be poor subjects, in terms of following instructions, or may be too busy to be available for testing and observation. The researcher may also find the study of upper class persons difficult if these persons do not want to be studied, as they have more power to implement their desires than persons on the lower social levels, and are thus more able to shut the researcher out of their social system. If such a subject bias has existed in the historical development of social-psychological theory, then certain corrective efforts seem apropos. As it is impossible to re-examine what has been actually observed in past studies, the alternative is

- to compare what has evolved out of these observations with a variety of samples of individuals. If there is at least one segment or one sample which does not fit with evolved theory, then that theory has been selective in its historical development. The purpose of this study is to see if findings derived from the studies of lower class adolescents also hold true for upper class adolescents and for adolescents who conceptualize on an abstract level.

Background of Related Variables. The present study evolved as a result of extensive participant observation of adolescent boys in a natural setting. The boys were from the upper-class areas and attended an independent school in Oklahoma City. Observations were made of this school population, and a number of boys in particular, over a complete school year. The original purpose of the observations was to ascertain the group affiliations of upper-class adolescents, and to compare these findings with those reported for lower-class adolescent boys (Sherif & Sherif, 1964). The criteria used to define a small group were that the group should include at least five or six boys, that they should remain together through a variety of situations over a period of at least several weeks, and that there be at least some form of permanent status hierarchy. It became evident that there was a pronounced absence of any small groups among the boys of the school which adhered to these criteria. Most of the social relations which were in evidence were characterized by a high degree of change. The

membership of what best approximated a group at any given time would change rapidly in a short period of time, due to changes in activity or interests on the part of participating adolescents. Not only was a great deal of change noted in membership within an activity, but there was also an equally variable pattern of leader-follower relations within the activities. Thus, when playing football, the boys involved would tend to accept the guidance or leadership of one person, usually the person who was most adept at the particular activity. This leadership would change if special skills within the activity changed, and if the leader were not equipped to maintain his leadership. If the focus of interest changed, and the playing of football came to an end, this activity group would tend to disintegrate, and others would form when the boys went off, for instance, in their cars. They would meet other boys who had been at some other activity, who would join them in their cars, and a whole new arrangement would very quickly arise, this time being centered around cars, or whatever else the boys might have decided to do. Leadership, in turn, changed unless the boy who had served as leader in the football situation also had the capacity to serve as the leader in the car activity group. This most likely meant that he would have to be a good ballplayer and have a high status car, one that was fast or had some other special feature. This was observed to happen in a few cases, but more often the leadership changed hands, especially when the membership of the activity groups changed radically. The more adolescents that were involved,

and the more interests they shared, the greater was the chance that one activity grouping would disintegrate, and the members would join members of other activity groups, becoming separated from one another in the process. Conversely, if a person had few friends and few interests, the chance seemed to be greater that he would associate with those same friends more often, and that one of them would more often, or more consistently, be designated as the leader.

The first of the four variables developed out of this period of participant observation dealt with the membership patterns of the various activity groups. It has been mentioned that the upper-class adolescents who were studied tended to be highly mobile in their social relations¹. This mobility was evident as they moved from one activity group to another with a minimum of stress in transition. Each student sought to achieve as much as possible for himself, for this meant not only parental and peer approval, but a chance to continue on to college, which was the expressed desire of the majority of the male portion of the student body, and most of the females as well. Membership in an activity group, then, may be partially a result of the fact that certain friends of an individual participate in the activity, but a more important factor may be an interest within the individual himself in the particular activity. It is likely, then, that an adolescent in the observed

¹The term "mobile" is here meant to include both vertical and horizontal mobility, in the sense that the adolescents observed moved freely from high status positions to low status positions, and vice-versa, as well as from one social situation, or activity group, to another.

setting would select an activity because of its inherent attractiveness to him before he would choose it merely to accompany his friends. This statement is generally supported by Hollingshead's (1949) finding in Elmtown that adolescents of the higher social classes were more competitive in their social interactions than adolescents of the lower classes, and that this takes the form of a personal need:

The culture complex associated with classes I, II, and III trains boys and girls to respond positively to competitive situations such as that presented by examinations and intelligence tests. Experience imbues them with a need for personnel achievement that is expressed in their constant search for success, teaching them from infancy to face each new situation aggressively and to overcome it to the best of their ability (Hollingshead, 1949, p. 175).

It is assumed that in the "search for success" which is mentioned here, there is something beyond success in finding friends.

The success seems to be more in the areas such as exams and tests, which Hollingshead (1949) specifies. Membership in an activity group, then, may be due largely to a personal interest, an interest in what may be gained within that activity which may lead the individual to a higher level of personal success, as measured not by "popularity" so much as by performance.

Where membership in an activity group is determined more by personal needs than by social pressures, it is less likely that a number of persons would all belong to the same groups. This is particularly true when these individuals are also conceptualizing their environment in highly abstract terms. For persons of this type, being restricted to any one category,

whether in terms of thought processes or in terms of the groups to which they belong, could easily be a frustrating experience which they might well intentionally avoid. This might not be true of a person of abstract thinking in a lower class setting, if his survival rests on his being a member of a single social unit. It also might not be true of a concrete thinker in an upper class setting, who does not have the ability to utilize the complexity of social patterns which are potentially available to him. At any rate, there is a greater probability that a person from an upper class setting will have available to him, and will therefore involve himself with a variety of groups, and that an abstract thinker will be more likely to search out more complex situations, including social groups. These observations constitute the first of the variables to be investigated in this study.

The characteristic of competitiveness among upper-class adolescents which Hollingshead (1949) notes, and which was also noted in the independent school, probably would explain much of the changing of status positions which occurred as individuals moved from one activity to another.. This is the basis of the second of the four variables studied herein. Where there is a high level of competition, each person within an activity will be striving to outperform the others, and status positions would tend to be filled more in terms of performance than other characteristics such as personality, or performance in an unrelated activity.

Bernard Bass (1960) proposed a theoretical system of leadership behavior which is highly relevant here:

It is suggested that if we can determine some of the functional demands and limitations placed upon a potential leader in different designated situations, and then determine the personal characteristics associated with persons best able to meet those demands and work within the limitations, we will be in a position to forecast the likelihood of success and effectiveness of each candidate for the leadership of a specified situation, knowing the specific characteristics of the situation and each candidate (Bass, 1960, p. 21).

Thus, if each person within an activity is highly competitive, and the activity differs significantly in the eyes of the participants from other activities, then there is a strong likelihood that the selection of leadership will depend in large part upon the ability of the individual members at that particular activity. This state of affairs may be hypothesized to be more prevalent among adolescents of the upper classes than among adolescents of the lower classes, who, according to Hollingshead (1949), are less likely to be highly competitive. It is less likely also that an abstract thinking person will be satisfied to follow the same person in different groups. By the very fact that he is able to categorize his world into more classes, he is better prepared to accept more persons as his leader, if he had a leader at all. He may even feel that it is too difficult to categorize a single person as the leader at a given time, so there may be a problem in measuring this fact among persons of very high abstract thinking.

In his description of the bureaucracy of industry, Moore's (1951) coinage of the term "spheres of competence" closely parallels the above notions of functional limitations placed upon leaders:

The industrial executive, technical specialist, junior manager, line supervisor, and to some degree the productive laborer have special spheres of competence based upon particular abilities of functional importance to the organization as a whole. Within these broad or narrow spheres of competence the individual specialist reigns supreme (Moore, 1951, p. 87).

The notion of spheres of competence is particularly applicable to activity groups of adolescents of the upper classes. It was observed in the independent school that each individual tended to have some special characteristics, such as intellectual ability, ability to get along with girls, or a variety of other abilities which might at some time or another, become important to the social structure of the school as a whole. Within a given activity, then, the status hierarchy which at any moment might arise could be said to depend in large part on the spheres of competence of the individual participants, and the fact that competence is a determinant of leadership. Also, the individual who functions on an abstract level of conceptualization may be said to have more spheres of competence in a sense than the individual with more concrete conceptualization. If each member of a group has more conceptual spheres of competence, there should be a finer selective process involved in determining the leader, and as situations change there should be more sensitivity by

the leadership position to the demands of the situation.

Social mobility also appeared to be enhanced by the fact that observed upper-class adolescents generally belonged to many activity groups, and had a large number of friends. These two characteristics represent the third and fourth dependent variables which will be studied herein. In this connection it should be noted that Hollingshead (1949) reported that upper-class adolescents, at least in Elmtown, participate in more activities than do lower-class adolescents (Hollingshead, 1949, p. 201), and that more participants are involved in each activity among adolescents of the upper classes (Hollingshead, 1949, p. 463). The abstract person, who is able to divide his experiences into many categories may do two things. First, he may actually belong to a variety of activity groups, the experiences which he gains from them being sufficiently complex to suit his needs. On the other hand, he may belong to a limited number of activity groups, but he may view any one of them in different ways, so that his perception as a member of a group differs from the situation as viewed by someone from outside the group. That is, this individual may view two sports as being distinct and two separate activities, while in fact they may be one and the same. For the purposes of this study, what is considered important is what the individual perceives, so that if he dichotomizes similar activities into separate activities, they will be considered to be separate.

The four variables which were introduced have so far been specifically related to upper-class adolescents. The same variables may be related to lower-class studies which have been cited in this chapter. The difficulty here lies in the fact that in few, if any, of these studies was social class used as an independent variable. From the descriptions which Thrasher (1927) gives of the environment of the gangs he studied, it may be assumed that the members were generally lower-class adolescents (Thrasher, 1927). There is, however, no way of estimating the levels of conceptual functioning which might have characterized the individuals involved. At best, it might be suggested that as the world has become increasingly urbanized and complex, the individuals who live at different periods of time have been grossly characterized by different degrees of complexity in their conceptual abilities. Thus, an adolescent growing up in Chicago in the 1930's might have functioned at a concrete level of conceptualization relative to the adolescent who grows up in Chicago in the 1960's. There is no evidence however, to support this notion.

If the adolescents which Thrasher (1927) discusses were indeed from the lower socio-economic levels, then the four variables discussed above may be related to a lower-class setting, using Thrasher's (1927) study as a basis for generalization. First of all, a lower-class adolescent would belong to a small solid group of which the membership remains the same. He would have a specific number of friends, probably those who joined with him in

the activities of that group, and these friends would be the same regardless of the situation in which the group was functioning. Secondly, this group would involve a relatively stable hierarchical structure, such that there would be a leader who remains the leader in most situations, as well as other high and low status positions which remain the same. Thirdly, the lower-class adolescent belongs to one group, or perhaps to only a few. Fourthly, the lower-class adolescent has a small number of friends, most likely the other members of the group to which he belongs.

More recent research has been done by Sherif and Sherif (1964). In all of the studies which they cite, inclusive of "high," "middle" and "low" class levels (Sherif & Sherif, 1964, p. 7), group solidarity is accompanied by stable leader-follower relations. In terms of the observations made at the independent school, what is described by Sherif and Sherif (1964) does not coincide with the patterns observed in upper-class setting. If it is assumed that the model established by the Sherifs (1964) does not include the most upper classes, then their model may be used only to describe relatively lower-class settings. If their studies indeed include upper-class adolescents, and the groups observed were indeed small solid, consistent groups, there is yet the possibility that those particular individuals involved in their studies were by and large concrete in their thinking. If this were the case, it may well be that they were not representative of upper-class adolescents. One difficulty in the studies of Sherif and Sherif (1964) is the lack of an objective

assessment of social class (Sherif & Sherif, 1964, pp. 7-29), and a measurement of the conceptual abilities of the adolescents. It is assumed that the subjects in the majority of their studies were by and large from among the lower classes. In this context, adolescent "groups" would be viewed in much the same way as the groups in the Thrasher (1927) studies.

The Hypotheses

The four variables previously discussed can be formulated as hypotheses concerning the social behavior of adolescents as follows: (1a) the higher the social class level, the greater the extent to which adolescent activity groups include different persons; (1b) the more abstract the conceptual level of functioning, the greater the extent to which adolescent activity groups include different persons; (2a) the higher the social class level, the greater the extent to which adolescent activity groups are characterized by inconsistent leadership-followership relations; (2b) the more abstract the conceptual level of functioning, the greater the extent to which adolescent activity groups are characterized by inconsistent leadership-followership relations; (3a) the higher the social class level, the greater the extent to which an adolescent belongs to a wide variety of activity groups; (3b) the more abstract the conceptual level of functioning, the greater the extent to which an adolescent belongs to a wide variety of activity groups; (4a) the higher the social class level, the greater the extent to which an adolescent has a wide variety of friends; (4b) the more abstract the conceptual level

of functioning, the greater the extent to which an adolescent has a wide variety of friends.

The dependent variable concerning activity group membership mentioned in the first hypothesis, will hereafter be referred to as "membership consistency," and relates to whether or not a number of individuals remain together in a variety of activities. Thus, if an individual belongs to a specified number of activity groups, e.g., five, and the same persons join with him in each of these five activities, with no one dropping out, and no new members joining in, then the membership of those five activity groups may be said to be consistent. Conversely, if a different set of friends join with him in each of the five activities, then the membership of those five activities may be said to be inconsistent. The importance of this hypothesis is that if membership consistency does vary with class position as hypothesized, then any further statements about group functioning, and the importance of the group for the individual, must be related to the class position of the members of the group.

The dependent variable concerning leadership-followership behavior mentioned in the second hypothesis, will hereafter be referred to as "status consistency." This broad term is a corollary of terms used to describe particular forms of leadership. Graham Bell and Robert French (1961), for instance, have employed a similar concept. They investigated "the extent to which individuals maintain consistent leadership status in a series of informal discussion groups made up of different members (Bell & French, 1961, p. 275). The difference between this concept

and the term status consistency is mainly in the inclusion of the leader as well as other status positions. If for any given number of activity groups, e.g., five, there are three individuals who occupy the same relative status positions in each of the activities, so that one may be the leader in each activity, one may occupy another high status position, and one may be in the lowest status position in each of the activities, then these status positions may be said to be consistent with each other. If, on the other hand, there are three different persons in the three designated status positions for each of the five activities, so that no one person holds a designated status position in more than one activity group, then status would be inconsistent, among the five activities. The importance here, as with the first hypothesis, is that if this hypothesis is proven valid, the variable of social class must be accounted for when making generalizations about the nature of leadership-followership relations among adolescent groups.

The dependent variable concerning the variety of activity groups mentioned in the third hypothesis, is of importance mainly in helping to describe the general nature of the social world in which adolescent members of various class positions function. If this hypothesis is substantiated, this would lead to a greater possibility of the first two hypotheses being true. That is, with a widened variety of activity groups, there is likely to be more diversification required on the part of members and leaders of those activity groups. This was directly observed to be the case

within the setting of the independent school. The upper-class youth of Elmtown, similarly, were shown to participate in more activities than lower-class adolescents (see above p. 11). No causal relationship is implied here, but rather a correspondence between class position and diversification, or number of activity group affiliations.

The dependent variable concerning the number of friends an adolescent associates with, mentioned in the fourth hypothesis, is a general statement of class differences. If upper-class adolescents have more friends to associate with, there is a greater likelihood, at least in terms of probability, that membership consistency will be low and status consistency will be low.

CHAPTER II

METHOD

Subjects

The populations from which the samples were drawn were chosen from two distinct geographical areas of the country, and from two areas within each of the geographical locations. These were subjectively evaluated as being at least economically distinct, and likely to be occupationally and educationally distinct. One location was within Boston, Massachusetts, wherein there were two schools, one an independent and the other a public school. The independent school is located near the public school, but is notable for its interest in obtaining students who are academically oriented. The high school, while limited in its ability to select such students, is located in an area of Boston where the academic atmosphere is relatively mature. It is a residential area within which professionals of often highly trained backgrounds live. Because of the tuition of the independent school, it can be assumed that there are economic and academic differences between the two schools. According to the basis of this study, these differences in background and opportunity should be reflected in differences

in the types of social activities in which the adolescents participate.

The other geographical location was Oklahoma City, Oklahoma, wherein three schools are available, one an independent school and two others, both public schools. The independent school is located near one of the public schools, and both border the upper-class residential area of the city. This public school will be referred to here as the upper-class public school. The independent school, such as the one in Boston, has both a tuition and an interest in preparing their students academically for continuation on to college. The upper-class public school is similar to the Boston public school, and is limited in its ability to select students. The student body is composed of many members of the upper and middle classes, but also contains a significant proportion of more lower class students from surrounding areas.

The remaining public school within the Oklahoma City area was a high school in the southeastern portion of the city, which is predominately more lower class and fundamentalist than the other two schools. This school will be referred to here as the lower-class public school. The inclusion of this school was designed to serve as the source of homogeneously lower-class adolescents, with minimal effect of middle and upper-class values and aspirations, as might have been the case among the lower-class members of, say, the upper-class public school.

Within each of the schools, students ranging in age

from 16 to 17 were thought to be the best population for use in this study. This accounted for the possibility that younger students might not have yet become fully integrated into the social life of the school. Older students, probably being seniors, might have been involved in activities particular to being seniors, and thus might have represented a special population of adolescents. Both males and females were incorporated into the design, and there were no racial restrictions. For practical reasons, a truly random sample of eligible students could not be obtained. This would have involved the entire population of 16 and 17 year-olds, from which, then, a random sample would have to have been drawn, and would have meant some disruption of the entire school. In lieu of such sampling, single classes taking either a general required course or an overflow study hall were chosen, as this facilitated administration, and minimized disruption of the school schedule. If a study hall had been used, this might have meant that there was a chance that the students tested were those who chose not to take elective courses, and were the less academically oriented students within the school. On the other hand, if students within an elective course were used, they might have been the more academically oriented students, and this would not have been an accurate representation of the school population. If the study hall was an overflow type, necessitated by a lack of teachers, the study hall bias may not have been as relevant as if the study period had been due to the students' lack of interest

in available courses.

The size of each school sample depended largely upon the cooperation of the individual school, but a goal of at least 100 per school was set. The size of an average class among the schools chosen was highly variable, so that different sample sizes were taken.

One major criticism may be made of the sampling techniques used here. With the use of any school system as a survey population, the survey is thereby limited to students, eliminating the possibility of testing non-students, or adolescents who have dropped out of school. This factor might be of critical importance for the results of this test due to the fact that one of the independent variables is social class. Hollingshead (1949) has shown that with a rise in social class there is a consequent rise in the number of adolescents who remain in school, and conversely, with a drop in social class there is a drop in the number who remain in school (Hollingshead, 1949, p. 330). If this is true in Oklahoma City and Boston, then this sample will be biased in favor of students coming from the upper classes, or of students perhaps who are relatively abstract in their conceptualizations. Data were not available for analysis on this point within either of the cities, but inferences may be made from available data. In the 1967-1968 school year, the percent of absences for the year is recorded, and may be accepted as the best available estimate of the drop-out rate. Among the two public schools in Oklahoma City, the percent of absences for

the lower-class school was 10 percent, and that of the upper-class school was six percent. The Oklahoma City independent school had an absentee rate of three percent, while the independent school in Boston had a rate of three to five percent, and the public school in that city had a rate of four to five percent. This is in support of Hollingshead's (1949) findings in Elmtown. Although this bias was regrettable, the obstacles to obtaining a truly representative sample of adolescents were such as to warrant its acceptance. There should be, however, sufficient spread in the samples taken to make a comparative analysis within that population of non-drop-outs.

Instrument

Participant observation always has some limitations. The most important of these are: bias by the observer due to preconceived notions, expectations, and values; effect of the observer upon the natural situation; limited scope of observation, leading to some data being unobserved; and difficulty in recording the data observed. The participant observations made in the independent school were limited by many of these same factors, as well as some unique to an upper-class setting. For example, it was impossible to be with at least a small unit of boys for any great length of time, let alone all the boys who interacted within the total social picture. It was equally difficult to observe the entire social structure at any given time, and most observation was limited to the school situation. Many of the important social events occurred in the various homes of students,

where they had much freedom and space, as well as a variety of recreational facilities, and often servants to help out. There was some difficulty in knowing where these events were taking place, as well as being able to attend them, due largely to the spontaneity of most social gatherings. The result of these restrictions was that only a small segment of the over-all social behavior of the students was observed. This was multiplied by the fact that these particular adolescents had a wide variety of opportunities open to them, such as available spending money, cars, sports, and recreational facilities both in their homes and at school. Relations among them were so widespread that a small social unit lasted for only a short period of time, and did not represent the entire social environment for any one of the participants. Where a small solid group is available for study, an observer is more able to remain with that group for longer periods of time, and in a wider variety of situations.

For the reasons stated, it was decided that some other measuring device would have to be employed if a more comprehensive perspective were to be obtained. It was also necessary to consider the use of another population of adolescents for purposes of comparison. The school in question was limited largely to members of the upper classes who could afford the tuition. This difference is sufficient to suggest that the observations made at the school may have been unique to that school and those members of the upper classes who attended it.

First of all, it was decided that an appropriate tool

of investigation might be made of some type of questionnaire. This would provide not only immediate data, without having to spend a great deal of time in observations, but a large sample could easily be gained, being limited in size only by available subjects. There are, however, some serious limitations in the use of a questionnaire to gather data of the type desired.

Faced by the impersonality of a questionnaire, as opposed to rapport established in participant observation, many adolescents might be reluctant to give information concerning their friends and their own specific activities. Use of a projective type of questionnaire was considered, but the data gained from a survey would not be specifically related to each respondent, and validity would have to be assumed. Another major obstacle to the use of a questionnaire was that in order to define specified friendship relations, some sort of identification would have to be used not only for the respondent, but for his friends as well. This would likely be done through the use of names, as is done in a sociometric analysis, which might lead the respondent to feel he was being personally investigated, or would be personally held responsible in some way for his answers.

A format was devised which would allow each respondent to answer the questionnaire without being identified (see Appendix A p. 78). This basically consisted of the use of a page which could easily be removed from the rest of the questionnaire, and on which there were a series of spaces in which the respondent

placed the names of his friends. This page would not be collected, thereby preserving anonymity of the respondent and his friends. Next to each space there was a letter of the alphabet, so that the spaces were lettered consecutively from A to Z. Respondents were instructed to use only the letters next to their friends' names on this list in answering the questions within the questionnaire. The major advantage of this device was that responses could be obtained which would relate to specific persons, without the need for using names. For the purposes of testing the stated hypotheses, the data thus gained were entirely sufficient.

The questionnaire consisted of four major sections. First there was a general page of short, relatively easy questions designed to draw the attention of the respondent by arousing his interest as much as possible. Within these questions were two questions, of father's occupation and father's education, which were used to estimate the social class position of the respondent. Based on what Hollingshead (1949) found in Elmtown, this was assumed to be a valid measure of the class position of the adolescent respondent (see above p. 7). Hollingshead's (1957) Two Factor Index of Social Position was used to evaluate the class position of the adolescent respondent, employing the two questions about the father. There were a variety of reasons which led to the use of this scale. Most importantly, it was supposed that the majority of adolescents who were asked their father's occupation would not be able to give an answer which

would be very explicit. This would also apply to the father's education, but to a lesser degree, as this is a more structured area. If income had been used, they would likely have had even less of an idea of what this might have been. Because of these factors, leading to somewhat low level of accuracy in responses, a highly refined social class scale was felt to be somewhat inappropriate. The Hollingshead scale was thought sufficient to delineate at least four separate class levels based on the responses of adolescents.

The second section of the questionnaire was of the sentence agreement-disagreement type, purporting to measure, among other things, the conceptual level of functioning of the individual. The first and most immediate task would be to operationally define what is meant by conceptual level of functioning. In order for it to be a significant contribution on the social psychological level, such a theoretical framework as presented here must have a measure, a means by which it may be entered as a significant variable into the study of interpersonal and intergroup relations.

Early studies of conceptual differentiation have been well summarized by Gardner and Schoen (1962, pp. 1-21). Most of these utilized tests which were largely of the sorting variety, wherein the subject's task was to sort objects or statements into groups. While perhaps of high validity, these tests present some difficulties both in application to large numbers of subjects and in control of testing conditions. For

greater application, a paper and pencil test would serve a better purpose. An early effort in this direction was the "This I Believe" (TIB) Test, developed in the form of a sentence completion test by Harvey (1967, pp. 210-211). For the purposes of the present study, this test offers the applicability to large numbers of subjects, yet requires some degree of subjective evaluation of the sentences completed by the subjects. Harvey's (1967) more recent development, the Conceptual Systems Test (CST), offers both the utility and the scorability of an objective multiple-choice paper and pencil test. This test was derived from items on the TIB test as well as some other tests, "purporting to measure personality aspects related to dimensions of conceptual systems" (Harvey, 1967, p. 211). Factor analysis of the CST items led to a number of factors which Harvey (1966) claims are "theoretically consistent with the major characteristics of the four principal conceptual systems or levels of concreteness-abstractness" (Harvey, 1966, p. 375). A major operational problem arises in Harvey's (1966) factors because the number of factors and their precise contents are unclear. For instance, in one article he uses four factors: divine fate control or religious fundamentalism; need for certainty or simplicity; tolerance of complexity and uncertainty; and relativism of truth (Harvey, 1966, p. 375). In another publication, he cites seven factors: divine fate control; need for simplicity-consistency; need for structure-order; distrust of social authority; friendship

absolutism; moral absolutism; and general pessimism (Harvey, 1967, pp. 211-212). In recent correspondence, Harvey defined six factors which would be derived from the CST: divine fate control; need for structure-order; need to help people; need for people; interpersonal aggression; and general pessimism. As this latter set of factors was defined in relation to a form of the CST which was used in this questionnaire, further discussion of the CST will be limited to them.

The six CST factors and the items which make up each of them are as follows:

I. Divine Fate Control

- A. In the final analysis events in the world will ultimately be in line with the master plan of God.
- B. The dictates of one's religion should be followed with trusting faith.
- C. There are some things which God will never permit man to know.
- D. The way to peace in the world is through religion.
- E. Marriage is the divine institution for the glorification of God.

II. Need for Structure-Order

- A. I like to keep my letters, bills, and other papers neatly arranged and filed according to some system.

- B. I like to have a place for everything and everything in its place.
- C. I like to have my life so arranged that it runs smoothly and without much change in my plans.
- D. I find that a well-ordered mode of life with regular hours is suitable to my personality.
- E. I don't like for things to be uncertain and unpredictable.

III. Need to Help People

- A. I like to help my friends when they are in trouble.
- B. I always like for other people to tell me their problems.
- C. I enjoy making sacrifices for the sake of the happiness of others.
- D. I like to treat other people with kindness and sympathy.

IV. Need for People

- A. I like to meet new people.
- B. I like to do things with my friends rather than myself.
- C. I enjoy very much being a part of a group.
- D. I prefer to do things alone, rather than with my friends (Item is reversed scored).
- E. I am very sociable and get along easily with nearly everyone.

V. Interpersonal Aggression

- A. I feel like telling other people off when I disagree with them.
- B. I like to criticize people who are in a position of authority.
- C. I feel like making fun of people who do things that I regard as stupid.
- D. I feel like getting revenge when someone has insulted me.

VI. General Pessimism

- A. Most people can still be depended upon to come through in a pinch (Item is reversed scored).
- B. You sometimes can't help wondering whether anything's worthwhile anymore.
- C. Anyone who completely trusts anyone else is asking for trouble.

These items are all imbedded in random order in the actual test device (Appendix A, pp. 78-87). With the exception of the two items noted, they are all evaluated in terms of agreement with the statements. That is, a high score on any factor would represent agreement with the items within that factor. Scoring is accomplished by assigning the value of 6 to a circled +3 ("I AGREE VERY MUCH"), 5 for a circled +2 ("I AGREE ON THE WHOLE"), 4 for a circled +1 ("I AGREE A LITTLE"), 3 for a circled -1 ("I DISAGREE A LITTLE"), 2 for a circled -2 ("I DISAGREE ON THE WHOLE"), and 1 for a circled -3 ("I DISAGREE VERY MUCH"). In

order to test the possibility that these phrases were not sufficiently separable, it was arranged for a subsample to be given the same test, but with the wording changed to "I AGREE STRONGLY," "I AGREE MILDLY," "I AGREE VERY LITTLE," "I DISAGREE VERY LITTLE," "I DISAGREE MILDLY," and "I DISAGREE STRONGLY."

A measure of conceptual abstractness or concreteness is derived from four of these six factors. The individual is defined as being at the most concrete, or Stage 1 level of conceptualization if he scores above the mean of the sample scores on Factor II, Need for Structure-Order. He is defined as being at the Stage 2 level if he scores above the sample mean on Factors V, Interpersonal Aggression, and Factor VI, General Pessimism. He is defined as being at the Stage 3 level if he scores below the sample mean on Factor II, below the mean on Factor V, and above the mean on Factor IV, Need for People. If he is below the mean on Factor II, Factor IV, and Factor V, he is defined as being at the most abstract, or Stage 4 level of conceptualization.

The third general section of the questionnaire deals with the clubs or organizations the respondent belongs to, and other interests he might have in addition to these organizations. Each of the responses in this section is counted as an activity group, regardless of whether it is an organization or an interest. This allows for the possibility that a person may list several interests he has which he pursues alone, without being joined by any friends. These are still considered activity groups, with

the underlying assumption being that an activity group may consist of only one person. A minimal number of activity group members was thus not set, for this would have eliminated that population of adolescents who choose not to have any friends in certain activities. It is from this section of the questionnaire that hypotheses 3a and 3b are to be tested.

The fourth section of the questionnaire elicits the friends who join with the respondent in the five activities most important to him, or as many as he might feel are important to him. Three specified status positions within each activity group are also elicited, in terms of which friends occupy those positions. From the friends listed in these activity groups, and status positions, a measure is drawn of the membership consistency of the activity groups to which the respondent belongs. From this data, the first and second set of hypotheses are tested. Employing all of the various friends listed among the chosen activity groups, it is also possible to test hypotheses 4a and 4b.

The Pre-Test. No pre-test was given for the questionnaire as it is used in this study. It has been administered, however, without the second section, to 253 male and female students in compiling data for this author's masters thesis (Bird, 1967). Some slight modifications were made to facilitate administration of the test and reduce time requirements. The second section, in the form of Harvey's Conceptual Systems Test, has apparently been administered with good reliability to a variety of age

groups, including adolescents. It was thought best to change as little as possible on both forms to maintain as much ability to check for reliability. The only alteration in the CST format was the insertion of the answer scale (+3 +2 +1 -1 -2 -3) on the form itself, both to facilitate answering the items and to facilitate coding of the completed questionnaire.

Procedure

Membership Consistency. The hypothesis concerning membership consistency will be tested by referring to the friends which a respondent lists as participating with him in the activities listed as being among the five most important to him. Three variables are involved here. There is a total number of friends mentioned for all activities, NM; there are a certain number of friends who may be repeated from one activity group to another a certain number of times, the sum of which is NMR; and there is the total number of activity groups designated as most important, A. Membership consistency is defined operationally as the ratio of the repeated friends, NMR, to the number of different friends, NM-NMR. This ratio is controlled for the number of activities, A, and is multiplied by 100. Thus,

$$\text{Membership Consistency} = \frac{(100) (\text{NMR})}{(\text{A}-1) (\text{NM}-\text{NMR})}$$

Table number 1 will provide an example for purposes of clarification in the usage of this equation.

Table 1

An Example of Five Most Important Activities
and Members Thereof

Activity	Sports	Racing	Dating	Gym	Cards	Total
Friends	AHYSD	AHITW	AIST	DHS	ADEHIO	
NM	5	5	4	3	6	23
NMR	0	2	4	3	4	13
A	1	1	1	1	1	5

Using the equation given above:

$$\text{Membership Consistency} = \frac{(100) (13)}{(5-1) (23-13)} = 32.50$$

As may be seen from inspection, the range of membership consistency may be anywhere from zero to 100, where zero would represent no consistency and 100 would represent total consistency.

Status Consistency. The hypothesis concerning status consistency will be tested by referring to the friends which a respondent lists as occupying certain status positions within each of the activity groups which are most important to him. Five variables are involved here. There is the same total number of friends mentioned for all activities, as in the case of membership consistency, NM; there are those friends who are repeated, as with membership consistency, NMR; there are a total number of

status positions specified, NS; there are some friends repeated in weighted status positions from one activity group to another, NSWP; and there is the total number of activity groups designated, A. Status consistency is operationally defined as the ratio of the weighted number of friends repeated in status positions, NSWP, to the total number of status positions specified, NS. This ratio is controlled for the number of activities, the total sum of all friends in all activity groups, the number of friends from activity to activity and is multiplied by 100. Thus,

$$\text{Status Consistency} = \frac{(100) (NM) (NSWP)}{(A-1) (NMR) (NS)}$$

Repeated status positions are weighted, so that a repeat in the same position is scored three, a repeat in a position next to a previously designated position is scored two, and a repeat in a position two spaces away from a previously designated position is scored one. If a friend is not repeated, he is given a score of zero. The example given for membership consistency will be continued as an example for status consistency. The same values will be used for NM, NMR, and A as previously. This example is summarized in Table 2.

Using the appropriate equation:

$$\text{Status Consistency} = \frac{(100) (23) (21)}{(5-1) (13) (15)} \quad 61.92$$

The range for status consistency scores starts at zero, for no consistency, and may continue up to any point. From

Table 2

An Example of Five Most Important Activities
and Status Positions Therein

Activity	Sports	Racing	Dating	Gym	Cards	Total
L1, L2, Fa ^a	B,H,A	B,W,H	S,T,A	S,B,H	B,O,A	
NS	3	3	3	3	3	15
NSWP	0 0 0	3 0 2	0 0 3	3 2 3	2 0 3	21

^aLetters refer to first leader, second leader, and follower, in that order.

inspection, it seems that most scores should fall somewhere between zero and 100, with a few exceptions.

Number of Activity Groups. The number of activity groups is operationally defined as the number of clubs and other interests listed by the respondent. Examples of possible responses for clubs or organizations are: French Club, Pep Club, F.T.A., Science Club, Church Youth Group, Candy Strippers. For other interests, responses might be: participating in plays, talking, cooking foreign dishes, eating, music, dancing, painting. The total number of activity groups would be the sum of the number of clubs, six, and the number of other interests, seven, the sum of which is 13. Another possible measure of this is the number of activity groups listed in the fourth section of the questionnaire.

This is a restricted measure, as the maximum number of such groups could only be five, yet the format of this section forces the respondent to list those activities which are most important to him, and in which he actively participates, so that it might better represent the social situation in which the respondent is involved.

Number of Friends. The number of friends is operationally defined as the total number of different friends which a respondent lists as joining with him in those activities most important to him. The number is the same as that used in determining membership consistency, $NM - NMR$. Again, NM represents the sum of all friends listed in all of the most important activities, and NMR represents those friends who are repeated in more than one activity. Using the example given to illustrate membership consistency (Table 1), the number of friends would be $23 - 13 = 10$, where $NM = 23$, and $NMR = 13$. By inspection it is seen that this respondent has in fact ten friends.

CHAPTER III

RESULTS

Samples Obtained

The Total Sample. The questionnaire was administered at five schools to a total sample of 406 students. There were 41 from the Boston independent school, 108 from the Oklahoma independent school, 63 from the Boston public school, 107 from the upper-class public school and 87 from the lower-class public school in Oklahoma. The re-worded questionnaire subsample was given at the Boston independent school by inserting one altered form for every one original form, resulting in a 50 percent sample, and the Oklahoma independent school by inserting one for every ten, resulting in a ten percent sample. The result was that 17 of the Boston students, and ten of the Oklahoma students were administered the altered form.

When the questionnaire was administered in the Oklahoma public schools, the CST items concerning religion, the five items of the Divine Fate Control factor, had to be eliminated from the form in order to meet the school board demands. The second section was consequently revised in accordance with the demand, so that the measure of Divine Fate Control was not obtained

within the Oklahoma City public schools. In the process of shortening this section, the format was sufficiently altered as to require an extra page at the back of the questionnaire (see Appendix A, p. 78) with questions aimed at evaluating the effects of the format change. There were very few responses which indicated this change might have effected performance on the questionnaire, and relatively few seemed even curious about it.

The Boston Independent School. This school was evaluated before the questionnaires were given as being the most upper-class and the most abstract in terms of the students' conceptual functioning. This was based on the geographical location, being in a large urban center, and on the selectivity of students entering the independent school. The forms were administered to tenth and eleventh graders by their teachers. The school is small, and therefore most of the tenth graders were included in the sample. In general, the questionnaire was administered to students in regularly scheduled, required courses or study hall. The total size of the ninth through twelfth grades is 109.

The Oklahoma Independent School. Due to the fact that it is an independent school in a less urban area than Boston, this institution was felt to be the next highest to the Boston independent school in terms of social class and level of abstract thinking. It is a slightly larger school, having 274 students in the upper school, which consists of the ninth through twelfth grades. As all the classes and study halls are small, several

periods had to be used in order to gather information from 100 students. The study hall was used throughout one morning, consisting of five periods, so that a fairly complete representation was made of the ninth and tenth graders. Older students were not available at this time due to examinations.

The Boston Public School. Being in a highly urban area, this school was felt to be on the same social class and conceptual level as the Oklahoma independent school, yet may be slightly below due to the lack of selectivity. If there is a regional difference with respect to these measures, then this school might be more upper-class and more abstract-oriented than the Oklahoma school, but as this evaluation is simply one means of subjectively checking the validity of the two scales it need not be more precise. The sample at this school was obtained by one of the teachers, apparently in a study hall period, and was given almost exclusively to tenth graders. The enrollment in the ninth through twelfth grades is 2,277.

The Oklahoma Upper-Class Public School. The student body at this school tends to be highly mixed in terms of backgrounds, and was therefore difficult to place on an evaluative scale. A first period study hall, composed mainly of tenth graders, was used, as well as a few more tenth graders from the second period study hall. According to the persons in charge, these were overflow periods, and should reflect a good sample of the tenth graders of this school. The size of school, including tenth, eleventh, and twelfth graders is 1,895.

The Oklahoma Lower-Class Public School. This school is the most lower-class of all the five schools, and was judged to be the most concrete in terms of the conceptualization abilities of the students. In this context it served as the opposite end of a continuum from the Boston independent school, and should correlate with the measures of social class and conceptual ability. There are 1,878 students in the upper three grades of this school. The last period study hall, of about half tenth and half eleventh graders, was used.

Results and Analysis

Brief Findings. The major analysis of the data was made by use of frequency distributions and chi-square¹, controlling on the two independent variables, social class and levels of conceptualization separately. The initial intent is to test the hypotheses stated earlier (see p. 26), and to provide some demographic material for further evaluation. An analysis of variance was performed to compare the subsample with the school samples within which they were imbedded (see below pp. 63-65). Some students' evaluations of the testing device were gathered in those samples in which the additional page was attached at the end of the questionnaire.

When analyzed by social class levels, all four of the

¹Detailed tables of the results appear in Appendix B, from which the tables which appear in this section were taken. Discussion of these tables, along with the statistical procedures, appear at the beginning of the appendix.

hypotheses relating to this variable were supported. Among the high social class adolescents there were reported to be more activity groups, more friends, less membership consistency, and less status consistency. Likewise among the lower-class adolescents there were reported to be fewer activity groups, fewer friends, greater membership consistency, and greater status consistency. When an analysis was made by conceptual levels, however, there was no relationship evident between this variable and membership consistency, status consistency, or number of activity groups. This can be shown to be true even when an additional control on geographical location is made (see Appendix B, p. 88). This latter control was made when it was found that conceptual levels were related to geographical location, the Boston samples, particularly the independent school sample, being characterized by more abstract levels of conceptualization. The single case of interaction, between conceptual levels and number of friends, is significant, yet in the opposite direction from that which was predicted. Later examination will show that there is no clear-cut trend along the dimension of abstractness in this interaction.

Number of Activity Groups. A positive correlation was found to exist between the number of activity groups a respondent listed in section three of the questionnaire and his social class position, as Table 3 illustrates.

This is in support of hypothesis 3a, concerning number of activity groups, but when hypothesis 3b is tested in like manner,

Table 3

Number of Activity Groups per Respondent
by Social Class

Class Levels ^a					
	I	II	III	IV,V	Total
Up to 5	18	27	38	48	131
6 to 8	36	37	31	26	130
9 or more	40	37	17	22	116
Total	94	101	86	96	377

^aSocial class levels denote high (I), medium high (II), medium low (III), and low (IV,V) relative positions.

$$\chi^2 = 29.88$$

$$df = 6$$

$$p < .001$$

Table 4

Number of Activity Groups per Respondent
by Conceptual Levels

Conceptual Levels ^a					
	I	II	III	IV	Total
Up to 5	83	25	21	12	141
6 to 8	76	25	14	9	124
9 or more	64	19	15	6	104
Total	223	69	50	27	369

^aConceptual levels denote Stage 1, or concrete (I), Stage 2 (II), Stage 3 (III), and Stage 4, or abstract (IV).

$$\chi^2 = 1.65$$

$$df = 6$$

$$p < .95$$

controlling on conceptual levels in place of social class, there is no difference among the groups on the number of activity groups listed, as shown in Table 4.

When this hypothesis is tested, using the number of activities listed in section four of the questionnaire, the same results occur, as seen in Tables 5 and 6.

When testing the fourth hypothesis, concerning the number of friends a respondent has, social class levels were related to number of friends, but conceptual levels were not. It should be kept in mind that the number of friends that the respondent has is operationally defined as the number of different individuals who are listed as participating with the respondent in those activities which he considers most important to him. Another measure might have been taken from the number of names placed on the removable sheet in the questionnaire, but this list was thought to be sensitive to over-estimation. This was proven true in the pre-test where some of these lists were returned with the questionnaire. In such cases, especially among the female respondents, these lists sometimes contained as many as 50 names. Comparison with friendship participation in the five most important activities revealed that many of the names on the list were apparently acquaintances, and were not necessarily close friends. For this reason, the number of friends is limited to those whom the respondent sees as being important enough to participate with him in his most important activities. Table 7 reveals the distribution over social class on this variable.

Table 5
Number of Activities (A)
by Social Class

Class Levels					
	I	II	III	IV, V	Total
Up to 2	13	35	36	49	133
3 to 4	28	24	24	19	95
5 or more	53	42	26	28	149
Total	94	101	86	96	377

$$\chi^2 = 33.67$$

$$df = 6$$

$$p < .001$$

Table 6
Number of Activities (A)
by Conceptual Levels

Conceptual Levels					
	I	II	III	IV	Total
Up to 2	78	30	19	7	134
3 to 4	54	17	14	8	93
5 or more	91	22	17	12	142
Total	223	69	50	27	369

$$\chi^2 = 3.99$$

$$df = 6$$

$$p < .75$$

Table 7

Number of Friends
by Social Class

Class Levels					
	I	II	III	IV,V	Total
Up to 3	19	24	26	36	105
4 to 9	48	37	30	38	153
10 or more	27	40	30	22	119
Total	94	101	86	96	377

$$\chi^2 = 14.49$$

$$df = 6$$

$$p < .025$$

Table 8

Number of Friends
by Conceptual Levels

Conceptual Levels					
	I	II	III	IV	Total
Up to 3	59	27	11	10	107
4 to 9	90	33	20	9	152
10 or more	74	9	19	8	110
Total	223	69	50	27	369

$$\chi^2 = 14.07$$

$$df = 6$$

$$p < .05$$

When the number of friends are distributed according to levels of conceptualization, the result can be seen in Table 8. The significance here is a result in part of the few level II individuals who have ten or more friends. In that cell, the expected frequency of occurrence is 20. There is, however, no clear-cut direct relationship here between conceptual levels, as a single dimension, and number of friends. Rather, the significance appears to be related more to the individual levels within the dimension.

The variable of membership consistency can be treated in the same way as number of activities and number of friends in testing the first hypothesis. The distribution of membership consistency over the four social class levels is represented in Table 9. The largest sources of interaction within this table appear on class level IV, V, where the greatest divergence from expectation occurs, that is, there are more persons obtaining a score of 60 or more and fewer obtaining a score under 32 than would be expected by chance.

When membership consistency is distributed by conceptual levels, there appears to be very little evidence of any sort of relationship, as seen in Table 10.

In similar manner, the variable of status consistency, the dependent variable within the second sets of hypotheses, 2a and 2b, was found to be interacting with the independent variable of social class, as should be clear in Table 11.

Table 9
Membership Consistency
by Social Class

Class Levels					
	I	II	III	IV,V	Total
Up to 31	39	37	31	18	125
32 to 59	35	36	21	27	119
60 or more	15	9	14	21	59
Total	89	82	66	66	303

$$\chi^2 = 14.14$$

$$df = 6$$

$$p < .05$$

Table 10
Membership Consistency
by Conceptual Levels

Conceptual Levels					
	I	II	III	IV	Total
Up to 31	69	22	13	11	115
32 to 59	71	22	19	5	117
60 or more	35	8	8	7	58
Total	175	52	40	23	290

$$\chi^2 = 6.44$$

$$df = 6$$

$$p < .50$$

Table 11
Status Consistency
by Social Class

Class Levels					
	I	II	III	IV,V	Total
0	48	30	28	28	134
5 to 69	29	39	19	18	105
70 or more	12	13	19	20	64
Total	89	82	66	66	303

$$\chi^2 = 16.83$$

$$df = 6$$

$$p < .01$$

Table 12
Status Consistency
by Conceptual Levels

Conceptual Levels					
	I	II	III	IV	Total
0	77	29	17	8	131
5 to 69	64	14	12	8	98
70 or more	34	9	11	6	60
Total	175	52	40	22	289

$$\chi^2 = 3.50$$

$$df = 6$$

$$p < .75$$

It should be pointed out that some of the zero scores on this measure could accrue from the related items in section four being left blank by the respondents. In many cases there was no way of deciding on the acceptance or rejection of such responses, as it was felt that there was no one who was followed or not followed, in short, there was no rigid status hierarchy. This is indicated by such comments written on the form as:

Dear Sir, I am sorry, but I began to try to put my friends in order of importance and I could not go on. It made me ill to think in such a way¹.

I don't like to "categorize" my friends in the way of -whom do I like best- and -who is most followed. A friend is a person to me; not someone who has been picked for certain qualities. Different friends I like for different things. I don't want to mentally say, well, you're my fourth best friend and you're my seventeenth best friend. In the third grade we had "best-friends" and "second-best" but it is somewhat childish to use a simple system for complex people. Third graders' friends are more superficial, lasting a shorter time (a matter of weeks). Most of my friends have been friends for years².

In both these cases, the status positions were not indicated, resulting in a zero score, which was felt to more accurately represent the situation than to omit them from the analysis.

Distributed across levels of conceptualization, the variable of status consistency appears to have no dependence upon the level of abstractness or concreteness of the respondents, as measured by this instrument. This will be observed in Table 12.

¹From page seven of a questionnaire given at the Boston Independent School.

²From page eight of a questionnaire given at the Boston Independent School.

Although the levels of conceptualization, as measured by the four stages of Harvey's instrument, did not appear to interact with either number of activity groups, number of friends, membership consistency or status consistency in the manner hypothesized, there is a relation between this measure of conceptualization and Hollingshead's measure of social class, as defined in Table 13. Upon close analysis of this table, it will be found that the cells which are contributing most to the dependence between these two measures are those at conceptual level I, social class IV,V; level II, classes II and IV,V; level III, class IV,V; and level IV, class I. Interpretively, this means that the most abstract subjects tend to come from high social classes and the most concrete subjects from low social classes, while there is a somewhat reversed trend in between. The major reversal is with those subjects from the lowest social classes who are just below the most abstract level. This must be considered a result of some of the inherent differences in definition of the four conceptual levels.

A separate analysis was made to determine if the re-wording of the GST items, in section two of the questionnaire, had any significant effect upon the responses. These re-worded forms were administered only at the two independent schools. The analysis was made within each of these two schools separately, to avoid a geographical bias which showed up in early analysis of this point with the schools combined. The test was made in the form of a completely randomized design analysis of variance.

Table 13

Social Class
by Conceptual Levels^a

	I	II	III	IV	Total
Class I	44	16	9	12	81
Class II	51	23	12	6	92
Class III	45	17	8	7	77
Class IV,V	65	8	16	2	91
Total	205	64	45	27	341

^aConceptual level I is most concrete, IV most abstract.
Social class I is highest, IV and V lowest.

$$\chi^2 = 21.02$$

$$df = 9$$

$$p .02$$

Eighteen items were analyzed by this test. They were: age, number of brothers, number of sisters, the six factors of the CST test, number of activities from section three, number of friends and repeats, number of activities (A) from section four, number of repeated activity group members (NMR), number of friends, number of friends per activity group, number of status positions specified, membership consistency, and status consistency. Out of these 36 tests, 18 in each school, only one significant difference was obtained, and that was within the Oklahoma School, the number of activities determined in section three being greater for the subsample than the others (school mean, 7.96;

subsample mean, 10.10; F of 4.92; $p < .05$). This particular finding is considered spurious, especially as the subsample size is ten as compared to 98 others. None of the six factors approached significance in either of the schools, and it is concluded that the change in wording of the CST test had no effect on the responses for that test.

Although the available data collected for this study could be analyzed in a variety of ways, especially in terms of controlling on several factors such as school and sex simultaneously with the independent factors of social class and conceptual levels, it is felt that with the explicit aims set forth at the beginning there should be no need for this. It is realized that sex differences may play an important role in defining social behavior (Bird, 1967, pp. 39, 42, 49, 52-53), yet if the hypotheses have been defined with disregard to this variable they must be tested along the same dimensions. Further study of the Conceptual Systems Test factors might well reveal differences, but this must remain an appendix to this study at best. The fact that hypotheses 1b, 2b, 3b, and 4b, relating to conceptual levels, were left unsupported may be digested for some time, but that does not alter the fact that the relationships were not found. This may be due to validity of the measure relative to the initial intent to measure complexity of conceptualization, or may be due to a number of other factors. From some of the comments by the students on the additional page placed at the back of the questionnaires given at the

Oklahoma City public schools, it is evident that many of them were sensitive to the repetitious nature of several of the items on the CST test. The degree to which the respondent was serious towards this test may have some bearing on the variability among the items and the resulting factor scales. It is, of course, impossible to evaluate this aspect accurately, as there was no direct measure of the attitude of the respondent towards the test.

One major point must be made concerning the measure which was used to elicit the conceptual abilities of each subject. Unlike the measure of social class, there was not a single dimension or series of dimensions which were actually used to measure conceptual ability. Rather, there were four quite separate categories which were assumed to be stages of development along a single dimension. Evidence, especially from Table 8, points to the fact that this was indeed the case. If the measure were uni-dimensional, there should not have been the striking interaction of one level with the dependent variable, but rather some degree of interaction with all levels, with some patterned uniformity. Quite possibly it would be more suitable to use each level as a single dimension, each of which might then define some special characteristic, such as interpersonal aggression. This would then, however, obviate the original intent to measure conceptual ability, as this is by definition of the CST arrived at through patterning all measures together. In lieu of this, there might be some other way to utilize the

information gathered from the CST form. An analysis could be made, for instance, on the variability among all responses on the test, differentiating those persons who used all possible answers, from +3 to -3, from those who used only a few, such as +1 and -1, indicating indecisiveness, or +3 and -3, indicating strong feelings. The notion might be advanced that those respondents who used a wide variety of different answers in the test have a more complex view of things, have more categories into which they can place their conceptions of the world, than those who use only a few. This use of the test has apparently not been made, or at least it has not been the primary measure of complexity of conceptualization. It would seem that such a use of the test might come closer to the original purposes of this paper as stated earlier. It has not been done, however, due to the initial acceptance and employment of the test along the lines as defined by the originators of the measure.

A summary of the findings of this study is presented in Table 14.

Table 14

Summary of Results

Dependent Variables	Independent Variables	
	Social Class	Conceptual Levels
Membership Consistency	$X^2 = 14.14$ $p < .05$	$X^2 = 6.44$ $p < .50$
Status Consistency	$X^2 = 16.83$ $p < .01$	$X^2 = 3.50$ $p < .75$
Number of Groups	$X^2 = 29.88$ $p < .001$	$X^2 = 1.65$ $p < .95$
Number of Activities	$X^2 = 33.67$ $p < .001$	$X^2 = 3.99$ $p < .75$
Number of Friends	$X^2 = 14.49$ $p < .025$	$X^2 = 14.07$ $p < .05$

CHAPTER IV

SUMMARY AND CONCLUSIONS

The initial intent of this study was to define four aspects of adolescent social behavior in the context of two independent variables which delineate the social and psychological potential of the individual. The four aspects were: number of activities, or activity groups; number of friends; consistency of inter-activity group membership; and consistency of status positions within activity groups. The independent variables were socio-economic class position, and levels of conceptualization, along a dimension of abstractness-concreteness. Eight hypotheses were generated to define the relations between the four aspects of social behavior and the two independent variables. They were: (1a) the higher the social class level, the greater the extent to which adolescent activity groups include different persons; (1b) the more abstract the conceptual level of functioning, the greater the extent to which adolescent activity groups include different persons; (2a) the higher the social class level, the greater the extent to which adolescent activity groups are characterized by inconsistent leadership-followership relations; (2b) the more abstract the conceptual level of functioning, the greater the extent to

which adolescent activity groups are characterized by inconsistent leadership-followership relations; (3a) the higher the social class level, the greater the extent to which an adolescent belongs to a wide variety of activity groups (3b) the more abstract the conceptual level of functioning, the greater the extent to which an adolescent belongs to a wide variety of activity groups; (4a) the higher the social class level, the greater the extent to which an adolescent has a wide variety of friends; (4b) the more abstract the conceptual level of functioning, the greater the extent to which an adolescent has a wide variety of friends.

A questionnaire was devised to measure these factors, including a measure of social class based on the subject's father's education and occupation, and a measure of conceptual functioning. The questionnaire was administered to 406 adolescents in five different schools, in two distinct areas of the United States. The analysis of the results supported the four hypotheses concerning the relation between social class and social involvement, but failed to support the remaining four hypotheses relating to levels of conceptualization and social involvement. Although hypothesis 4b was neither supported nor clearly refuted by the results, there was some interaction occurring between levels of conceptualization and number of friends. This was thought to be an artifact of interaction between the measure of number of friends and one of the individual levels. The rate of interaction between level II and ten or more friends may be due to the nature of that level, which, as defined, is

composed of persons who scored above the mean on the CST factors of interpersonal aggression and general pessimism. It should not be surprising, if inter-personal aggression is a valid measure, that persons who score high on this do not list many other persons who join with them in important activities. Aside from this conceptual level, there seems to be little interaction between the other levels and the number of friends.

One of the major efforts of this study was to extend previously established correlations between socio-economic background and social patterns of behavior (Bird, 1967), to a more psychological level of analysis. In this regard the results of the present study must be viewed as negative. Easily measurable aspects of the individual's conceptual abilities could either not be obtained or were not relevant to the dependent variables under consideration.

The fact that the measure of social class was found to be related as predicted to the four measures of social behavior substantiates the notion that there are different types of social situations for adolescents from different background environments. An adolescent from an upper-class background, with a wide variety of available resources at his disposal is disposed towards social activity which will best utilize these potentials. On the other hand, an adolescent from an impoverished background may seek and find different uses for interacting with age-mates, uses which fulfill his own particular needs, which arise from his own particular condition in life. Understanding

of adolescent group behavior which has been achieved through study of only one type of background may not be assumed to be adequate in understanding the behavior of adolescents from other backgrounds.

If this notion could be extended, as was the purpose of this study, to the psychological level, then the needs and social activity of the adolescent would be defined not only by social factors but by psychological needs and abilities as well. If an adolescent is not equipped, for one reason or another, to handle complex situations, he is not likely to enjoy participation in complex situations, and will attempt to reduce such situations to a degree of structuredness which he can cope with. If, on the other hand, he is able and used to dealing with highly complex situations, he will become bored with and attempt to avoid or alter those situations which are too concrete for him.

The fact that the measure of conceptual complexity was not found to be related to any of the four dependent variables of this study was evaluated in light of the measuring instrument employed. There was no apparent evidence from this study to negate the argument for recognizing conceptual differences, but rather it was felt that they were not adequately measured.

REFERENCES

- Anderson, N. The hobo: The sociology of the homeless man.
Chicago: University of Chicago Press, 1923.
- Bass, B. M. Leadership, psychology, and organizational behavior.
New York: Harper & Bros., 1960.
- Becker, H. S. Outsiders. London: Free Press of Glencoe Collier-Macmillan, 1963.
- Bell, G. B., & French, L. Consistency of individual leadership position in small groups of varying membership. In A. P. Hare, E. F. Borgatta, & R. F. Bales (Eds.) Small groups. New York: Alfred A. Knopf, 1961.
- Bernheim, H. De la suggestion dans l'état hypotique et dans l'état de ville. Paris: O. Doin, 1884.
- Bevan, W. Chapter 2. In O. J. Harvey (Ed.) Motivation and social interaction. New York: Ronald Press, 1963.
- Binet, A. La suggestibilité. Paris, 1900.
- Bird, H. B. A preliminary study of inter-clique relations. Bard Psychology Jrn. Annandale-on-Hudson New York: Bard Psychology Dept., 1963.
- Bird, H. B. A study of the class distribution of small solid adolescent groups. Unpublished master's dissertation, Univ. of Oklahoma, 1967.
- Bogardus, E. S. Leaders and leadership. New York: Appleton-Century, 1934.
- Bredemeier, H. C., & Stephenson, R. M. The analysis of social systems. New York: Holt, Rinehart & Winston, 1962.
- Cantril, H. The psychology of social movements. John Wiley, 1941.
- Centers, R. The psychology of social classes. Princeton, 1949.

- Davis, A., Gardner, B., & Gardner, M. Deep south. Chicago: University of Chicago Press, 1941.
- Faris, E. L. Social disorganization. New York: Ronald Press, 1948.
- Faris, E. L. (Ed.) Handbook of modern sociology. Chicago: Rand McNally, 1964.
- Festinger, L., Schachter, S., & Back, K. Social pressures in informal groups. New York: Harper & Bros., 1950.
- Freud, S. Group psychology and the analysis of the ego. London: International Psychoanalytical Press, 1922.
- Gardner, W., & Schoen, A. Differentiation and abstraction in concept formation. Psychological Monographs, LXXVI, 1962.
- Hare, A. P. Interpersonal relations in the small group. In Robert E. L. Faris (Ed.) Handbook of modern sociology. Chicago: Rand McNally, 1964.
- Harvey, O. J. Motivation and social interaction. New York: Ronald Press, 1963.
- Harvey, O. J. Teachers' belief systems and pre-school atmospheres. Jrn. Educ. Psychol., LVII, 1966, 375.
- Harvey, O. J. Conceptual systems and attitude change. In Sherif, Carolyn W. & Sherif, M. (Eds.) Attitude, ego-involvement and change. New York: Wiley & Sons, 1967.
- Harvey, O. J., Hunt, D. E., & Schroder, H. M. Conceptual systems and personality development. New York: Wiley & Sons, 1961.
- Harvey, O. J., & Schroder, H. M. Chapter 4. In O. J. Harvey (Ed.) Motivation and social interaction. New York: Ronald Press, 1963.
- Helson, H. Adaptation-level theory. In S. Koch (Ed.) Psychology: A study of a science, Vol. 1, Sensory, perceptual and physiological formulations. New York: McGraw-Hill, 1959.
- Hiller, E. T. The strike. Chicago: University of Chicago Press, 1928.
- Hollingshead, A. B. Elmtown's youth. New York: Wiley & Sons, 1949.

- Hollingshead, A. B. Two factor index of social position.
New Haven: Author, 1957.
- Homans, G. C. The human group. New York: Harcourt Brace, 1950.
- Hyman, H. The psychology of status. Archives of Psychol.,
1942, no. 269.
- Kerber, A., & Smith, W. Educational issues in a changing society. Detroit: Wayne State Univ. Press, 1964.
- Koch, S. (Ed.) Psychology: A study of a science. Vol. 6.
New York: McGraw-Hill, 1963.
- Loomis, C. P., & Loomis, Zona K. (Eds.) Modern social theories.
Van Nostrand Co., 1961.
- Marx, K. A contribution to the critique of political economy.
Trans. N. I. Stone from the 2nd German ed. New York:
International Library Publ. Co., 1904.
- Moore, W. E. Industrial relations and the social order.
New York: Macmillan, 1951.
- Parsons, T. The social system. Glencoe: Free Press, 1951.
- Riessman, F. The culturally deprived child. New York: Harper &
Row, 1962.
- Rosenbaum, M., & Berger, M. (Ed.) Group psychotherapy and group function. New York: Basic Books, 1963.
- Shaw, C. R. The jack roller. Chicago: University of Chicago
Press, 1930.
- Sherif, M., & Sherif, Carolyn W. Reference groups. New York:
Harper & Row, 1964.
- Strodtbeck, F. L., & Hare, A. P. Bibliography of small group
research. Sociometry, XVII, 1954.
- Tarde, G. Les lois de l'imitation. Paris, 1890. Trans. by
E. C. Parsons, The laws of imitation. New York: Holt,
1903.
- Thrasher, F. M. The gang. Chicago: University of Chicago
Press, 1927.
- Warner, W. L., et al. Yankee City Series (I-IV). New Haven:
Yale University Press, 1941-47.

Warner, W. L., Havighurst, R., & Loeb, M. Who shall be educated?
New York, 1944.

Warner, W. L., Meeker, M., & Eells, K. The measurement of social status. Chicago: Science Research Associates, 1949.

Whyte, W. F. Street corner society. Chicago: University of Chicago Press, 1943.

Zorbaugh, H. W. The gold coast and the slum. Chicago: Chicago University Press, 1929.

APPENDICES

APPENDIX A

ADOLESCENT ATTITUDE QUESTIONNAIRE

This questionnaire is part of a national sample being taken of young people, and HAS NOTHING TO DO WITH YOUR OWN SCHOOL, nor will you be graded on it in any way. Please try to answer all the questions as honestly and as quickly as you can. You will be given about thirty minutes to complete the entire questionnaire. If you cannot answer a question, please place a line through the answer space.

1. How old are you? _____
2. Sex: Male _____ Female _____
3. What grade are you now in? _____
4. How many brothers _____ and sisters _____ do you have?
5. What is your father's occupation? _____
6. Describe in your own words what your father does in his work: _____

7. What is your father's education? _____ years in grade school;
_____ years in high school; _____ years in college;
_____ years in graduate school; Degrees earned _____
8. If your mother works, what is her occupation? _____
9. If you have a car to drive:
Do you yourself own it? _____
What make is it? _____
What year is it? _____

The following are questions about what the general adolescent thinks and feels about a number of important social and personal matters. The best answer to each statement below is your personal opinion. We have tried to cover many different and opposing points of view; you may find yourself agreeing strongly with some of the statements, disagreeing just as strongly with others, and perhaps uncertain about others; whether you agree or disagree with any statement, you can be sure that many people feel the same as you do.

Please mark each statement on this sheet by placing a circle around one of the numbers: +3, +2, +1, or -1, -2, -3, depending on how you feel in each case.

+3 I AGREE VERY MUCH	-1 I DISAGREE A LITTLE
+2 I AGREE ON THE WHOLE	-2 I DISAGREE ON THE WHOLE
+1 I AGREE A LITTLE	-3 I DISAGREE VERY MUCH

- | | |
|--|-------------------|
| 1. I feel like blaming others when things go wrong for me. | +3 +2 +1 -1 -2 -3 |
| 2. I like to meet new people. | +3 +2 +1 -1 -2 -3 |
| 3. I feel like telling other people off when I disagree with them. | +3 +2 +1 -1 -2 -3 |
| 4. I like to help my friends when they are in trouble. | +3 +2 +1 -1 -2 -3 |
| 5. I always like for other people to tell me their problems. | +3 +2 +1 -1 -2 -3 |
| 6. I like to criticize people who are in a position of authority. | +3 +2 +1 -1 -2 -3 |
| 7. I like to show a great deal of affection toward my friends. | +3 +2 +1 -1 -2 -3 |
| 8. I feel at home with almost everyone and like to participate in what they are doing. | +3 +2 +1 -1 -2 -3 |
| 9. In the final analysis events in the world will ultimately be in line with the master plan of God. | +3 +2 +1 -1 -2 -3 |
| 10. The dictates of one's religion should be followed with trusting faith. | +3 +2 +1 -1 -2 -3 |

+3 I AGREE VERY MUCH	-1 I DISAGREE A LITTLE
+2 I AGREE ON THE WHOLE	-2 I DISAGREE ON THE WHOLE
+1 I AGREE A LITTLE	-3 I DISAGREE VERY MUCH

- | | |
|--|-------------------|
| 11. I like to keep my letters, bills, and other papers neatly arranged and filed according to some system. | +3 +2 +1 -1 -2 -3 |
| 12. Most people can still be depended upon to come through in a pinch. | +3 +2 +1 -1 -2 -3 |
| 13. I am always the last one to leave a party. | +3 +2 +1 -1 -2 -3 |
| 14. Most public officials are really interested in the poor man's problems. | +3 +2 +1 -1 -2 -3 |
| 15. I like to do things with my friends rather than by myself. | +3 +2 +1 -1 -2 -3 |
| 16. I like to have a place for everything and everything in its place. | +3 +2 +1 -1 -2 -3 |
| 17. I enjoy very much being a part of a group. | +3 +2 +1 -1 -2 -3 |
| 18. Most people in public office are really interested in the problems of the poor man. | +3 +2 +1 -1 -2 -2 |
| 19. There is no excuse for lying to someone else. | +3 +2 +1 -1 -2 -3 |
| 20. I like to have my life so arranged that it runs smoothly and without much change in my plans. | +3 +2 +1 -1 -2 -3 |
| 21. I enjoy making sacrifices for the sake of the happiness of others. | +3 +2 +1 -1 -2 -3 |
| 22. I feel like making fun of people who do things that I regard as stupid. | +3 +2 +1 -1 -2 -3 |
| 23. I prefer to do things alone, rather than with my friends. | +3 +2 +1 -1 -2 -3 |

+3 I AGREE VERY MUCH	-1 I DISAGREE A LITTLE
+2 I AGREE ON THE WHOLE	-2 I DISAGREE ON THE WHOLE
+1 I AGREE A LITTLE	-3 I DISAGREE VERY MUCH

- | | |
|--|-------------------|
| 24. I prefer clear-cut fiction over involved plots. | +3 +2 +1 -1 -2 -3 |
| 25. Honesty is the best policy in all cases. | +3 +2 +1 -1 -2 -3 |
| 26. I think I am stricter about right and wrong than most people. | +3 +2 +1 -1 -2 -3 |
| 27. I prefer a story that has two themes rather than one that has five or six themes going at once. | +3 +2 +1 -1 -2 -3 |
| 28. I find that a well-ordered mode of life with regular hours is suitable to my personality. | +3 +2 +1 -1 -2 -3 |
| 29. There are some things which God will never permit man to know. | +3 +2 +1 -1 -2 -3 |
| 30. I feel like getting revenge when someone has insulted me. | +3 +2 +1 -1 -2 -3 |
| 31. I am a very sociable person who gets along easily with nearly everyone. | +3 +2 +1 -1 -2 -3 |
| 32. I like to treat other people with kindness and sympathy. | +3 +2 +1 -1 -2 -3 |
| 33. All in all, it is better to be humble and honest than to be important and dishonest. | +3 +2 +1 -1 -2 -3 |
| 34. I don't like to work on a problem unless there is a possibility of coming out with a clear-cut answer. | +3 +2 +1 -1 -2 -2 |
| 35. I don't like for things to be uncertain and unpredictable. | +3 +2 +1 -1 -2 -3 |
| 36. You sometimes can't help wondering whether anything's worthwhile any more. | +3 +2 +1 -1 -2 -3 |

+3 I AGREE VERY MUCH	-1 I DISAGREE A LITTLE
+2 I AGREE ON THE WHOLE	-2 I DISAGREE ON THE WHOLE
+1 I AGREE A LITTLE	-3 I DISAGREE VERY MUCH

- | | |
|---|-------------------|
| 37. The way to peace in the world
is through religion. | +3 +2 +1 -1 -2 -3 |
| 38. Most people who get ahead in the
world lead clean, moral lives. | +3 +2 +1 -1 -2 -3 |
| 39. Anyone who completely trusts
anyone else is asking for trouble. | +3 +2 +1 -1 -2 -3 |
| 40. One should take action only when
sure it is morally right. | +3 +2 +1 -1 -2 -3 |
| 41. Marriage is the diving institution
for the glorification of God. | +3 +2 +1 -1 -2 -3 |

GO ON TO THE NEXT PAGE

1. Please list those clubs or organizations in which you participate, from that which is most important to that which is least important to you:

Importance:	Club or organization:
1	_____
2	_____
3	_____
4	_____
5	_____
6	_____
7	_____
8	_____
9	_____
10	_____

2. Please list ANY OTHER things you do with your time which are interesting to you; in other words, what things do you like to do IN ADDITION TO the activities you just listed?

Importance:	Things you like to do:
1	_____
2	_____
3	_____
4	_____
5	_____
6	_____
7	_____
8	_____
9	_____
10	_____

This page is an EXTRA PAGE, or a work sheet, and should be REMOVED before answering the questions. Do not hand it in with the rest of the questionnaire.

Place in the spaces below the names of your friends, in order of their importance to you, starting with your best friend in space B. Use as many spaces as you need, but do not spend more than a few minutes with this list. You may find it easier to add to the list as you continue.

In answering the questions on the following pages, refer to your friends **ONLY BY THE LETTER IN FRONT OF THEIR NAMES ON THE LIST**. Please do not use names on any sheet but this one.

	MYSELF
A	
B	
C	
D	
E	
F	
G	
H	
I	
J	
K	
L	
M	
N	
O	
P	
Q	
R	
S	
T	
U	
V	
W	
X	
Y	
Z	

From the clubs (question #1) or interests (question #2) you have just listed on the last page:

- A) Which ONE of all of them is the MOST important to you?

Which of your friends join with you in it? (list your friends by the letter next to their names ONLY. Refer to yourself as "A.")

A _____

Who is the one person the others follow most? _____

(If none, please indicate this)

Who is another person the others tend to follow? _____

Who is the person no one will follow? _____

- B) Which club or interest is SECOND MOST important to you?

Which of your friends join with you in it?

A _____

Who is the one person the others follow most? _____

Who is another person the others tend to follow? _____

Who is the person no one will follow? _____

- C) Which club or interest is THIRD MOST important to you?

Which of your friends join with you in it?

A _____

Who is the one person the others follow most? _____

Who is the one person the others tend to follow? _____

Who is the person no one will follow? _____

D) Which club or interest is FOURTH MOST important to you?

Which of your friends join with you in it?

A _____

Who is the one person the others follow most? _____

Who is another person the others tend to follow? _____

Who is the person no one will follow? _____

E) Which club or interest is FIFTH MOST important to you?

Which of your friends join with you in it?

A _____

Who is the one person the others follow most? _____

Who is another person the others tend to follow? _____

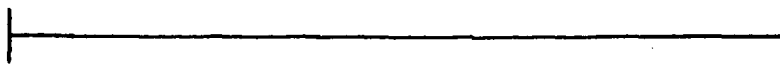
Who is the person no one will follow? _____

Place a mark at some point along the line below which best
represents your opinion on the following statement:

Usually the person who knows the most about sports
also knows the most about cars, how to arrange dates,
and what to wear.

true all the time

never true



Please answer the following questions if there is extra time:

1. Was there anything out of the ordinary which struck you about this questionnaire?

2. Which questions in particular seemed out-of-place?

3. Did the fact that the second page was short bother you?

Thank you for your help.

APPENDIX B

Description of the Tables

The following tables have been compiled through the use of chi-square under the following conditions:

- 1) If more than 20 percent of the expected cell frequencies have a value of less than five, a correction for continuity is made by subtracting .5 from the absolute difference between the expected cell frequency and the observed cell frequency, before the expression is squared and divided by the expected frequency, for each cell.
- 2) If any expected cell frequency has a value of less than one, the p value is set in brackets and a "regroup" message is printed, indicating the necessity of regrouping the table before chi-square can be done.
- 3) If the value of p is less than .05 and greater than .02, the chi-square is recomputed by using the correction factor, and an *EXTRA* message is printed. Under these conditions, care should be taken in assuming significance if the new p value changes.

In all tables, data which has not been coded, and has been left blank is automatically omitted, accounting for the differences between tables in the total N.

TABLE 15

SCHOOLS BY SOCIAL CLASS

		BIS	OCIS	BPS	OCUC	OCLC					TOTAL
SOCIAL CLASS											
Class I	0	25	47	14	8	0	0	0	0	0	94
Class II	0	10	46	14	27	4	0	0	0	0	101
Class III	0	2	13	21	40	10	0	0	0	0	86
Class IV,V	0	2	0	7	24	63	0	0	0	0	96
Totals	0	39	106	56	99	77	0	0	0	0	377

06

CELL CHI-SQUARES

Class I	0.0	+ 23.9	+ 16.0	+ 0.0	- 11.2	- 19.1	0.0	0.0	0.0	0.0
Class II	0.0	- 0.0	+ 10.9	- 0.0	+ 0.0	- 13.4	0.0	0.0	0.0	0.0
Class III	0.0	- 5.3	- 5.1	+ 5.2	+ 13.4	- 3.2	0.0	0.0	0.0	0.0
Class IV,V	0.0	- 6.3	- 26.9	- 3.6	- 0.0	+ 96.0	0.0	0.0	0.0	0.0

CHI-SQUARE = 260.5052

DF = 12 P < 0.001

TABLE 16

SCHOOLS BY CONCEPTUAL LEVEL

		BIS	OCIS	BPS	OCUC	QCLC					TOTAL
LEVELS OF CONCEPTUALIZATION											
Concrete	0	5	65	32	62	59	0	0	0	0	223
Level 2	0	14	16	18	12	9	0	0	0	0	69
Level 3	0	9	11	3	18	9	0	0	0	0	50
Abstract	0	7	7	5	7	1	0	0	0	0	27
Totals	0	35	99	58	99	78	0	0	0	0	369

91

CELL CHI-SQUARES

Concrete	0.0	- 12.3	+ 0.4	- 0.2	+ 0.0	+ 2.9	0.0	0.0	0.0	0.0
Level 2	0.0	+ 8.4	- 0.3	+ 4.7	- 2.2	- 2.1	0.0	0.0	0.0	0.0
Level 3	0.0	+ 3.8	- 0.4	- 3.0	+ 1.5	- 0.2	0.0	0.0	0.0	0.0
Abstract	0.0	+ 7.6	- 0.0	+ 0.1	- 0.0	- 3.8	0.0	0.0	0.0	0.0

CHI-SQUARE = 54.8817

DF = 12 P < 0.001

TABLE 17

SEX OF SUBJECT BY SOCIAL CLASS

		MALE	FEMALE									TOTAL
SOCIAL CLASS												
Class I	48	46	0	0	0	0	0	0	0	0	94	
Class II	52	49	0	0	0	0	0	0	0	0	101	
Class III	38	48	0	0	0	0	0	0	0	0	86	
Class IV,V	43	53	0	0	0	0	0	0	0	0	96	
Totals	181	196	0	0	0	0	0	0	0	0	377	
CELL CHI-SQUARES												
Class I	+0.1	- 0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Class II	+0.2	- 0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Class III	-0.2	+ 0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Class IV,V	-0.2	+ 0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		

92

CHI-SQUARE = 1.7420

DF = 3 P < 0.700

TABLE 18

SEX OF SUBJECT BY CONCEPTUAL LEVEL

	MALE	FEMALE									TOTAL
LEVELS OF CONCEPTUALIZATION											
Concrete	114	109	0	0	0	0	0	0	0	0	223
Level 2	42	27	0	0	0	0	0	0	0	0	69
Level 3	13	37	0	0	0	0	0	0	0	0	50
Abstract	10	17	0	0	0	0	0	0	0	0	27
Totals	179	190	0	0	0	0	0	0	0	0	369

93

CELL CHI-SQUARES

Concrete	+ 0.3	- 0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Level 2	+ 2.1	- 2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Level 3	- 5.2	+ 4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Abstract	- 0.7	+ 0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

CHI-SQUARE = 16.3944

DF = 3 P < 0.001

TABLE 19

AGE OF SUBJECT BY SOCIAL CLASS

			12	13	14	15	16	17	18	19		
SOCIAL CLASS												
Class I	0	0	0	0	10	50	30	4	0	0	94	94
Class II	0	0	0	1	15	51	29	5	0	0	101	
Class III	0	0	0	0	1	34	45	6	0	0	86	
Class IV,V	0	0	0	0	1	25	55	13	1	1	96	
Totals	0	0	0	1	27	160	159	28	1	1	377	

96

CELL CHI-SQUARES

Class I	0.0	0.0	0.0	-	0.0	+	1.1	+	2.3	-	2.1	-	0.8	-	0.0	-	0.0
Class II	0.0	0.0	0.0	+	0.2	+	7.2	+	1.3	-	4.0	-	0.5	-	0.0	-	0.0
Class III	0.0	0.0	0.0	-	0.0	-	3.5	-	0.1	+	1.8	-	0.0	-	0.0	-	0.0
Class IV,V	0.0	0.0	0.0	-	0.0	-	4.2	-	5.7	+	4.8	+	4.0	+	0.2	+	0.2

CORRECTED CHI-SQUARE = 44.6368

REGROUP DF = 18 P < 0.001

TABLE 20

AGE OF SUBJECT BY CONCEPTUAL LEVEL

				13	14	15	16	17	18		TOTAL
LEVELS OF CONCEPTUALIZATION											
Concrete	0	0	0	1	19	84	100	18	1	0	223
Level 2	0	0	0	0	6	35	24	4	0	0	69
Level 3	0	0	0	0	1	23	22	4	0	0	50
Abstract	0	0	0	0	1	13	11	2	0	0	27
Totals	0	0	0	1	27	155	157	28	1	0	369

95

CELL CHI-SQUARES

Concrete	0.0	0.0	0.0	+	0.0	+	0.2	-	0.8	+	0.2	+	0.0	+	0.0	0.0
Level 2	0.0	0.0	0.0	-	0.0	+	0.0	+	1.0	-	0.8	-	0.1	-	0.0	0.0
Level 3	0.0	0.0	0.0	-	0.0	-	1.2	+	0.1	+	0.0	+	0.0	-	0.0	0.0
Abstract	0.0	0.0	0.0	-	0.0	-	0.1	+	0.1	-	0.0	-	0.0	-	0.0	0.0

CORRECTED CHI-SQUARE = 5.0477

REGROUP DF = 15 P < 1.000

TABLE 21
TOTAL NUMBER OF ACTIVITIES
BY SOCIAL CLASS

	0,1	2,3	4	5	6	7	8	9	10-	12+	TOTAL
SOCIAL CLASS											
Class I	1	5	5	7	13	12	11	9	17	14	94
Class II	3	3	9	12	19	7	11	15	13	9	101
Class III	5	12	8	13	9	11	11	5	7	5	86
Class IV,V	8	14	15	11	7	9	10	4	10	8	96
Totals	17	34	37	43	48	39	43	33	47	36	377

96

CELL CHI-SQUARES																			
Class I	-2.4	-	1.4	-	1.9	-	1.2	+	0.0	+	0.5	+	0.0	+	0.0	+	2.3	+	2.8
Class II	-0.5	-	4.0	-	0.0	+	0.0	+	2.9	-	1.1	-	0.0	+	4.2	+	0.0	-	0.0
Class III	+0.3	+	2.3	-	0.0	+	1.0	-	0.3	+	0.4	+	0.1	-	0.8	-	1.2	-	1.2
Class IV,V	+3.1	+	3.2	+	3.3	+	0.0	-	2.2	-	0.0	-	0.0	-	2.3	-	0.3	-	0.1

CHI-SQUARE = 49.1808

DF = 27 P<0.010

TABLE 22

TOTAL NUMBER OF ACTIVITIES

BY CONCEPTUAL LEVEL

	0,1	2,3	4	5	6	7	8	9	10-	12+	TOTAL
CONCEPTUAL LEVELS IN BOSTON											
Concrete	2	1	5	5	7	3	1	5	5	3	37
Level 2	1	3	4	4	4	5	2	5	3	1	32
Level 3	0	4	1	0	0	0	2	2	3	0	12
Abstract	1	0	4	1	0	3	1	1	0	1	12
Totals	4	8	14	10	11	11	6	13	11	5	93

97

CELL CHI-SQUARES

Concrete	+ 0.0	- 0.8	- 0.0	+ 0.0	+ 1.0	- 0.1	- 0.3	- 0.0	+ 0.0	+ 0.1
Level 2	- 0.0	+ 0.0	- 0.0	+ 0.0	+ 0.0	+ 0.1	- 0.0	+ 0.0	- 0.0	- 0.0
Level 3	- 0.0	+ 5.8	- 0.0	- 0.4	- 0.5	- 0.5	+ 0.6	+ 0.0	+ 0.8	- 0.0
Abstract	+ 0.0	- 0.2	+ 1.5	- 0.0	- 0.5	+ 0.8	+ 0.0	- 0.0	- 0.5	+ 0.0

CORRECTED CHI-SQUARE = 15.8936

REGROUP DF = 27 P < 0.980

TABLE 23

TOTAL NUMBER OF ACTIVITIES

BY CONCEPTUAL LEVEL

	0,1	2,3	4	5	6	7	8	9	10-	12+	TOTAL
CONCEPTUAL LEVELS IN OKLAHOMA											
Concrete	15	17	14	24	22	19	24	15	19	17	186
Level 2	2	3	4	4	4	6	4	2	4	4	37
Level 3	1	6	3	6	5	2	5	1	6	3	38
Abstract	1	1	3	1	1	1	3	0	2	2	15
Totals	19	27	24	35	32	28	36	18	31	26	276

86

CELL CHI-SQUARES

Concrete	+ 0.3	- 0.0	- 0.2	+ 0.0	+ 0.0	+ 0.0	- 0.0	+ 0.6	- 0.1	- 0.0
Level 2	- 0.0	- 0.0	+ 0.0	- 0.0	- 0.0	+ 0.8	- 0.0	- 0.0	- 0.0	+ 0.0
Level 3	- 0.4	+ 0.8	- 0.0	+ 0.0	+ 0.0	- 0.4	+ 0.0	- 0.3	+ 0.3	- 0.0
Abstract	- 0.0	- 0.0	+ 1.0	- 0.0	- 0.0	- 0.0	+ 0.1	- 0.2	+ 0.0	+ 0.0

CORRECTED CHI-SQUARE = 6.1053

REGROUP DF = 27 P < 1.000

TABLE 24
NUMBER OF ACTIVITIES
BY SOCIAL CLASS

	0	1	2	3	4	5					TOTAL
SOCIAL CLASS											
Class I	4	1	8	19	9	53	0	0	0	0	94
Class II	9	10	16	7	17	42	0	0	0	0	101
Class III	10	10	16	13	11	26	0	0	0	0	86
Class IV,V	10	20	19	12	7	28	0	0	0	0	96
Totals	33	41	59	51	44	149	0	0	0	0	377

66

CELL CHI-SQUARES

Class I	-2.1	+	8.3	-	3.0	+	3.1	-	0.3	+	6.7	0.0	0.0	0.0	0.0
Class II	+0.0	-	0.0	+	0.0	-	3.2	+	2.3	+	0.1	0.0	0.0	0.0	0.0
Class III	+0.8	+	0.0	+	0.4	+	0.1	+	0.0	-	1.8	0.0	0.0	0.0	0.0
Class IV,V	+0.3	+	8.7	+	1.0	-	0.0	-	1.5	-	2.6	0.0	0.0	0.0	0.0

CHI-SQUARE = 47.3649

DF = 15 P < 0.001

TABLE 25
NUMBER OF ACTIVITIES
BY CONCEPTUAL LEVEL

	0	1	2	3	4	5					TOTAL
LEVELS OF CONCEPTUALIZATION											
Concrete	20	28	30	33	21	91	0	0	0	0	223
Level 2	11	6	13	7	10	22	0	0	0	0	69
Level 3	4	6	9	9	5	17	0	0	0	0	50
Abstract	4	1	2	4	4	12	0	0	0	0	27
Totals	39	41	54	53	40	142	0	0	0	0	369

100

CELL CHI-SQUARES

Concrete	-0.5	+ 0.4	- 0.2	+ 0.0	- 0.4	+ 0.3	0.0	0.0	0.0	0.0
Level 2	+ 1.8	- 0.3	+ 0.8	- 0.8	+ 0.8	- 0.7	0.0	0.0	0.0	0.0
Level 3	- 0.3	+ 0.0	+ 0.3	+ 0.4	- 0.0	- 0.2	0.0	0.0	0.0	0.0
Abstract	+ 0.1	- 0.7	- 0.5	+ 0.0	+ 0.1	+ 0.1	0.0	0.0	0.0	0.0

CORRECTED CHI-SQUARE = 7.6744

DF = 15 P < 0.950

TABLE 26

NUMBER OF FRIENDS
BY SOCIAL CLASS

	0	1-3	4-5	6-7	8-9	10-	12-	15+			TOTAL
SOCIAL CLASS											
Class I	9	10	16	23	9	7	9	11	0	0	94
Class II	15	9	14	14	9	16	12	12	0	0	101
Class III	11	15	8	13	9	8	10	12	0	0	86
Class IV,V	20	16	12	15	11	3	10	9	0	0	96
Totals	55	50	50	65	38	34	41	44	0	0	377

101

CELL CHI-SQUARES

Class I	-1.6	-	0.4	+	1.0	+	2.8	-	0.0	-	0.2	-	0.1	+	0.0	0.0	0.0
Class II	+0.0	-	1.4	+	0.0	-	0.6	-	0.1	+	5.2	+	0.0	+	0.0	0.0	0.0
Class III	-0.1	+	1.1	-	1.0	-	0.2	+	0.0	+	0.0	+	0.0	+	0.3	0.0	0.0
Class IV,V	+2.5	+	0.8	-	0.0	-	0.1	+	0.1	-	3.6	-	0.0	-	0.4	0.0	0.0

CHI-SQUARE = 24.9135

DF = 21 P < 0.300

TABLE 27
NUMBER OF FRIENDS
BY CONCEPTUAL LEVEL

	0	1-3	4-5	6-7	8-9	10-	12-	15+			TOTAL
CONCEPTUAL LEVELS IN BOSTON											
Concrete	5	5	8	4	2	4	4	5	0	0	37
Level 2	7	9	8	4	1	1	0	2	0	0	32
Level 3	2	1	3	2	2	0	0	2	0	0	12
Abstract	4	1	1	2	1	1	2	0	0	0	12
Totals	18	16	20	12	6	6	6	9	0	0	93

102

CELL CHI-SQUARES

Concrete	-0.3	-	0.1	+	0.0	--	0.0	-	0.0	+	0.5	+	0.5	+	0.2	0.0	0.0
Level 2	+0.0	+	1.6	+	0.0	--	0.0	-	0.1	-	0.1	-	1.1	-	0.1	0.0	0.0
Level 3	-0.0	-	0.1	+	0.0	+	0.0	+	0.6	-	0.0	-	0.0	+	0.0	0.0	0.0
Abstract	+0.5	-	0.1	-	0.4	+	0.0	+	0.0	+	0.0	+	0.6	-	0.3	0.0	0.0

CORRECTED CHI-SQUARE = 8.4901

REGROUP DF = 21 P < 1.000

TABLE 28

NUMBER OF FRIENDS
BY CONCEPTUAL LEVEL

	0	1-3	4-5	6-7	8-9	10-	12-	15+			TOTAL
CONCEPTUAL LEVELS IN OKLAHOMA											
Concrete	25	24	24	33	19	20	25	16	0	0	186
Level 2	9	2	4	7	9	2	2	2	0	0	37
Level 3	5	3	4	5	4	3	4	10	0	0	38
Abstract	3	2	0	3	2	1	1	3	0	0	15
Totals	42	31	32	48	34	26	32	31	0	0	276

103

CELL CHI-SQUARES

Concrete	- 0.3	+ 0.4	+ 0.2	+ 0.0	- 0.6	+ 0.3	+ 0.5	- 1.1	0.0	0.0
Level 2	+ 1.4	- 0.6	- 0.0	+ 0.0	+ 3.4	- 0.2	- 0.7	- 0.6	0.0	0.0
Level 3	- 0.0	- 0.1	- 0.0	- 0.1	- 0.0	- 0.0	- 0.0	+ 6.4	0.0	0.0
Abstract	+ 0.0	+ 0.0	- 0.8	+ 0.0	+ 0.0	- 0.0	- 0.0	- 0.3	0.0	0.0

CORRECTED CHI-SQUARE = 18.1404

DF = 21 P < 0.700

TABLE 29

MEMBERSHIP CONSISTENCY

BY SOCIAL CLASS

	0-15	15-	21-	27-	32-	40-	50-	60-	100+	UNKN	TOTAL
SOCIAL CLASS											
Class I	4	10	14	11	15	11	9	10	5	5	94
Class II	9	6	10	12	15	12	9	7	2	19	101
Class III	6	4	11	10	6	5	10	13	1	20	86
Class IV,V	5	7	3	3	6	13	8	14	7	30	96
Totals	24	27	38	36	42	41	36	44	15	74	377

CELL CHI-SQUARES

Class I	-0.6	+	1.5	+	2.1	+	0.4	+	1.9	+	0.0	+	0.0	-	0.0	+	0.4	-	9.8
Class II	+1.0	-	0.2	-	0.0	+	0.5	+	1.2	+	0.0	-	0.0	-	1.9	-	1.0	-	0.0
Class III	+0.0	-	0.7	+	0.6	+	0.3	-	1.3	-	2.0	+	0.3	+	0.8	-	1.7	+	0.5
Class IV,V	-0.2	+	0.0	-	4.6	-	4.1	-	2.0	+	0.6	-	0.1	+	0.6	+	2.6	+	6.6

CHI-SQUARE = 53.8794

DF = 27 $P < 0.010$

TABLE 30

MEMBERSHIP CONSISTENCY

BY CONCEPTUAL LEVEL

	0-15	15-	21-	27-	32-	40-	50-	60-	100+	UNKN	TOTAL
LEVELS OF CONCEPTUALIZATION											
Concrete	12	18	20	20	25	26	20	25	9	48	223
Level 2	5	2	9	8	7	5	7	6	3	17	69
Level 3	2	5	2	4	6	6	6	5	4	10	50
Abstract	3	0	4	4	2	1	1	5	2	5	27
Totals	22	25	35	36	40	38	34	41	18	80	369

105

CELL CHI-SQUARES

Concrete	- 0.1	+ 0.5	- 0.0	- 0.1	+ 0.0	+ 0.4	- 0.0	+ 0.0	- 0.3	- 0.0
Level 2	+ 0.1	- 1.5	+ 0.9	+ 0.2	- 0.0	- 0.6	+ 0.0	- 0.3	- 0.0	+ 0.2
Level 3	- 0.0	+ 0.3	- 1.0	- 0.0	+ 0.0	+ 0.0	+ 0.1	- 0.0	+ 0.4	- 0.0
Abstract	+ 0.4	- 0.9	+ 0.3	+ 0.2	- 0.0	- 0.5	- 0.3	+ 0.7	+ 0.0	- 0.0

CORRECTED CHI-SQUARE = 9.5315

DF = 27 P < 1.000

TABLE 31

STATUS CONSISTENCY

BY SOCIAL CLASS

	0	5-	30-	50-	70-	120+				UNKN	TOTAL
SOCIAL CLASS											
Class I	48	9	14	6	9	3	0	0	0	5	94
Class II	30	10	16	13	5	8	0	0	0	19	101
Class III	28	4	8	7	9	10	0	0	0	20	86
Class IV,V	28	3	9	6	11	9	0	0	0	30	96
Totals	134	26	47	32	34	30	0	0	0	74	377

106

CELL CHI-SQUARES

Class I	+6.3	+ 0.9	+ 0.4	- 0.4	+ 0.0	- 2.6	0.0	0.0	0.0	- 9.8
Class II	-0.9	+ 1.3	+ 0.9	+ 2.2	- 1.8	- 0.0	0.0	0.0	0.0	- 0.0
Class III	-0.2	- 0.6	- 0.6	- 0.5	+ 0.1	+ 1.4	0.0	0.0	0.0	+ 0.5
Class IV,V	-1.0	- 1.9	- 0.7	- 0.5	+ 0.6	+ 0.2	0.0	0.0	0.0	+ 6.6

CHI-SQUARE = 43.8335

DF = 18 P<0.001

TABLE 32

STATUS CONSISTENCY

BY CONCEPTUAL LEVEL

	0	5-	30-	50-	70-	120+				UNKN	TOTAL
LEVELS OF CONCEPTUALIZATION											
Concrete	77	17	26	22	18	15	0	0	0	48	223
Level 2	29	5	5	5	5	3	0	0	0	17	69
Level 3	17	2	9	1	5	6	0	0	0	10	50
Abstract	8	1	4	3	4	2	0	0	0	5	27
Totals	131	25	44	31	32	26	0	0	0	80	369

107

CELL CHI-SQUARES

Concrete	- 0.0	+ 0.2	- 0.0	+ 0.5	- 0.0	- 0.0	0.0	0.0	0.0	- 0.0
Level 2	+ 0.8	+ 0.0	- 1.2	- 0.1	- 0.1	- 0.7	0.0	0.0	0.0	+ 0.2
Level 3	- 0.0	- 0.2	+ 1.0	- 1.7	+ 0.0	+ 1.1	0.0	0.0	0.0	- 0.0
Abstract	- 0.1	- 0.0	+ 0.0	+ 0.0	+ 0.5	+ 0.0	0.0	0.0	0.0	- 0.0

CORRECTED CHI-SQUARE = 7.7680

DF = 18 P < 0.990