

A STUDY OF SELECTED PSYCHOSOCIAL
CORRELATES OF COLLEGE
STUDENT SUBCULTURES

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CHAPTER I

INTRODUCTION

Statement of the Problem

This is a study of four subcultures of Oklahoma State University men. The sample subgroups were selected according to behavior patterns indicating differing value orientations toward the University itself and toward learning. The basis for the selections was a theoretical model of college student subcultures developed by Clark and Trow (8).

Specifically stated, the problem is: Do members of four subcultures of college students differ significantly on selected psychosocial factors?

Need for the Study

A myriad of college students have served as subjects in psychological and sociological studies. However, few of these studies were of students as students. The findings of the studies which have been made concerning the effects of college have rarely been complimentary. Administrative procedures, the curriculum, the quality of teaching and many other aspects of the higher education process have been severely criticized and the number of critics and the volume

of criticism are increasing. The crux of this criticism, primarily by persons outside the universities, is that the effects of higher education on students are not nearly what they have been assumed to be or what could reasonably be expected.

A new student activism encouraged by the successes of civil rights activities and epitomized by the student revolt and continuing crisis at the University of California, Berkeley, has focused national attention on the college student. Instead of being a neglected area, the study of college students and their relations to the social system of the university has become a popular endeavor.

The great heterogeneity of students in higher education almost defies conceptualization. Some method of classifying or categorizing patterns of student adaptation to the formal and informal demands of the university is essential to an understanding of student behavior as it relates to the achievement of the objectives of the institution. Common criteria for classification include number of hours accumulated, academic aptitude and achievement, sex, marital status, race, and resident-commuter. None of these is particularly relevant to an understanding of how students adapt to the means and goals of the institution which they attend.

Predicting, understanding, controlling, and changing behavior all necessitate an understanding of personality systems and their situational relationships. The great variability and diversity among college students make essential

the adoption of a theoretical framework based on variables which are relevant to institutional goals. This study is concerned with four groups of students who evidence by their behavior specific value orientations toward the institution and toward institutional goals.

Of those components which make up a university: the administration, the faculty, the curriculum, and the students, the latter are most viable and the most easily changed. It is a truism that the primary concern of a university is student learning and that this means student change. To achieve this purpose, faculties and administrators must understand student values and attitudes as they are related to institutional means and goals.

Purpose

The purpose of this study is to study subcultures of college students in order to better understand their differing behavior patterns vis-à-vis the institution.

The quantitative data gathered will be used to compare variations among the four selected subgroups, to determine whether hypothesized relations among the group are to be accepted or rejected, and to help make inferences about students regarding the variables studied. More specifically, the objectives of this study may be stated in terms of the nineteen variables being studied. These may be categorized as measures of academic aptitude and ability, attitudes toward the institution's means and goals, certain social

attitudes and values, and socioeconomic status.

Theoretical Framework

According to Talcott Parsons (37, p. 5), a system of social action has three aspects: 1) a social system, 2) personality systems of the individual actors, and 3) the cultural system. A study of differing modes of adaptation to the social system of the university involves all three aspects. This study is derived from the four disciplines sociology, psychology, social psychology, and education.

The use of a theoretical model based on values which are of critical importance to the larger social system (the university) has a number of advantages. It suggests variables and research objectives which are meaningful, it gives a framework in which results may be more easily interpreted, and it helps to make research cumulative.

Robert Merton (32, p. 140) has developed a model of modes of adaptation to a social system. Every system has goals which are legitimate objects for all its members plus an element which sets forth the prescribed or acceptable means of reaching these goals.

"Conformity" is characterized by a stable pattern of adaptation. Institutionally-prescribed means are followed in order to attain the legitimate cultural goals.

"Innovation" results when persons accept the prescribed goals, but reject the generally accepted means of reaching those goals; a type of non-conformity results. This may

result from a lack of opportunity or from taking opportunistic "short cuts."

Rejecting or de-emphasizing the cultural goals while continuing to follow the institutionalized means is termed "Ritualism." The concentration of effort is on means. The goals are either repressed or changed to suit the actor.

The rejection of both cultural goals and institutional means is termed "Retreatism." Merton describes this as resulting most often from frustration at failure to attain desired goals although acceptable means were used. The result is a resorting to escapism, that is, abandoning both the goals and the means.

"Rebellion" in this context signifies a rejection of both prescribed goals and means and the substitution of one's own for them. Attributions of legitimacy are withdrawn from the prevailing social structure and transferred to a hypothetical new system (32).

<u>Modes of Adaptation</u>	<u>Cultural Goals</u>	<u>Institutionalized Means</u>
Conformity	+	+
Innovation	+	-
Ritualism	-	+
Retreatism	-	-
Rebellion	±	±

Figure 1. Merton's Typology of Adaptations

The educational philosopher, Harry S. Broudy (5), has set forth what he terms solutions to the problems of conflict between individuals and the social order. The first type of solution he terms "corporate identification." This is a type of conformity in which the individual identifies with the group and accepts its goals as his own.

A second solution is revolt. Broudy delineates two kinds — revolt by defiance and revolt by flight. Revolt by defiance may be a sort of blind striking out against society's evils or a positive seizing of some cause. These are analogous to Merton's "Rebellion."

The third solution involves the division of self into two parts; in one form the person is a group member and in the other he is an escapee from the group. This may result in "Ritualism."

Broudy's final and ideal solution to the problem of self versus the social order is self-cultivation of intellectual, moral and aesthetic values. A necessary explanation is that Merton's system is value-free while Broudy's is conceived in idealistic terms. To compare the two theories, it is necessary to assume an ideal social system. Thus, theoretically, conformity or corporate identification would be an ideal mode of adaptation or pattern of behavior.

Individuals adapt differing patterns of behavior in response to the goals and means of achieving the objectives of social systems. Next an account will be given of how such a theoretical framework may be applied to students'

differing modes of adaptation to the means and goals of the university.

Clark and Trow (8) have developed a typology of college student subcultures. The subcultures are differentiated by their value orientations. The terms "value" and "orientation" have no meaning apart from some definite frame of reference or statements of what the expectations of the model are. In this model the two differentiating criteria are intellectual commitment and identification with the institution. The typology which results from dichotomizing these two orientations is as follows:

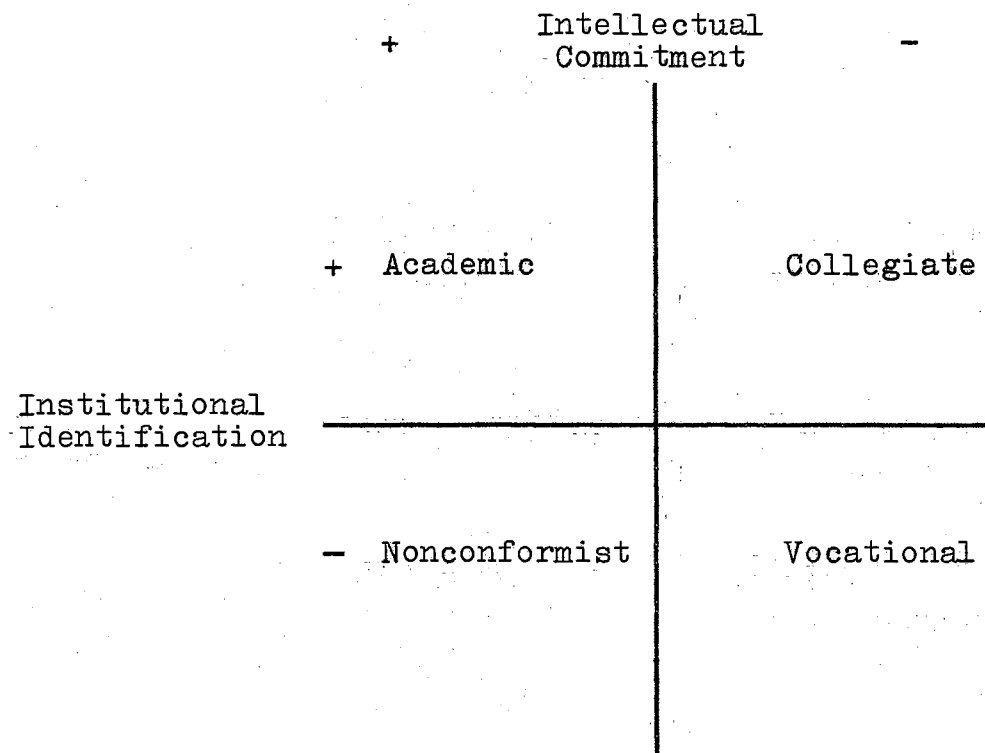


Figure 2. The Clark and Trow Typology of College Student Subcultures

These are patterns of behavior, not types of individuals. Students move in and out of the respective cells. However, for the purpose of explaining the theory of Clark and Trow it is necessary to consider each of the subcultures as representing types of students. A basic assumption is that most students adopt one of these patterns as their dominant orientation.

The Academic Subculture. This is the subculture of ideal students. They identify with the more scholarly members of the faculty and through them with the institution itself. These students are seriously concerned with learning beyond requirements for grades and degrees. When the institution fosters intellectual values, the members of the academic subculture identify strongly with it. In the theoretically-ideal university these students would internalize the values of the system, using institutionally-prescribed means to reach the common or superordinate goals.

The Collegiate Subculture. This is the subculture most characteristic of the common stereotype of the college student. Emphasizing the social aspects of college life, these students are little concerned with learning. Instead of intellectual development they substitute ritualistic goals of their own. This behavior pattern is not opposed to the system, but rather is often strongly supportive of it.

It is, however, indifferent and resistant to serious demands emanating from the faculty for an involvement with ideas and issues over and above that required to gain the diploma. (8, p. 21)

The Nonconformist Subculture. This pattern of adaptation is characterized by active rejection of the system accompanied by deep involvement with ideas. The identifications and primary concerns of these students are most often off-campus persons, causes, and issues. There may be some selective identification with a few faculty members, but their general attitudes toward the institution are negative ones. In systems terms, these students may be said to be pursuing the common goals of the system while rejecting the means set forth to reach those goals as well as rejecting and rebelling against the system itself.

The Vocational Subculture. Students who single-mindedly pursue a degree and develop little or no attachment to the institution are classified as vocational. They substitute their own goals — a degree and a good job — for those of the system. The emphasis is on ritualistically meeting requirements. There is neither time nor inclination to identify with the institution. Serious involvement with ideas and attachment to the university are luxuries which these students cannot afford.

The foregoing are short theoretical descriptions. The personal characteristics, values, and attitudes of these "types" will be considered in greater detail in Chapter IV.

The identifiable forms which these behavioral patterns take on the campus are student peer groups. Newcomb (34) points out three factors which contribute to college student peer group formation: 1) pre-college acquaintance,

2) propinquity, and 3) similarity of attitudes and interests. It is with the latter that this study is especially concerned although the first two factors may very well contribute also. As a rationale for studying these groups, Newcomb states:

Insofar as we are interested in what college experience does to students' attitudes we must, because of the nature of attitude formation and change, be interested in the groups to which students yield power over their own attitudes. Most attitudes and particularly those in which educators are interested — are, as social psychologists say, anchored in group membership. (34, p. 80)

Although Newcomb feels that the social needs of students are met by formal and informal peer groups, he questions whether the academic-intellectual needs are. Most peer groups are not intellectually oriented; instead they often work against the efforts of the institution in such endeavors.

To summarize, this study is based on the sociological theory that individuals assume differing behavioral patterns in relating to a social system. Within a university, two most important values are intellectual commitment and identification or ego-involvement with the institution. Dichotomizing these two variables yields four theoretical student subcultures. Because of the extensive research on the influence of the peer group on student values and attitudes, understanding the characteristics of these groups should prove invaluable for those concerned with educating college students.

The true test of any theory is its stimulation of further study. This study, based on the theories outlined is an attempt to further the understanding of groups of college students who evidence by their behavior differing value orientations toward higher education.

Hypotheses

The hypotheses are stated according to the subsets of the typology as shown in Figure 3.

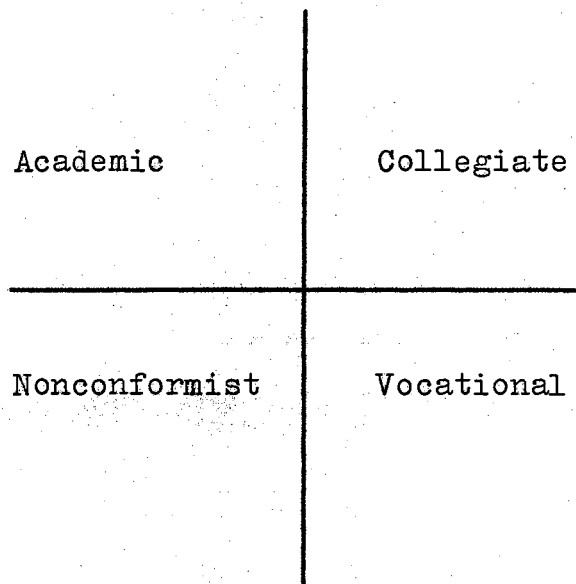


Figure 3. The Subsets of the Typology

The generalized null hypothesis states that there are no significant differences among the four subgroups on the selected variables. The research hypotheses are stated directionally and the decision to accept or reject these hypotheses is based on the value of a one-tailed "t" test at

the .05 level of significance.

H₁ — On "Educational Orientation" as measured by Theoretical and Aesthetic Values and Cultural Sophistication, the following differences will occur: Academic > Collegiate; Academic > Vocational; Nonconformist > Collegiate; Nonconformist > Vocational.

H₂ — On "Identification" as measured by Satisfaction with Faculty, Administration, Students, Major, and Extracurricular Involvement, the following differences will occur: Academic > Nonconformist; Academic > Vocational; Collegiate > Nonconformist; Collegiate > Vocational.

H₃ — On "Independence" as measured by Peer Independence and Family Independence, the following relations will hold: Academic > Collegiate; Academic > Vocational; Nonconformist > Collegiate; Nonconformist > Vocational.

H₄ — On "Academic Ability and Achievement" as measured by the Composite score of the American College Test and Grade Point Average, the following differences will occur: Academic > Collegiate; Academic > Vocational; Nonconformist > Collegiate; Nonconformist > Vocational.

H₅ — On Economic Value, the following differences will occur: Collegiate > Academic; Collegiate > Nonconformist; Vocational > Academic; Vocational > Nonconformist.

H₆ — On Political Value, the following differences will occur: Collegiate > Academic; Collegiate > Vocational; Nonconformist > Academic; Nonconformist > Vocational.

H₇ — On Socioeconomic Status, the following differences

will occur: Academic > Nonconformist; Academic > Vocational; Collegiate > Nonconformist; Collegiate > Vocational.

H₈ — On Study Habits, the following relations will occur: Academic > Collegiate; Academic > Nonconformist; Vocational > Collegiate; Vocational > Nonconformist.

H₉ — On "Social Orientation" as measured by Liberalism, Social Conscience, and Social Value, these relations will hold: Academic > Collegiate; Academic > Vocational; Nonconformist > Collegiate; Nonconformist > Vocational.

Definitions of Concepts and Terms

The following are definitions of concepts and terms as they are used in this study.

1. Academic aptitude — Composite score on the American College Test.
2. Attitude — a disposition to evaluate certain objects, systems, persons, or situations in certain ways.
3. Culture — a system of shared meanings including habits, norms, attitudes, and values.
4. Identification — the process of affective merging with an institution — internalization of the system's norms. (Used synonymously with ego-involvement).
5. Intellectual commitment — concern with ideas and with learning beyond imposed requirements.
6. Overall Grade Point Average — the total

accumulated grade points divided by the total hours attempted. Highest possible is 4.0.

7. Social system — the action and interaction of individuals with differentiated roles within definable environmental limits (37, p. 5).
8. Socioeconomic status — an index combining father's educational and occupational levels.
9. Student — a male undergraduate with 28 or more semester hours who was enrolled for the fall semester, 1966-1967 in Oklahoma State University.
10. Subculture — the normative system of a group smaller than a society which differs from that society in values, behavior, and "style of life" (53).
11. Value — an attribution of worth or usefulness to an object, person, situation, or idea.
12. Value orientation — a pattern of behaviors reflecting an especially favorable regard for a particular action, thought or feeling.

Limitations

The primary instrument used, the College Student Questionnaire (38), was designed to study groups and therefore generalization to individuals is not feasible. Because of the unique nature of the subgroups, generalization to other groups will be risky.

As the sample is limited to males, a substantial part

of the college student population is not represented. Because the behavior patterns described are adaptations to a particular environment, in this case Oklahoma State University, generalizations to other institutions must take into account possible differences in environmental determinants.

The basis for the selection of the sample subgroups was a priori presumptions of representativeness. Although this was carefully done on the basis of experience and theory, the possibilities of bias must be taken into consideration. The extent to which the groups in the sample exemplify the theoretical subcultures of the typology will determine the validity of the sampling methods.

Finally, any typology must oversimplify. Some students are most likely not represented. Some of these might be the "hippy" who to a large degree has "left the field" or withdrawn from the system, the emotionally-disturbed student, the behaviorally-deviant student, and others on the fringes of the system.

Basic Assumptions

The following assumptions are basic for this study:

- 1) The subgroups chosen on the a priori bases are representative samples of populations with similar value orientations.
- 2) All the subjects are members of the subculture their group membership represents.
- 3) The ideal student is one who is committed to serious involvement with ideas

and who is ego-involved with the institution which he attends. 4) The ideal university includes among its objectives the development of intellectual, moral, social, and aesthetic values.

CHAPTER II

REVIEW OF THE LITERATURE

General Student Studies

In the first half of the Twentieth Century there were relatively few studies of students in higher education. Newcomb's (33) longitudinal study of student attitude change at Bennington College, 1935-1939, was a notable exception. The university as a social system, college cultures, and the relevant personality characteristics of students only began to be studied in the middle 1950's. The first comprehensive long-range study of college students in the United States was the Vassar College study, 1954-1958. The efforts of anthropologists, sociologists, social psychologists, and psychologists were focused on student life and its relationships to the college's activities and goals. Possibly the most significant work on the college student was The American College published in 1962 (43). This monumental work emphasized the importance of environmental conditions for learning and the power of the informal system of the students to foster or negate the efforts of faculty and administration and the effects of the curriculum. Particular attention was given a previously neglected area — the effects of the college experience on students.

The American College seems to have stimulated a great number of studies on the college student. More and more social scientists are beginning to study the process of higher education itself.

Several comprehensive studies have been made of college student values and how they change or fail to change during the college years (12; 16). A stimulus to such studies was the Jacob Report, 1957, which received much attention with its conclusion that student values are relatively unaffected by the college experience (24). Webster, Freedman, and Heist (50) reviewed studies showing significant changes in student values and attitudes.

A significant number of studies have focused on student personality and background characteristics, and how these relate to the "press" of the institution (49; 36). Lavin (28) has ably organized and summarized studies in a much overworked area — the prediction of academic performance.

Studies of Student Culture

A number of writers have stated that a separate student culture exists which holds attitudes and values differing from and often opposed to those of the faculty and administration. Writing in The American College, Bay said: "It is inevitable that the student culture becomes rather antagonistic to the faculty culture or to the purposes of the administration." (3, pp. 988-989) Reporting on a facet of the Vassar study, Bushnell (7, p. 512) speaks of a student

culture with norms passed down from one student generation to the next, with the students feeling that their ways are superior to those of the faculty's which are viewed as unrelated to the students' lives.

Gordon (17) studied the social system of a high school of 576 students focusing on three subsystems of school organization: 1) the formal organization — grade achievement, 2) the system of student organizations — extra-curricular activities, and 3) the network of interpersonal relations — friendship choices. The dominant motivations stemmed from the informal rather than the formal structure. Prestige was associated with achievement in student activities, athletics, clothes, friendship cliques, dating, money, and cars.

A study similar to but more comprehensive than Gordon's was conducted by Coleman (9). In his sample of ten high schools, he found what he termed an "adolescent subculture" with its separate norms, values, and attitudes. In no school did good grades rank as the most important factor for being a member of the leading crowd. The most important requirements for being popular were athletic participation for boys and "good looks" for girls. These works are important in that they show informal systems operating in opposition to the formal one of the school.

The two culture theory has been challenged by writers who question the subjective and impressionistic nature of the conclusions (13; 44). However, the most serious

shortcomings of such divisions are their vast oversimplifications of highly diverse systems. To adequately characterize such a heterogeneous phenomenon it is essential to take into account its diversity. Therefore, a number of researchers have attempted to develop meaningful phenotypic models or typologies of college students.

Subcultural Studies

Students adapt to the demands of higher education in a variety of ways. In a study of medical school students, Hughes, et al. (23) observed two distinct subgroups. The "practice-minded" concentrated on those facts which they felt would be essential when they entered medical practice. The "system-minded" group believed that the most important thing to do was ingeniously figure out what the professors wanted. McArthur (31) reviews the remarkable differences between two subcultures — private school boys and public school boys, when they enter a university. Wedge (51) characterized Yale students as intellectuals, athletes, the professionally and vocationally oriented, the business oriented, and those that are "well-rounded" without "deep commitment."

There is a growing need to bring some order and meaning to the proliferating studies pertaining to college students. A theory is needed which will not only generate logical hypotheses and provide a base for new research, but which will help to organize the existing research into a meaningful

system. The basis for this study is a theory of college student subcultures advanced by Clark and Trow (8). The subcultural approach deals with shared or patterned aspects of individual behaviors. This method of studying college students attempts to handle differences by meaningful categorizations. The Clark and Trow typology was explained in Chapter I. All typologies must oversimplify and do some violence to reality; however, this model is particularly valuable in that the criteria for categorization are fundamental to the achievement of the goals of the system. Using this model, Gottlieb and Hodgkins (18) assigned students to the different subcultures by having them select paragraph descriptions which most accurately described their orientation toward college. They then studied subculture membership as it related to socioeconomic status, academic performance, attitude change, and post-college expectations. This study is an excellent example of the ability of the Clark and Trow scheme to generate research. Some of the findings of Gottlieb and Hodgkins will be mentioned below.

This dissertation is a study of subgroups or subcultures of college students and the relationships between membership in these groups and selected individual factors. Several studies have been made of "types" of students which are similar to the subcultures of Clark and Trow.

The "academic" or ideal student has been the subject of surprisingly little research. Hastings Rashdall (39) in The Universities of Europe in the Middle Ages, 1936, said:

"The life of the virtuous student has no annals" (39, p. 441). In The Rise of the Universities, Haskins (19, p. 90), stated: "The studious lad of today never breaks into the headlines as such, and no one has seen fit to produce a play or film 'featuring the good student'." In a recent publication, The Superior Student in American Higher Education, 1966, the single chapter on student characteristics (Chapter four) reports no research studies, only impressions gained from conversations, panel discussions, and autobiographical accounts of honors students' college experiences (41). In a study of a group of students who pursued scholastic and intellectual activities for their own sakes and to whom grades seemed an incidental interest, Yonge (54) found that they were high on academic ability, reflective thought, and interest in world affairs. Brown (6) had the faculty identify ideal students for a study of their characteristics. The students nominated were highly independent of peer group pressures, high on impulse expression, very tolerant of ambiguity, and theoretically oriented.

The "collegiate way of life" as epitomized by social fraternities has been characterized by Goldsen et al. (16) in the Cornell Value Study, 1960.

As a system, they (fraternities) set the pace for a characteristic style of life which emphasizes the importance of dating, drinking and 'having a good time,' and which relegates the academic side of college to 'its proper place' in the scheme of things. (16, p. 80)

In a study of dormitory, fraternity, and off-campus freshman

men at Oklahoma State University, Dollar (11) found the fraternity group had higher ACT Composite Scores, higher socioeconomic status, and ranked lower on an independence scale than the other two groups. Similar findings were reported by Scott (44) who studied six fraternities and four sororities at the University of Colorado. On the value of independence, fraternity pledges scored lower than nonpledges. Freshman men who pledged fraternities also scored lower on scales of intellectualism and creativity than independents. Scott's study was based on this assumption: "The principal function, which is the 'sine qua non' of fraternity living, is the furtherance of interpersonal relations." (44, p. 92) Research which deals with relationships between fraternity membership and values and attitudes relating to the goals of the university is exceedingly rare.

Surprisingly, there is also a dearth of research concerning the characteristics of the nonconforming student. Keniston (25) has studied the alienated student at Harvard, but his subjects are for the most part those who have dropped out either actually or figuratively. Luce (30) provides an insight into the ideology of the "New Left" as does Davidson (10); however, neither gives us insight into the person behind the radical philosophy. Heist (20) found that leaders and participants in student protests, many of whom had been arrested in the Free Speech Movement at Berkeley, were brighter than average, intellectually oriented, and made higher grades than the average student.

The vocationally-oriented student as classified by Clark and Trow has apparently not been systematically studied. Gottlieb and Hodgkins found their "vocational subculture" to contain a greater percentage of students with lower class social origins than the other three subcultures. The "vocationals" tended to make better grades than the "collegiates," but poorer than the "academics" and "non-conformists" (18, pp. 278-279).

Need for Further Study

Clark and Trow were concerned with sociological factors which encouraged or inhibited the development of certain subcultures on a given campus. They were not concerned with the characteristics of individuals in these groups or the personal factors contributing to group membership. A more thorough understanding of students who differ in their orientations toward learning and in their feelings pro or con toward the institution they attend await further research.

CHAPTER III

DESIGN AND METHODOLOGY

Introduction

Oklahoma State University, founded in 1890 as a land-grant college in accordance with the Morrill Act, is a complex institution which at the time of this study, the Fall Semester of 1966, had over 16,000 students. The approximate distribution of the undergraduate enrollment by college is shown in Table I.

TABLE I

PERCENTAGES OF UNDERGRADUATE ENROLLMENT BY COLLEGE

College	Total	Male
Arts and Sciences	33%	30%
Business	18%	20%
Engineering	16%	22%
Education	13%	6%
Agriculture	10%	18%
Home Economics	9%	3%
Veterinary Medicine	1%	1%

This information is provided for illustrative purposes only as no attempt was made to control for college affiliation in the study.

The population for this study was all undergraduate men enrolled for the Fall Semester, 1966, who met these two criteria: 1) sophomore standing or above, and 2) under 25 years of age.

The Samples

Because of the nature of this study, the sampling procedures varied greatly from group to group. Beginning in the Fall Semester of 1965, the author spent many hours interviewing students, administrators, and faculty members in an exploratory field study to attempt to find behavioral and organizational patterns which could serve as prototypes of the Clark and Trow subcultures. Common criteria adhered to in the sampling were that the group member perceive himself as such and that his participation in the group was a matter of his own choosing.

A subculture is a "style of life" differing from that of other parts of the larger culture. After an extensive review of the literature on attitudes and values of college students and almost a year of informal field study, four groups were selected. These were groups judged on a priori bases — observations of patterns of behavior, impressions gained from reading organizational materials, and interview findings — to be representative of the four theoretical

subcultures.

The general criteria used in the selections were these:

1. Academic subculture — a group committed to learning through prescribed institutional means.
2. Collegiate subculture — emphasis on a "well-rounded" approach to higher education with an organizational program which consists primarily of social activities; a group which cooperates with institutional means of control and participates in institutional activity programs.
3. Nonconformist subculture — a group characterized by searching and innovation which for the most part take the form of activities independent of or at least outside of university structures. These activities often have to do with off-campus issues such as civil rights and other social reforms. Sometimes this group advocates and agitates for radical reform within the university itself.
4. Vocational subculture — a group characterized by single-minded preoccupation with curricular requirements leading to a degree and a job combined with a detachment from participation in student activities sponsored by the institution.

Based on the foregoing efforts to operationalize the selection criteria, four subgroups were chosen. The number sought in each group was a minimum of fifty.

The Academic Subculture. The subgroup chosen as most

representative of this subculture on the Oklahoma State University campus was the men enrolled in the University Honors Program. In order to be selected for the honors program, a student must have a standard score of 28 or above on the American College Test (Composite score) and have a B plus or higher grade point average. However, students achieving a score of 30 or higher may be admitted regardless of grades. These men were enrolled voluntarily in either an Honors Seminar or an honors section of a course.

By choosing a more challenging course these men indicated both a commitment to learning and ego-involvement with the institution. In Merton's terms, they pursued institutionally-prescribed goals through institutionally-approved means.

The Collegiate Subculture. The social fraternity chapters on the Oklahoma State University campus who were members of the National Interfraternity Conference in the Fall of 1966 were chosen as sources of men for this sample. There were 23 such organizations. (Farmhouse Fraternity was arbitrarily not included in this study as it restricts membership to majors in agriculture and related areas.) The population after the exclusion of freshmen and inactive members was 877 men. In order to assure getting the 50 men required, a target sample of 67 men was chosen. The sample was randomly chosen from a list maintained in the Office of the Director of Fraternities. The number "seven" was drawn from a pool of numbers 1 to 13. Therefore, beginning with

the seventh name, every thirteenth man was selected for a total of 67 names.

The Nonconformist Subculture. Several factors made the selection of this sample especially difficult. Among the students who met the criteria there was marked suspicion of persons asking personal questions. Some were conscientious objectors to the draft; most were opposed to the Vietnam war; and all seemed somewhat distrustful of an investigator who looked much like a FBI agent or a college administrator. Only after many hours of effort mostly consisting of sympathetic listening, was this researcher able to gain the confidence of a significant number of this group. Even after almost a year of such effort there remained a sizable fringe element with which contact was not made.

Because the identifiable members of this subculture numbered no more than 100 at the time of the study and because of the difficulties mentioned above, a special sampling technique was used — "snowball sampling." This technique, commonly used in anthropological and sociometric studies, is explained by Rossi (42). Yonge (54) had eight key informants nominate his sample of students committed to learning.

Beginning with the officers of "Students for a Democratic Society," snowball sampling was used to find other students of like value orientations. Respondents were asked to serve as informants to put the investigator in touch with other subjects. They were asked: "Who else or

what other groups feel about the University the way you do?"

The sample came from two rather loosely-organized groups:

1) "Students for a Democratic Society" members and sympathizers and 2) a small group of men in a residence hall who had been in difficulty with the Assistant Dean of Men concerning objectionable material published in their residence hall newspaper. The latter group was included upon the advice of the Dean of Students and other University officials. Since the sampling was done, the leader of the residence hall group has joined with a number of the first group to edit an off-campus newspaper.

The national organization "Students for a Democratic Society" (SDS), was formed in 1960 from the "Student League for Industrial Democracy." The Oklahoma State University Student Senate granted official recognition to the OSU chapter of SDS in April of 1966.

The preamble of the SDS Constitution states:

Students for a Democratic Society is an association of young people of the left. It seeks to create a sustained community of educational and political concern; one bringing together liberals and radicals, activists and scholars, students and faculty.

Projects of this organization have included voter registration drives in the South in conjunction with the Student Non-violent Coordinating Committee (SNCC), efforts to organize the urban poor for political action, and a variety of actions opposing the war in Vietnam. SDS was an important force in the student revolt at Berkeley and has fostered disruptive

action of various types on many campuses. In a recent article, an SDS official, Carl Davidson (10) calls for the establishment of student syndicates to abolish student governments, "disrupt the knowledge factory machinery," and assert student control.

The Vocational Subculture. These are men who view college as training for a job and who participate very little in any organized extraclass activities of the University. After much discussion and informal investigation the group chosen was men enrolled in the Technical Education program in the College of Education. This program is designed for the preparation of post-high school technical education teachers.

The Bachelor of Science requirements for this program are shown in Table II.

TABLE II

BACHELOR OF SCIENCE REQUIREMENTS FOR MAJORS
IN TECHNICAL EDUCATION

Area	Semester Hours Required
Technical Courses	40
Mathematics and Physical Sciences	26
Engineering and Science	14
Professional Education	13
General Education	33

All the men under 25 years of age in four sections of the Professional Education courses were chosen for this sample.

The total number of students contacted and the total number who participated in the study are listed in Table III.

TABLE III
NUMBER OF STUDENTS CONTACTED AND NUMBER
PARTICIPATING IN STUDY

Subgroup	Contacted	Participating
Academic	56	50
Collegiate	67	52
Nonconformist	60	54
Vocational	60	60

In order to have the same number of subjects in each group, each was reduced to a total of 50 persons. This was done by listing the names of all those in groups with excessive numbers and then by using a table of random numbers, eliminating the appropriate number of subjects.

Little is known of those who were sent letters, but failed to keep appointments. Two persons refused verbally. Four fraternity men had gone inactive and left their fraternity houses. Two persons in the academic group moved and left no forwarding address.

In studies of group characteristics of college students,

the most common sampling procedure is to select "captive" groups such as members of particular classes or living groups. As neither of these methods was adaptable to three groups in the study, different sampling techniques were used. The method used was a form of "stratified sampling." That is, the total population was divided into subpopulations and then samples were taken from each. A different sampling method was used for each group. In a chapter in Festinger and Katz, Research Methods in the Behavioral Sciences, Kish states: "In each of the strata one may use a different sampling fraction, and even different methods and procedures." (27, pp. 189-190)

Method of Data Collection

Once names were secured of the Academic and Collegiate groups — the former from the Director of the University Honors Program and the latter randomly selected from organizational lists maintained by the Director of Fraternities, a letter was sent to each person asking him to participate in the study. (See Appendix A for a copy of the letter.) Those who did not respond were sent follow-up letters and postal cards again soliciting their cooperation and each time giving them alternate evenings when they might complete the research instruments.

After six sessions, 39 Academics and 37 Collegiates had responded and completed the two instruments. At this point phone calls were made and the man asked to come in at their

convenience either to a meeting room in the Student Union or to the author's office to complete the instruments. The first "testing" session was held on October 11, 1966, and the last formal session on December 17, 1966.

Because of the nature of the sample, the Nonconformists were "tested" in small groups and often individually. The instruments were administered in Student Union meeting rooms, in the snack bar areas, and in a study room of a men's residence hall. This sample was completed on December 20, 1966.

The Vocationals were the only group in the study who were not strictly volunteers. They completed the instruments during regular class periods.

To complete the two instruments most subjects took approximately one hour and 45 minutes. A few finished in 80 minutes and several took more than two hours.

Of the 19 variables included in this study, 11 were obtained from scale scores on the College Student Questionnaire (38) and five from scale scores on the Study of Values (1). The three remaining variables — socioeconomic status, grade point average, and American College Test Composite score, were derived as follows. The College Student Questionnaire allows for the insertion of optional locally-produced items and this method was used to arrive at an index of socioeconomic status (see Appendix B). American College Test scores were obtained from University records and in some cases, from institutions previously attended by the subjects. Overall grade point averages were

computed to include grades for the Fall Semester, 1966.

In every case the subjects were invited to call for an appointment if they desired an interpretation of their Study of Values profiles. They were assured that their responses would be kept confidential and used only for group analyses. They were not required to put their names on the answer materials. Ten subjects in the Nonconformist group chose to remain anonymous; no one in the other groups did.

The Instruments

The primary instruments used in this study were the College Student Questionnaire Part 2 and the Allport-Vernon-Lindzey Study of Values.

The College Student Questionnaire was developed by Educational Testing Service to measure the characteristics of groups of college students. It includes both scales dealing with behaviors and with attitudes and values. Items were inserted in the questionnaire to allow for designation of an assigned subgroup number and for assessment of socioeconomic status.

The College Student Questionnaire Part 2 was used in this study. (Part 1 is designed for students just beginning college.) There are three general sections to the instrument. Section I deals with educational and vocational plans; Section II with college activities and attitudes toward the institution; Section III assesses a variety of values and attitudes.

The questionnaire contains 200 multiple choice items. The data used in this study were 11 scale scores. The scales are: Family Independence, Peer Independence, Liberalism, Social Conscience, Cultural Sophistication, Satisfaction with Faculty, Satisfaction with Administration, Satisfaction with Major, Satisfaction with Students, Study Habits, and Extracurricular Involvement.

From a pool of questionnaire items furnished Educational Testing Service by sociologist, Martin Trow, the College Student Questionnaire was developed. Details of the development of the instrument may be obtained from the Technical Manual for the College Student Questionnaires (38). The instrument is the result of four years of study during which various forms were administered to more than 7,000 undergraduates in a number of institutions.

Because the scale scores were intended to be used for group analyses only, the reliability of individual scale scores is not particularly relevant to the overall analysis. However, reliability coefficients reported are relatively low, ranging from approximately .60 to .80. The standard error of measurement of the scales ranges from 2.5 to 3.0 (38, pp. 25-27).

The construct validity of these measures will depend to a large degree on whether the hypotheses are supported. In a sense, this study will test the validity of the scale scores. If the groups differ significantly on these scales and in the predicted direction, this will support the

construct validity of the scales. Although he used paragraph descriptions to assign students according to Clark and Trow's model, Peterson reports extensive data which support the validity of the CSQ scales (38, pp. 31-53). This study, based as it is on self-selected group memberships and observed group behaviors, should contribute to a better understanding of the validity of these scales.

The Study of Values was first developed in 1931. The Third Edition, 1960, was used in this study. This instrument is based on a theoretical formulation of six types of men advanced by Eduard Spranger (48) in his Types of Men originally published in Germany in 1928. Spranger felt that the personalities of men could best be understood by studying their values.

The six scales of this instrument are: Theoretical, Economic, Aesthetic, Social, Political, and Religious. The first five were used in this study. The Study of Values takes approximately 20 minutes to complete. It consists of 120 items, 20 for each of the six values.

Reliability coefficients of about .90 are reported for each scale. The validity of the scales is supported by their extensive use on groups whose characteristics are known. Statistical interpretations of the Study of Values must take into account that the scale scores are interdependent and measure relative rather than absolute strength of the values (1).

The American College Test is a nationally standardized

test of aptitude for college. There are four subtests — English, Mathematics, Social Studies, and Natural Science. The Composite score is the mean of the student's scores on the four subtests. Reported reliability coefficients for the composite score range around .95 (2).

The Variables

The 19 measures included in this study may be empirically divided into nine nomological categories, some of which contain several variables and some comprised of a single variable.

Those measures associated with value orientations concerning the goals of the university include the Theoretical and Aesthetic value scales from the Study of Values and the Cultural Sophistication scale from the College Student Questionnaire. Brief descriptions of these scales are:

1. Theoretical value — a critical, rational, intellectual orientation characterized by the searching for form and order.
2. Aesthetic value — a valuing of form, harmony, and beauty.
3. Cultural Sophistication — "an authentic sensibility to ideas and art forms." (38, p. 17)

A second common factor among the measures involves identification and satisfaction with the institution itself. The specific scales and short descriptions are:

1. Satisfaction with Faculty — a general attitude

of respect and esteem for one's professors.

2. Satisfaction with Administration — approval both of administrators themselves and of institutional rules and regulations.
3. Satisfaction with Students — general approval of one's fellow students.
4. Satisfaction with Major — a positive attitude toward one's major field — includes approval of instruction and general departmental procedures.
5. Extracurricular Involvement — extensive participation in out-of-class activities sponsored by the institution.

Two measures are of independence — a Peer Independence scale and a scale measuring the extent of one's independence from his family.

Academic ability is measured by the Composite score of the American College Test and academic achievement by overall grade point average.

Two of the values on the Study of Values are considered separately. The Economic value represents the extent of one's emphasis on practical, useful, and material matters. The Political value scale assesses one's interest in personal power and influence.

An index of socioeconomic status was derived from a hierarchical rating of the level of formal education attained by the father and a ranking of father's occupational level. The rationale for this method was based on a system used by

Hollingshead and Redlich (22). Similar formulations have been used more recently by others concerned with the social origins of their subjects (21).

Study Habits are difficult to predict in relation to the Clark-Trow model. A high score on this scale indicates "a serious, disciplined, planful orientation toward customary academic obligations." (38, p. 17) It is hypothesized that this is most characteristic of Academics and Vocationals and that they differ significantly from the other groups on this variable.

A final cluster of factors encompasses a "Social Orientation." These scales are:

1. Liberalism — high scorers support measures of the welfare state, organized labor, abolition of capital punishment, etc.
2. Social Conscience — "moral concern about perceived injustice." (38, p. 18)
3. Social value — an altruistic, philanthropic orientation.

Research Design and Statistical Treatment

This research is of the ex post facto type which Kerlinger (26) defines as:

... that research in which the independent variable or variables have already occurred and in which the researcher starts with the observation of a dependent variable or variables. He then studies the independent variables in retrospect for their possible relations to, and effects on, the dependent variable or variables. (26, p. 360)

He goes on to review a number of such studies and concludes:

If a tally of sound and important studies in psychology, sociology, and education were made, it is likely that ex post facto studies would outnumber and outrank experimental studies. (16, p. 373)

The dependent variables in this study are the respective group memberships. The purpose of the study is to examine hypothesized antecedents of these group affiliations. The independent variables, the nineteen measures studied, are not presumed to be causes, but rather relationships or correlates. Another way of stating the problem is: What significant differences exist among the subcultures on the variables selected?

The statistical treatment used was analysis of variance. This technique is especially suited to research designs where group comparisons are made. The analysis of variance is a method of comparing the variance of values around their respective group means with the variance of the group means around the mean of the total scores. This method is described by Wert, et al. (53, pp. 172-177) and in great detail by Kerlinger (26, Chapters 7 and 11).

The actual computations in this study were done on a CDC Model 3100 Computer at the Computer Center, The University of Texas at El Paso. The entire analysis was done by groups and the following are the procedures followed:

1. Compute the sum of squares for total.

$$SS_t = \sum X^2 - \frac{(\sum X)^2}{N}$$

where X is the individual raw score. N in this study was 200.

2. Compute the sum of squares for groups.

$$SS_g = \frac{(\sum x_1)^2 + (\sum x_2)^2 + (\sum x_3)^2 + (\sum x_4)^2}{n} - \frac{(\sum X)^2}{N}$$

where n is the number of subjects in each group; in this case $n = 50$.

3. Compute the sum of squares within groups.

$$SS_w = SS_t - SS_g$$

4. Determine the degrees of freedom.

df for groups = number of groups - 1 = 3.

df for total = $N - 1 = 199$.

df for within = df for total - df for groups = 196.

5. Compute mean squares.

$$MS = \frac{SS}{df}$$

6. Compute F values.

$$F = \frac{\text{Group MS}}{\text{Within MS}}$$

7. Look up $F_{3,196}$ in appropriate table at .05 level of significance.

Where significant differences were found among the groups, further steps were taken to find the sources of the difference. The method used was to compute "t" tests among the means according to the hypotheses. Because the hypotheses were stated directionally, one-tailed "t" tests were used. This has the advantage of increasing the power of "t" to reject the null hypothesis when it is false (48, pp. 6-14).

In order to compute the appropriate "t" values, these further computations were necessary.

1. Standard deviation

$$SD = \frac{\sum x^2}{\sqrt{n}}$$

2. Standard error of the mean

$$SE_M = \frac{SD}{\sqrt{n}}$$

3. Standard error of the difference between means

$$SE_D = \sqrt{(SE_{M_1})^2 + (SE_{M_2})^2}$$

4. $t = \frac{|M_1 - M_2|}{SE_D}$

At this point a one-tailed table of "t" values was consulted to determine whether the differences between the means were significant.

CHAPTER IV

ANALYSIS OF DATA AND PRESENTATION OF RESULTS

Introduction

The numerical values reported in this study were derived from several sources. The College Student Questionnaire Part 2 (38) yields scale scores as does the Study of Values (1). Details of how these scores were arrived at are reported in the respective manuals. An index of socioeconomic status was calculated by adding the values of hierarchical ratings of educational level reached by father and occupation of father. For example, if the father completed less than seven years of school and was a carpenter, the socioeconomic status value would be $1 + 3 = 4$. (See Appendix B for complete scales.) Grade point average was calculated in the usual manner by dividing the total number of accumulated grade points by the total number of hours attempted. For example, a person who had attempted 60 hours and accumulated 186 grade points would have an overall grade point average of $\frac{186}{60} = 3.10$. The American College Test Composite score is a standard score and ranges from 1 to 36.

The analysis of variance is based upon several statistical assumptions which may not be seriously violated without the results of such an analysis being vitiated. The

assumptions are these: 1) that the attributes being studied are normally distributed in the populations from which the samples were drawn, 2) that the variances within the groups are homogeneous, and 3) it is assumed that the attributes being measured are distributed on a continuum and can be transformed into equal interval scales.

In actual practice and in experimental tests involving many kinds of data, a number of statisticians have concluded that unless the violations of these assumptions are of a great magnitude, the "F" and "t" tests are affected only in a minimal way. Lindquist (29, pp. 78-86), Boneau (4), and Kerlinger (26, pp. 258-260) discuss these matters in detail. Their conclusions support the use of the analysis of variance technique and the use of "t" tests in studies of the nature of the one reported here when the measures are independent.

The Study of Values presents a special problem for the statistical analysis because the scales are not independent. In this study the profile configurations are quantified and treated as if they were independent. The limitations of such a procedure are obvious and therefore caution should be used in interpreting the analysis of variance and "t" test results on the Theoretical, Economic, Aesthetic, Social, and Political scales. To aid in the interpretation of these measures, profiles of the group means are shown in Figure 6, page 56.

Essentially this study consists of analyses of group differences on 19 different measures. However, a number of

steps were taken to give order and meaning to the results. First of all, this research effort stems from a theoretical formulation which gave both form and direction to the investigation. Secondly, efforts were made to develop substantive hypotheses generating from the theory and hopefully having heuristic value for both further research and for educational practice. A third procedure adopted in order to strengthen the statistical tests as well as to make the results more intelligible was to state the hypotheses directionally. In Chapter V an effort will be made to characterize the groups on the basis of the statistically significant differences found among them.

An Overview of the Data

The procedure in this chapter will be to present results in tables and figures and then discuss these results as they relate to the nine hypotheses. For an initial overview of the data, Tables IV through XII show the means and standard deviations on the 19 measures.

Table IV pertains to those measures deemed most closely related to value orientations toward ideas and toward learning. The rank order of the Aesthetic and the Cultural Sophistication means is as expected. The relative patterns are almost identical with the Nonconformist mean exceeding the others followed by Academic, Collegiate, and Vocational values in that order. The Collegiate and Vocational means are practically the same.

TABLE IV
GROUP MEANS AND STANDARD DEVIATIONS
ON EDUCATIONAL ORIENTATION

Variable	Group	Mean	Standard Deviation
Aesthetic Value	Academic	38.43	10.05
	Collegiate	32.84	7.29
	Nonconformist	48.50	10.43
	Vocational	32.83	7.17
Theoretical Value	Academic	45.70	7.16
	Collegiate	42.53	6.09
	Nonconformist	43.16	5.58
	Vocational	45.66	5.99
Cultural Sophistication	Academic	24.78	5.00
	Collegiate	19.84	5.33
	Nonconformist	30.16	6.26
	Vocational	19.82	4.83

The relative size of the Vocational mean on Theoretical Value does not follow the pattern predicted.

The standard deviations show a large amount of variability of the individual scores contributing to the group mean. This variability is especially high among the Academic and Nonconformist groups on Aesthetic Value.

In Table V are presented those measures presumed to relate to identification or ego-involvement with the institution. Here the Academic and Collegiate values are expected to be larger. Examination of the table, however, indicates that the Vocationals scored relatively higher than the theoretical bases of the study would lead one to expect.

TABLE V
 GROUP MEANS AND STANDARD DEVIATIONS ON
 IDENTIFICATION WITH THE INSTITUTION

Variable	Group	Mean	Standard Deviation
Satisfaction with Faculty	Academic	26.38	4.49
	Collegiate	25.28	4.05
	Nonconformist	24.14	4.65
	Vocational	26.06	5.33
Satisfaction with Administration	Academic	25.70	5.47
	Collegiate	27.98	3.81
	Nonconformist	17.50	4.43
	Vocational	28.22	4.09
Satisfaction with Students	Academic	26.70	3.70
	Collegiate	26.08	3.90
	Nonconformist	24.88	3.89
	Vocational	26.92	4.20
Satisfaction with Major	Academic	27.96	3.49
	Collegiate	28.46	3.71
	Nonconformist	25.20	4.62
	Vocational	26.74	4.18
Extracurricular Involvement	Academic	23.00	6.04
	Collegiate	25.20	3.78
	Nonconformist	18.80	5.70
	Vocational	19.22	3.94

On each measure of identification the Nonconformist means are the lowest among the four groups. The Vocational means on the satisfaction scales are relatively higher than expected. Also worthy of note in Table V are the generally low standard deviations of the Collegiates.

The means in Table VI are of the expected order as persons committed to learning are presumably more self-sufficient and hence less dependent on family and peers for support.

TABLE VI
GROUP MEANS AND STANDARD DEVIATIONS
ON INDEPENDENCE

Variable	Group	Mean	Standard Deviation
Peer Independence	Academic	26.58	4.39
	Collegiate	22.54	3.53
	Nonconformist	27.22	4.86
	Vocational	24.78	3.32
Family Independence	Academic	23.50	4.76
	Collegiate	22.42	4.49
	Nonconformist	29.08	5.40
	Vocational	22.72	5.34

Here the Nonconformist mean scores exceed the others which is a predictable finding.

Table VII shows the mean American College Test Composite scores and the overall grade point averages for the respective groups.

TABLE VII
GROUP MEANS AND STANDARD DEVIATIONS ON
ACADEMIC APTITUDE AND ACHIEVEMENT

Variable	Group	Mean	Standard Deviation
Academic Aptitude	Academic	28.04	2.66
	Collegiate	23.00	4.29
	Nonconformist	25.08	2.36
	Vocational	18.18	3.12
Academic Achievement	Academic	3.43	.51
	Collegiate	2.59	.50
	Nonconformist	2.76	.50
	Vocational	2.60	.36

The high mean scores of Academics are as expected as these men were required to have high aptitude scores and grades in order to be accepted into the Honors Program. The relatively high scores and the small standard deviation of the Nonconformists is revealing; particularly if one associates deviant behavior or radicalism with low scholastic ability and poor achievement. The achievement level of the Vocationals is surprising in relation to their mean aptitude score.

Table VIII shows the respective group means and standard deviations on Economic Value.

TABLE VIII
GROUP MEANS AND STANDARD DEVIATIONS
ON ECONOMIC VALUE

Variable	Group	Mean	Standard Deviation
Economic Value	Academic	35.72	7.57
	Collegiate	46.56	8.64
	Nonconformist	29.34	10.24
	Vocational	45.32	8.17

Here the differences are marked and in the expected direction. Although the Nonconformist mean is lower than the others, the standard deviation indicates a significant amount of variation in the group. It is interesting to note that the Vocational and the Collegiate means are similar and relatively high.

Scores on the Political Value scale are shown in Table IX.

TABLE IX
GROUP MEANS AND STANDARD DEVIATIONS
ON POLITICAL VALUE

Variable	Group	Mean	Standard Deviation
Political Value	Academic	41.82	7.72
	Collegiate	46.19	6.80
	Nonconformist	39.01	6.63
	Vocational	40.00	5.58

The Collegiate mean is relatively high as expected. The relatively low Nonconformist mean shows that power over other is not highly important among the members of this group.

The first three groups are remarkably homogeneous on Socioeconomic Status as is shown in Table X.

TABLE X
GROUP MEANS AND STANDARD DEVIATIONS
ON SOCIOECONOMIC STATUS

Variable	Group	Mean	Standard Deviation
Socioeconomic Status	Academic	9.94	2.95
	Collegiate	9.92	2.76
	Nonconformist	9.64	2.80
	Vocational	7.60	2.24

The value of the Vocational mean in relation to the other group means was predicted; however, the Nonconformist mean is unexpectedly high.

Results on the Study Habits scale are presented in Table XI.

TABLE XI
GROUP MEANS AND STANDARD DEVIATIONS
ON STUDY HABITS

Variable	Group	Mean	Standard Deviation
Study Habits	Academic	27.56	4.34
	Collegiate	26.02	3.75
	Nonconformist	24.36	5.66
	Vocational	26.92	4.27

Study Habits are very difficult to assess and there could very well be a "social desirability" factor involved in these responses. In other words these questionnaire items may have been marked in accordance with the perceived expectations of others. The rank order of these means fulfills the expectations of the model. Of special interest are the standard deviations showing the Collegiates to be the most standardized in their study habits and the Nonconformists the most variable.

The three remaining variables in the study pertain to political liberalism, concern about social problems, and the relative value one attributes to altruism and philanthropy. These "Social Orientation" means and Standard Deviations are shown in Table XII. The Nonconformist means in each case are the highest.

TABLE XII
GROUP MEANS AND STANDARD DEVIATIONS
ON SOCIAL ORIENTATION

Variable	Group	Mean	Standard Deviation
Liberalism	Academic	26.80	5.02
	Collegiate	23.54	3.42
	Nonconformist	32.50	6.11
	Vocational	21.38	4.17
Social Conscience	Academic	28.44	3.88
	Collegiate	27.08	4.95
	Nonconformist	30.42	4.71
	Vocational	26.18	4.89
Social Value	Academic	36.47	8.95
	Collegiate	32.20	7.36
	Nonconformist	43.83	10.24
	Vocational	34.75	6.17

The rank order of the means on the Liberalism and Social Conscience scales are the same. The prospective teachers (the Vocationals) scored somewhat higher than the Collegiates on concern for others.

Figures 4, 5, and 6 give graphic presentations of the group means on selected measures.

Means and standard deviations are descriptive statistics. Comparisons of these measures utilizing tables of numerical values and charts showing spatial relationships give some notion of group characteristics. However, to better interpret these data an analysis of variance was performed. This method of analyzing group differences takes into account both differences within and between the groups.

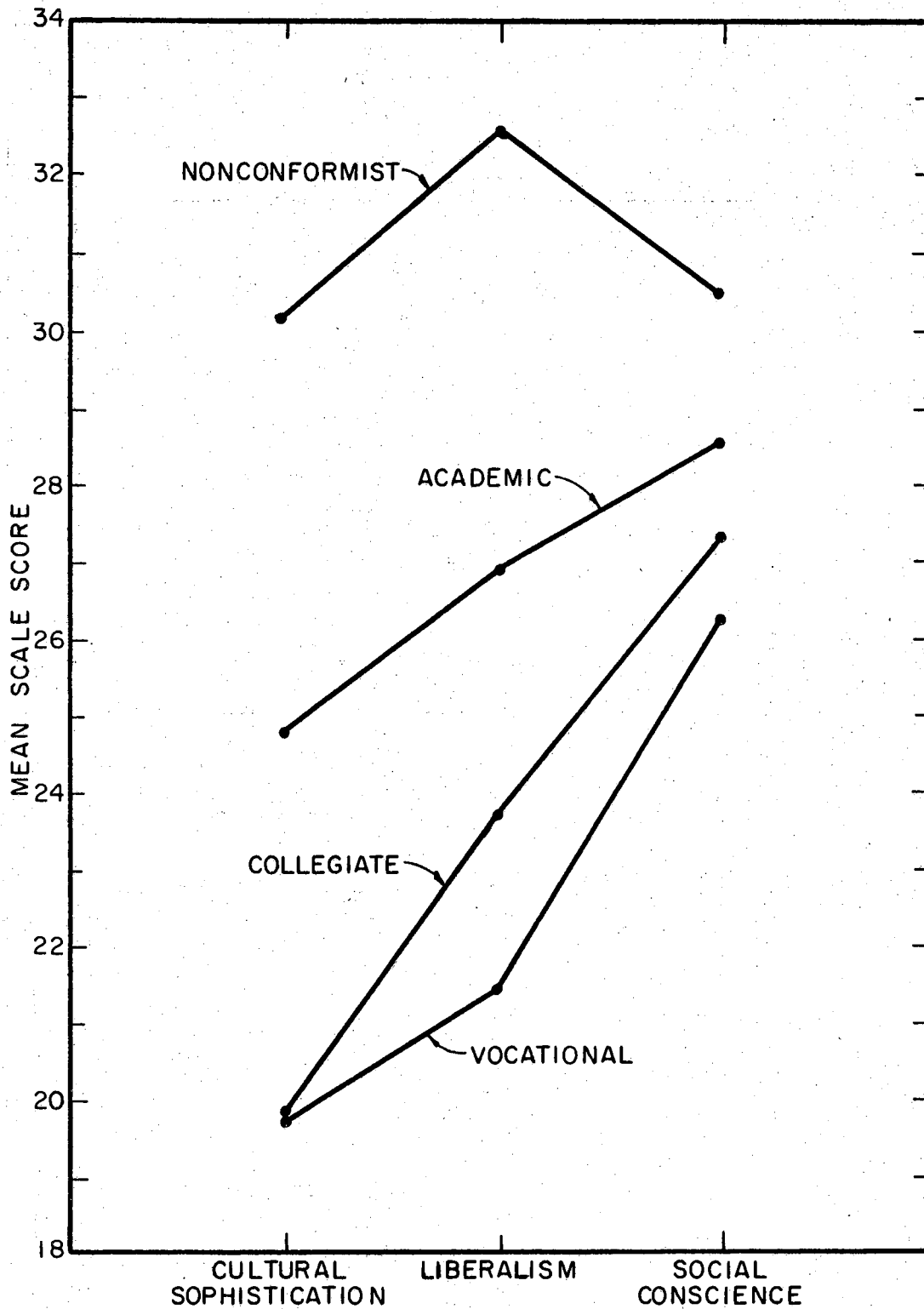


Figure 4. Profile of Selected Measures of Educational and Social Orientation

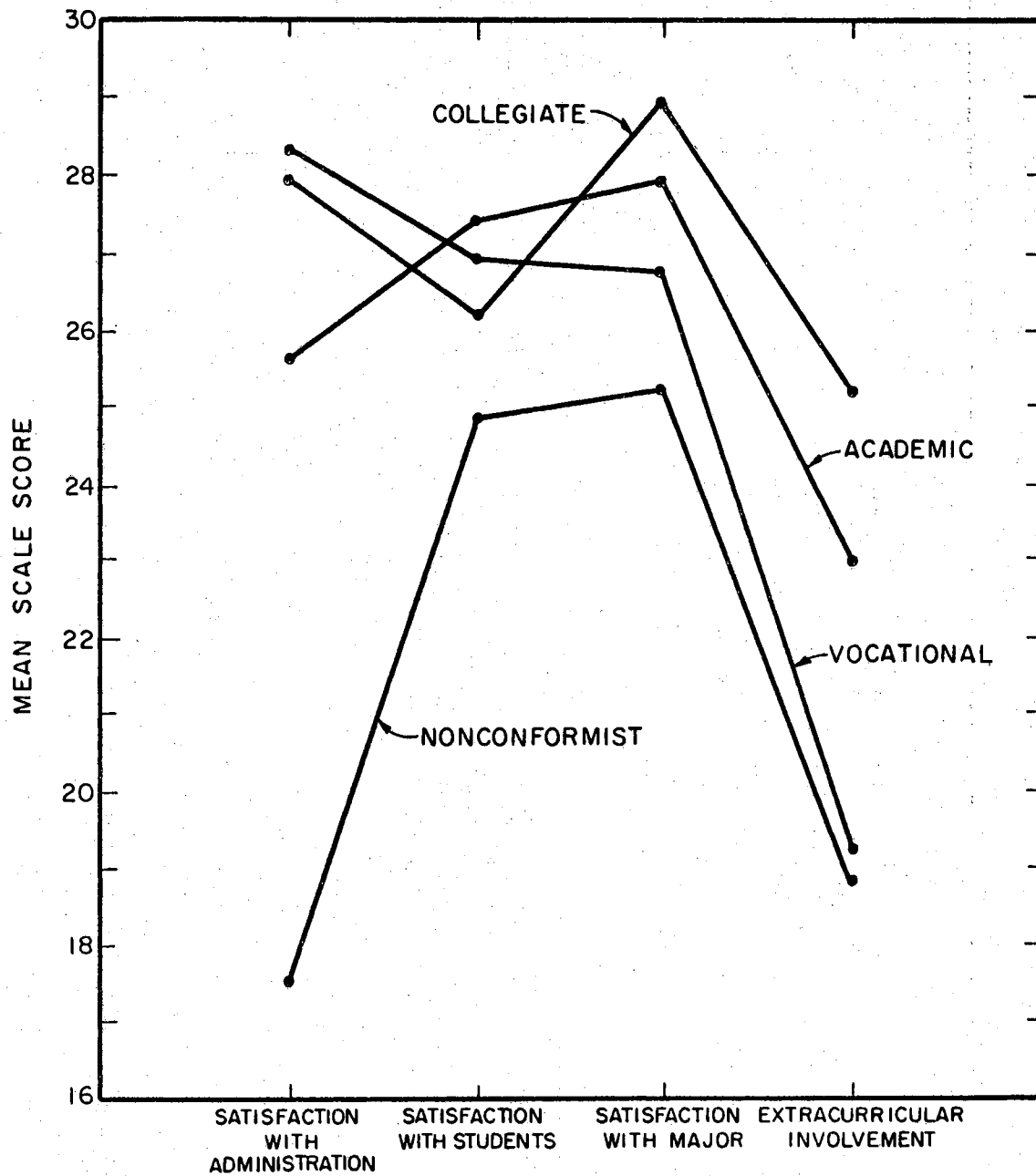


Figure 5. Profile of Four Measures of Identification

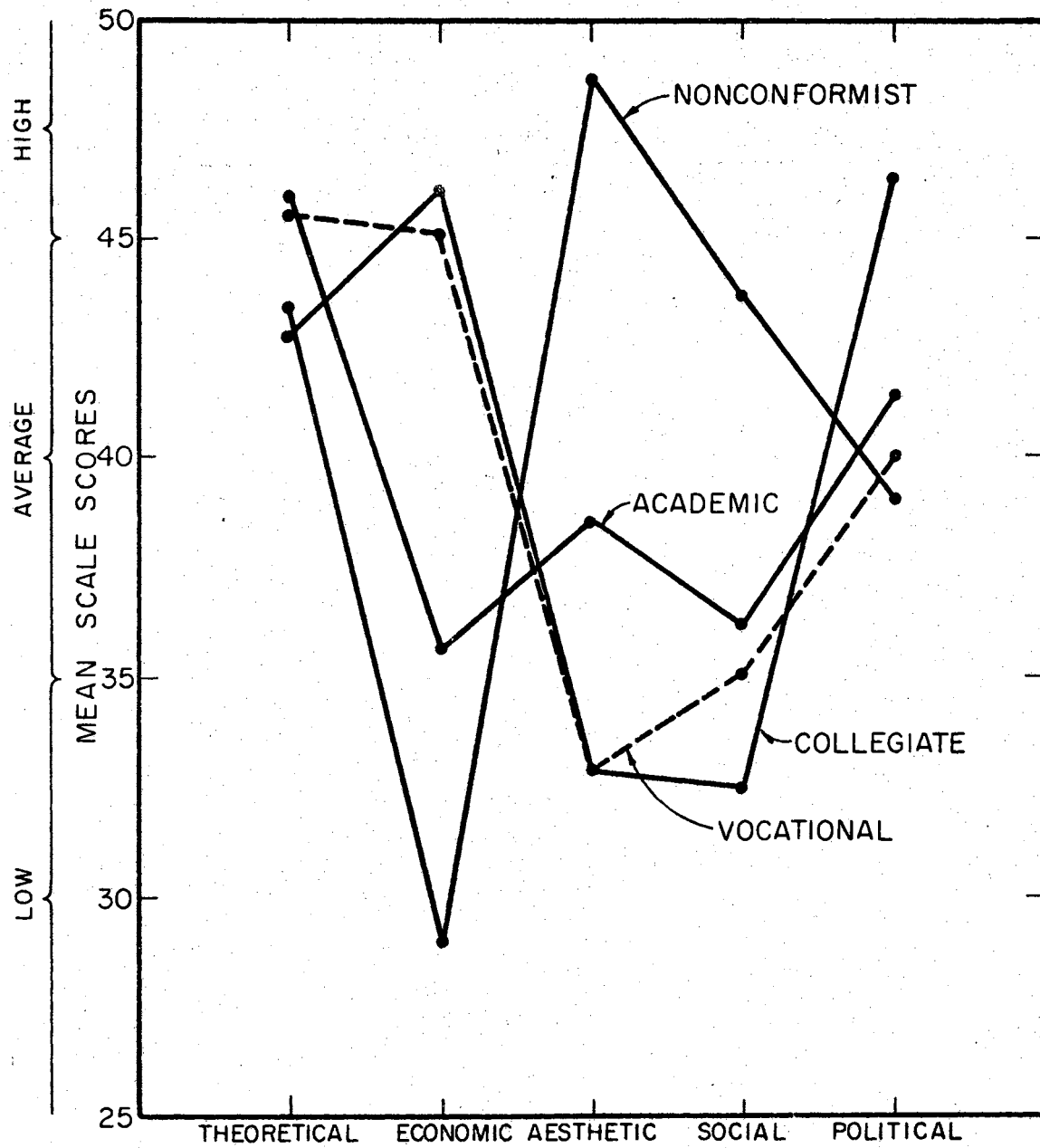


Figure 6. Profile of Values

Analysis of Variance Results

Tables XIII, XIV, XV, and XVI show the analysis of variance results. Table XIII presents the "Educational Orientation" data.

TABLE XIII
ANALYSIS OF VARIANCE RESULTS FOR FOUR SUBGROUPS
ON EDUCATIONAL ORIENTATION

Variable and Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F
Aesthetic Value				
Between Groups	3	8184.97	2728.32	34.02**
Within Groups	196	15717.53	80.19	
Theoretical Value				
Between Groups	3	411.82	137.27	3.46*
Within Groups	196	7768.65	39.64	
Cultural Sophistication				
Between Groups	3	3642.10	1214.03	41.09**
Within Groups	196	5791.40	29.55	

* Significant at the .05 level of confidence.

** Significant at the .01 level of confidence.

Highly significant "F" values were found for Aesthetic value and for Cultural Sophistication with the group differences on the Theoretical value being significant at the .05 level. These findings demonstrate that differences do exist among the groups. Further analysis is necessary to determine if these differences are as hypothesized.

Table XIV presents the findings relative to the identification or ego-involvement dimension of the Clark-Trow

typology.

TABLE XIV
ANALYSIS OF VARIANCE RESULTS FOR FOUR SUBGROUPS
ON IDENTIFICATION WITH THE INSTITUTION

Variable and Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F
Satisfaction with Faculty				
Between Groups	3	149.05	49.68	2.25
Within Groups	196	4332.70	22.11	
Satisfaction with Administration				
Between Groups	3	3794.94	1264.98	61.33**
Within Groups	196	4042.56	20.63	
Satisfaction with Students				
Between Groups	3	125.65	41.88	2.66*
Within Groups	196	3081.14	15.72	
Satisfaction with Major				
Between Groups	3	316.42	105.47	6.38**
Within Groups	196	3237.96	16.52	
Extracurricular Involvement				
Between Groups	3	1420.82	473.61	18.80**
Within Groups	196	4938.58	25.20	

* Significant at the .05 level of confidence.

** Significant at the .01 level of confidence.

The Satisfaction with Faculty group differences are not significant and therefore the null hypothesis cannot be rejected. An "F" value of 2.65 is required for significance at the .05 level. The Satisfaction with Students measures just reach this level, but the remaining three analyses yielded differences beyond the .01 level.

The "F" values for group differences on independence

from peers and from family are presented in Table XV.

TABLE XV
ANALYSIS OF VARIANCE RESULTS FOR FOUR
SUBGROUPS ON INDEPENDENCE

Variable and Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F
Peer Independence				
Between Groups	3	660.56	220.19	13.00**
Within Groups	196	3319.76	16.94	
Family Independence				
Between Groups	3	1472.58	490.86	19.13**
Within Groups	196	5028.44	25.66	

** Significant at the .01 level of confidence.

The group differences are significant on both measures beyond the .01 level of confidence.

The analyses of variance for the remaining variables are presented in Table XVI. The "F" values are all significant beyond the .01 level. This signifies that among the four groups there are differences and that we can be highly confident that these are "real" and not chance differences.

The especially high "F" values on Academic Aptitude, Academic Achievement, and Liberalism are partly attributable to the criteria used for group selection. The Academics were chosen because of high aptitude scores and high grades; the Nonconformist selection criteria included at least an intimation of sympathy with coercive societal change or political liberalism.

TABLE XVI
ANALYSIS OF VARIANCE RESULTS FOR FOUR SUBGROUPS
ON NINE SELECTED MEASURES

Variable and Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F
Academic Aptitude				
Between Groups	3	2581.90	860.63	82.73**
Within Groups	196	2038.98	10.40	
Academic Achievement				
Between Groups	3	23.75	7.92	34.85**
Within Groups	196	44.52	0.23	
Economic Value				
Between Groups	3	10047.46	3349.15	43.25**
Within Groups	196	15177.50	77.44	
Political Value				
Between Groups	3	1514.43	504.81	10.93**
Within Groups	196	9050.07	46.17	
Socioeconomic Status				
Between Groups	3	189.85	63.28	8.51**
Within Groups	196	1458.02	7.44	
Liberalism				
Between Groups	3	3513.69	1171.23	50.09**
Within Groups	196	4582.70	23.38	
Social Conscience				
Between Groups	3	510.26	170.09	7.78**
Within Groups	196	4283.56	21.85	
Social Value				
Between Groups	3	3744.58	1248.19	17.64**
Within Groups	196	13865.64	70.74	
Study Habits				
Between Groups	3	289.25	96.42	4.54**
Within Groups	196	4160.50	21.23	

** Significant at the .01 level of confidence.

The next step in the analysis of the data is to look for the sources of these differences. On the basis of the typological model, hypothesized group differences will be tested.

Before testing the hypotheses on the measures with significant "F" values, some remarks will be made concerning the Satisfaction with Faculty variable which will be dropped from the analysis. The items making up this scale are concerned with the student's attitudes toward the competence of his professors as well as the general nature of student-faculty relations on the campus.

A normative mean value of 26.51 with a standard deviation of 4.93 is reported in the CSQ Technical Manual. These values are based on scores from a stratified sample of 700 undergraduates (38, p. 27). The overall mean for the subjects in this study was 25.42 and the standard deviation was 4.72. Generalizations would be risky; however, it may be noted that none of the mean values of the subgroups in this study reached that of the norm group on this scale (Table V).

It may be stated that the scale scores on the Satisfaction with Faculty measure are relative homogeneous among the groups and that the group means do not differ significantly. Further implications of this finding will be discussed in Chapter V.

Testing of Hypotheses

Means and standard deviations show the central tendencies and the variability of group responses on given sets of items. Analysis of variance results indicate relations between differences within each group and differences between the respective groups. When significant "F" values occur this indicates that there are significant differences among the groups.

In studies involving more than two groups, an additional statistical analysis must be employed in order to find the sources of the significant differences. The method used here was to apply "t" tests between means according to the hypotheses. The "t" values are derived from the ratio of a statistic, in this case the absolute differences between two means, to its standard error. The latter statistic in this case is the standard error of the difference between the two means.

The generalized null hypothesis is that there are no significant differences among the subgroups on the respective variables. With the exception of that part of Hypothesis 2 which deals with Satisfaction with Faculty, the null hypothesis can be rejected. The next step is to test the research hypotheses.

Hypothesis 1. On "Educational Orientation" as measured by Aesthetic and Theoretical values and Cultural Sophistication, the following differences will occur:
Academic > Collegiate; Academic > Vocational; Nonconformist

> Collegiate; Nonconformist > Vocational.

Table XVII gives the means, standard errors, hypothesized differences, and values of "t" for the three measures making up the variable "Educational Orientation." Each hypothesized relationship will be discussed in turn.

TABLE XVII
RESULTS OF "t" TESTS OF HYPOTHESIZED DIFFERENCES
BETWEEN MEANS OF GROUPS ON
EDUCATIONAL ORIENTATION

Variable and Groups	Means	SE _M	Hypothesized Differences	"t"
Aesthetic Value				
Academic	38.43	1.42	Academic > Collegiate	3.18**
Collegiate	32.84	1.03	Academic > Vocational	3.21**
Nonconformist	48.50	1.47	Nonconformist > Collegiate	8.70**
Vocational	32.83	1.01	Nonconformist > Vocational	8.75**
Theoretical Value				
Academic	45.70	1.01	Academic > Collegiate	2.38*
Collegiate	42.53	.86	Academic > Vocational	0.03
Nonconformist	43.16	.79	Nonconformist > Collegiate	0.54
Vocational	45.66	.85	Nonconformist > Vocational	-2.16*
Cultural Sophistication				
Academic	24.78	.71	Academic > Collegiate	4.78**
Collegiate	19.84	.75	Academic > Vocational	5.05**
Nonconformist	30.16	.88	Nonconformist > Collegiate	8.88**
Vocational	19.82	.68	Nonconformist > Vocational	9.25**

* Significant at the .05 level of confidence.

** Significant at the .01 level of confidence.

> Greater than.

- Opposite direction.

The Academics scored significantly higher than the Collegiates on Aesthetic value. This difference, significant at the .01 level, indicates that the Academic group

places more value on the artistic aspects of life than does the Collegiate. The same differential relationship holds between Academics and Vocationals and to a much greater degree between Nonconformists and Collegiates and between Nonconformists and Vocationals. The Academics and Nonconformists place higher values on beauty, grace, and harmony.

A high Theoretical value indicates a great interest in discovering truth and order in the universe. This is a scientific and empirical orientation to questions. On this scale the hypothesized relationships are true for the Academic and the Collegiate, but not for the other groups.

The difference between the Nonconformists and the Collegiates is in the predicted direction, but does not approach the value necessary to reject the null hypothesis. The confounding factor is the high mean score of the Vocationals. These subjects, enrolled in the Technical Education program, are understandably more interested in and hence more likely to value a rational as opposed to an aesthetic approach to knowledge and learning. The difference between the Nonconformists and Vocationals is actually significant in the direction opposite to that hypothesized. At least in this respect, the Vocationals belie their theoretical subcultural values as described by Clark and Trow.

The differences on the Cultural Sophistication scale are all highly significant and in the hypothesized direction. The Academics and Nonconformists significantly exceed the

other two groups on this measure of sensitivity to ideas and art forms. Of special interest is the comparatively high score of the Nonconformists and the almost identical means of fraternity men and Technical Education students.

Hypothesis 2. On "Identification" as measured by Satisfaction with Faculty, Administration, Students, Major, and Extracurricular Involvement, the following differences will occur: Academic > Nonconformist; Academic > Vocational; Collegiate > Nonconformist; Collegiate > Vocational.

As the analysis of variance of the Satisfaction with Faculty scale scores did not yield a significant "F" value, the null hypothesis cannot be rejected for this measure.

The statistical findings on this factor are presented in Table XVIII. A student who identifies with the institution he attends would theoretically be expected to express satisfaction with its various components including administration, fellow students, major field of study, and the extracurriculum. This hypothesis is only partly supported by the data.

Academics scored significantly greater than the Nonconformists as did the Collegiates on Satisfaction with Administration. The fact that the mean Vocational score was higher than that of the other groups was not expected. Apparently these men are relatively pleased with their relations with administrators and view the application of rules and regulations as reasonable and fair. The difference between the Academics and the Vocationals was in the opposite direction

from the hypothesized one. Predictably, the Nonconformists scored very low on this scale in comparison with the other three groups. The difference between the mean scores of the Collegiates and the Nonconformists are statistically the highest of any of the 19 variables in the study. The relationships among the first three groups were as hypothesized.

TABLE XVIII
RESULTS OF "t" TESTS OF HYPOTHESIZED DIFFERENCES
BETWEEN MEANS OF GROUPS ON IDENTIFICATION

Variable and Groups	Means	SE _M	Hypothesized Differences	"t"
Satisfaction with Administration				
Academic	25.70	.77	Academic > Nonconformist	8.23**
Collegiate	27.98	.54	Academic > Vocational	- 2.61*
Nonconformist	17.50	.63	Collegiate > Nonconformist	12.68**
Vocational	28.22	.58	Collegiate > Vocational	- 0.30
Satisfaction with Students				
Academic	26.70	.52	Academic > Nonconformist	2.40*
Collegiate	26.08	.55	Academic > Vocational	- 0.28
Nonconformist	24.88	.55	Collegiate > Nonconformist	1.54
Vocational	26.92	.59	Collegiate > Vocational	- 1.04
Satisfaction with Major				
Academic	27.96	.49	Academic > Nonconformist	3.37**
Collegiate	28.46	.52	Academic > Vocational	1.58
Nonconformist	25.20	.65	Collegiate > Nonconformist	3.89**
Vocational	26.74	.59	Collegiate > Vocational	2.18*
Extracurricular Involvement				
Academic	23.00	.85	Academic > Nonconformist	3.58**
Collegiate	25.20	.53	Academic > Vocational	3.71**
Nonconformist	18.80	.81	Collegiate > Nonconformist	6.62**
Vocational	19.22	.56	Collegiate > Vocational	7.75**

* Significant at the .05 level of confidence.

** Significant at the .01 level of confidence.

> Greater than.

- Opposite direction.

Another presumed characteristic of a student who identifies with the institution he attends is satisfaction with his fellow students. The scale items deal with perceived interests, honesty, and seriousness of purpose of other students. The differences between the Academics and Nonconformists was significant at the .05 level of confidence. The difference between the Collegiates and Nonconformists approached the .05 level, but did not reach it. As on the Satisfaction with Administration scale, the Vocationals' mean score was higher than the others, again an unexpected occurrence.

On Satisfaction with Major, the Academics scored significantly higher than the Nonconformists. The difference between the Academics and Vocationals was in the expected direction, but not statistically significant. The Collegiates scored higher than the other groups on this scale and their mean was significantly higher than that of the Nonconformists and Vocationals. With the exception of the Academic-Vocational relationship which was near the significant level, the hypothesized relationships were supported on this scale.

Another measure of identification with the University is extent of participation in extracurricular activities sponsored by the University. The hypothesis is that the groups which are, according to the model, ego-involved with the institution will score significantly higher on this scale than the Nonconformists and Vocationals. The

hypothesis is strongly affirmed by the fact that all differences were significant well beyond the .01 level.

Hypothesis 3. On "Independence" as measured by Peer Independence and Family Independence, the following relations will hold: Academic > Collegiate; Academic > Vocational; Nonconformist > Collegiate; Nonconformist > Vocational.

The results of the statistical tests are presented in Table XIX.

TABLE XIX

RESULTS OF "t" TESTS OF HYPOTHESIZED DIFFERENCES
BETWEEN MEANS OF GROUPS ON INDEPENDENCE

Variable and Groups	Means	SE _M	Hypothesized Differences	"t"
Peer Independence				
Academic	26.58	.62	Academic > Collegiate	5.07**
Collegiate	22.54	.50	Academic > Vocational	2.31*
Nonconformist	27.22	.69	Nonconformist > Collegiate	5.50**
Vocational	24.78	.47	Nonconformist > Vocational	2.93**
Family Independence				
Academic	23.50	.67	Academic > Collegiate	1.17
Collegiate	22.42	.64	Academic > Vocational	0.77
Nonconformist	29.08	.76	Nonconformist > Collegiate	6.70**
Vocational	22.72	.75	Nonconformist > Vocational	5.92**

* Significant at the .05 level of confidence.

** Significant at the .01 level of confidence.

> Greater than.

The relations hypothesized derive from the assumption that a commitment to learning is highly related to autonomy. The scholar has presumably matured to a point of being relatively independent of peers and family.

The hypotheses are all supported as they pertain to Peer Independence. The Academics scored significantly higher than the Collegiates and the Vocationals. The Nonconformist mean was the highest of the four groups and was significantly different from the Collegiates and Vocationals beyond the .01 level of confidence.

The Family Independence scores are not of the order expected for the Academics. An explanation would require more data than are available here. The Academics did not score significantly higher than the Collegiates and Vocationals. The mean score of the Nonconformists was highest of the four groups on Peer Independence and is even higher on Family Independence. The differences between Nonconformists and Collegiates and Nonconformists and Vocationals are highly significant.

Hypothesis 4. On "Academic Ability and Achievement" as measured by the Composite score of the American College Test and grade point average, the following differences will occur: Academic > Collegiate; Academic > Vocational; Nonconformist > Collegiate; Nonconformist > Vocational.

Table XX shows that this hypothesis is strongly supported by the data with the exception of one set of relationships which falls just short of statistical significance.

It must be remembered that the criteria for selection of the Academic sample depended on high scores on both of these measures. This lack of independence naturally results in spuriously high differences. This limitation notwith-

standing, the magnitude of the differences is impressive.

TABLE XX

RESULTS OF "t" TESTS OF HYPOTHESIZED DIFFERENCES
BETWEEN MEANS OF GROUPS ON ACADEMIC
ABILITY AND ACHIEVEMENT

Variable and Groups	Means	SE _M	Hypothesized Differences	"t"
Academic Aptitude				
Academic	28.04	.38	Academic > Collegiate	7.06**
Collegiate	23.00	.61	Academic > Vocational	16.99**
Nonconformist	25.08	.33	Nonconformist > Collegiate	3.01**
Vocational	18.18	.44	Nonconformist > Vocational	12.47**
Academic Achievement				
Academic	3.43	.07	Academic > Collegiate	8.25**
Collegiate	2.59	.07	Academic > Vocational	9.42**
Nonconformist	2.76	.07	Nonconformist > Collegiate	1.62
Vocational	2.60	.05	Nonconformist > Vocational	1.85*

* Significant at the .05 level of confidence.
** Significant at the .01 level of confidence.
> Greater than.

The Nonconformists, as predicted, exceeded the Collegiates and Vocationals on aptitude test scores; however, their mean grade point averages differed significantly only from the Vocationals. This latter finding is contrary to the expected relationship between aptitude and achievement.

Hypothesis 5. On Economic Value, the following differences will occur: Collegiate > Academic; Collegiate > Nonconformist; Vocational > Academic; Vocational > Nonconformist.

Table XXI shows the relatively clear cut differences among the groups on this value scale.

TABLE XXI

RESULTS OF "t" TESTS OF HYPOTHESIZED DIFFERENCES
BETWEEN MEANS OF GROUPS ON ECONOMIC VALUE

Variable and Groups	Means	SE _M	Hypothesized Differences	"t"
Economic Value				
Academic	35.72	1.07	Collegiate > Academic	6.67**
Collegiate	46.56	1.22	Vocational > Academic	6.09**
Nonconformist	29.34	1.45	Collegiate > Nonconformist	9.09**
Vocational	45.32	1.16	Vocational > Nonconformist	8.63**

** Significant at the .01 level of confidence.
> Greater than.

Economic value is a measure of the degree to which one is interested in the useful and the practical. "The economic man wants education to be practical, and regards unapplied knowledge as waste." (1, p. 4) The differences among the group means on this scale are highly significant and the hypothesis is strongly supported.

The high mean score of the fraternity sample conforms with expectations and reflects a materialistic value system. The high score of the Vocationals is also as expected in a job-oriented group. The Nonconformist mean score is the lowest of any of the groups on the five Study of Values scales included in this study (Theoretical, Economic, Aesthetic, Social, Political). As these scales are interdependent, such a low score must be reflected elsewhere. Examination of the Aesthetic and Social value scores of this group helps to explain the low score on the Economic value.

A note of caution must be injected here regarding the

relatively high variability within the Nonconformist sample on this value. The standard deviation of 10.24 (Table VIII) and the large standard error of the mean indicate the wide variance within this subgroup regarding the importance placed on things utilitarian.

Hypothesis 6. On Political Value, the following differences will occur: Collegiate > Academic; Collegiate > Vocational; Nonconformist > Academic; Nonconformist > Vocational.

Theoretically, those subgroups that emphasize out-of-class activities would have higher mean scores on a scale emphasizing the value of having power over the actions of other people. A desire for personal influence fits the stereotype of the gregarious, politically-aspiring fraternity man. Also, in an era of student activism, another stereotype is emerging — the radical, power-seeking rebel. Scores on the Political value scale reflect the degree to which one is interested in power. The results are presented in Table XXII.

The hypothesis is confirmed as it applies to the Collegiate group. This group had a mean score significantly higher than the Academics and the Vocationals at the .01 level. However, the relations between the Nonconformists and the Academics and Vocationals are in the opposite direction from that predicted with the Academic mean score being significantly larger than that of the Nonconformists.

TABLE XXII

RESULTS OF "t" TESTS OF HYPOTHESIZED DIFFERENCES
BETWEEN MEANS OF GROUPS ON POLITICAL VALUE

Variable and Groups	Means	SE _M	Hypothesized Differences	"t"
Political Value				
Academic	41.82	1.09	Collegiate > Academic	3.00**
Collegiate	46.19	.96	Collegiate > Vocational	4.97**
Nonconformist	39.01	.94	Nonconformist > Academic	-1.95*
Vocational	40.00	.79	Nonconformist > Vocational	-0.81

* Significant at the .05 level of confidence.

** Significant at the .01 level of confidence.

> Greater than.

- Opposite direction.

Hypothesis 7. On Socioeconomic Status, the following differences will occur: Academic > Nonconformist; Academic > Vocational; Collegiate > Nonconformist; Collegiate > Vocational.

The hypothesis is based on the rationale that those with higher societal status are those who tend to support and identify with the University. Subcultural patterns are presumably reflections of value orientations of parts of the larger culture.

As shown in Table XXIII, the hypothesized relations do not hold because of the relatively high mean score of the Nonconformists.

The Vocational group, as expected, tends to come from a lower socioeconomic level than the Academic and Collegiate groups.

TABLE XXIII

RESULTS OF "t" TESTS OF HYPOTHESIZED DIFFERENCES
BETWEEN MEANS OF GROUPS ON SOCIOECONOMIC STATUS

Variable and Groups	Means	SE _M	Hypothesized Differences	"t"
Socioeconomic Status				
Academic	9.94	.42	Academic > Nonconformist	0.52
Collegiate	9.92	.39	Academic > Vocational	4.47**
Nonconformist	9.64	.40	Collegiate > Nonconformist	0.50
Vocational	7.60	.32	Collegiate > Vocational	4.62**

** Significant at the .01 level of confidence.
> Greater than.

Hypothesis 8. On Study Habits, the following differences will hold: Academic > Collegiate; Academic > Nonconformist; Vocational > Collegiate; Vocational > Nonconformist.

In a study dealing with modes or patterns of adaptation to a system, some assessment must be made of how the subjects approach and cope with the day to day tasks required by that system. Within this model the hypothesis states that the Academics, the prototypes of the ideal student, and the Vocationals, the degree-oriented, would exceed the other subgroups on a measure of study habits. Table XXIV shows the relationships found. Three of the four predicted differences are confirmed.

The discrepant combination is between the Vocational and Collegiate groups with the difference being in the direction expected, but not large enough to reach the desired level of significance. The relative size and pattern of these means closely resemble those on Satisfaction

with Students and Satisfaction with Major (Table XVIII).

TABLE XXIV

RESULTS OF "t" TESTS OF HYPOTHESIZED DIFFERENCES
BETWEEN MEANS OF GROUPS ON STUDY HABITS

Variable and Groups	Means	SE _M	Hypothesized Differences	"t"
Study Habits				
Academic	27.56	.61	Academic > Collegiate	1.90*
Collegiate	26.02	.53	Academic > Nonconformist	3.20**
Nonconformist	24.36	.80	Vocational > Collegiate	1.12
Vocational	26.92	.60	Vocational > Nonconformist	2.55**

* Significant at the .05 level of confidence.

** Significant at the .01 level of confidence.

> Greater than.

Hypothesis 9. On "Social Orientation" as measured by Liberalism, Social Conscience, and Social Value, these relations will hold: Academic > Collegiate; Academic > Vocational; Nonconformist > Collegiate; Nonconformist > Vocational.

The relationships among the groups on Social Orientation are as expected. Table XXV shows that all the relations are in the predicted direction and ten of the twelve differences are statistically significant.

Liberalism is broadly defined as a "sympathy for an ideology of change." (38, p. 18) Items refer to medical care for the aged, excluding conscientious objectors from military service in wartime, the importance of labor unions, etc. On this measure the Vocationals scored lowest and the

Nonconformists the highest. All the hypothesized differences are statistically significant beyond the .01 level of confidence, with two exceptions.

TABLE XXV
RESULTS OF "t" TESTS OF HYPOTHESIZED DIFFERENCES
BETWEEN MEANS OF GROUPS ON SOCIAL ORIENTATION

Variable and Groups	Means	SE _M	Hypothesized Differences	"t"
Liberalism				
Academic	26.80	.71	Academic > Collegiate	3.79**
Collegiate	23.54	.48	Academic > Vocational	5.87**
Nonconformist	32.50	.86	Nonconformist > Collegiate	9.05**
Vocational	21.38	.59	Nonconformist > Vocational	10.63**
Social Conscience				
Academic	28.44	.55	Academic > Collegiate	1.53
Collegiate	27.08	.70	Academic > Vocational	2.56**
Nonconformist	30.42	.67	Nonconformist > Collegiate	3.46**
Vocational	26.18	.69	Nonconformist > Vocational	4.42**
Social Value				
Academic	36.47	1.27	Academic > Collegiate	2.61**
Collegiate	32.20	1.04	Academic > Vocational	1.12
Nonconformist	43.83	1.45	Nonconformist > Collegiate	6.52**
Vocational	34.75	.87	Nonconformist > Vocational	5.37**

** Significant at the .01 level of confidence.
> Greater than.

The Social Conscience scale assesses concern for social ills such as poverty, crime, and government graft. The pattern of differences here is also as predicted; however, the difference between the Academics and the Collegiates does not reach the level of confidence required to reject the hypothesis of no significant difference. The relative sizes of the means is in the same rank order on this measure as

on Liberalism. Again the Academic-Collegiate and the Academic-Vocational differences are significant as are the Nonconformist-Collegiate and the Nonconformist-Vocational differences.

The highest value for the "social man" is love for one's fellow man. High scorers on this scale of the Study of Values prize unselfish concern for others. Although the means may not be compared to those of Liberalism and Social Conscience, the rank order of magnitude may be. Here the Vocationals, preparing for post-high school teaching, score relatively higher than the Collegiates. The hypothesized relations are confirmed with the exception that the difference between the Academics and the Vocationals is not statistically significant. The very high score of the Nonconformists makes the differences between this group mean and that of the Collegiates and the Vocationals highly significant.

Summary

In this chapter, nine general hypotheses, each having a number of sub-parts, have been tested. The data were presented in tables of means and standard deviations, analysis of variance tables, and tables of "t" test results. According to the theoretical formulations upon which the study is based, statistical tests of the significance of differences between means were made. Finally, the findings were discussed.

In the next chapter, Chapter V, generalizations concerning the subgroups will be made in an attempt to relate the findings to educational goals and practices. Questions for subsequent research efforts will be suggested.

CHAPTER V

SUMMARY AND CONCLUSIONS

Review of the Study

This dissertation has reported a study of selected personal and social measures as they relate to membership in four subcultures. The study was developed from a theoretical background which provided both testable hypotheses and meaningful direction.

The samples were chosen from populations theoretically representative of four different normative systems. Sampling methods varied from stratified random to a technique most often used in sociometric studies — "snowball sampling." The number of subjects in each of the subgroups was 50 for a total of 200 subjects in the study.

The instruments used were a questionnaire designed to elicit meaningful information concerning groups of college students, The College Student Questionnaire, a value scale, The Study of Values, and a socioeconomic status scale. Academic aptitude scores and grade point averages were secured from student records.

The statistical method employed was analysis of variance. Where significant differences were found among the four groups, "t" tests were run to find the specific sources of

the differences.

Nine hypotheses stated according to the theoretical model were tested. An attempt was made to group the measures into meaningful common factors such as "social orientation," and "educational orientation." The hypotheses were generally confirmed with many of the group differences being highly significant.

Summary of Findings

Subcultures are normative systems of the larger culture, and strictly defined, they are not groups of people. Individuals move in and out of subcultures and membership is most difficult to establish. However, it is common, in fact almost essential, to describe a subculture by characterizing the persons who share its norms, attitudes, and values. In this study the term subculture has been used interchangeably with subgroup.

From the findings of this study, the four groups studied can be said to differ greatly in their patterns of adaptation to the process of higher education. A significant majority of these differences were as hypothesized in the research design. The findings show that on the same campus there are highly diverse and heterogeneous subgroups of students. These groups differ significantly on values related to things intellectual and in their attitudes toward various aspects of the institution they attend. The following sections are characterizations of these subgroups on the Oklahoma State

University campus.

The Academic Subculture. This group, although valuing aesthetics, tends to take a predominately rational, critical view toward learning. They are more interested in and knowledgeable about intellectual matters such as ideas and art forms than are the Collegiate and Vocational groups. In their attitudes toward the University they tend to be moderately satisfied with the administrative rules and regulations and the way these are applied. The same holds true for their feelings of satisfaction concerning other students, and their major field of study. These men tend to participate in extracurricular activities to a greater extent than their Vocational and Nonconformist counterparts.

The Academics are relatively independent of their fellow students, but not of their families. By definition, this group ranks high on both academic aptitude and achievement. They tend to place less value on the practical aspects of education, being relatively low on a scale of value placed on materialism. Power over other persons is of moderate importance to this group with their mean score being significantly below that of the Collegiates, but higher than the mean of the other two groups.

Like the Collegiates and Nonconformists these men tend to come from middle class backgrounds as evidenced by level of father's occupation and educational attainment. In their sensitivity to the problems and needs of other people, these men rank second to the Nonconformists.

The general pattern that emerges is one of a talented, dedicated student, moderately satisfied with the institution he attends. He is interested in ideas beyond the routine demands of class work and he has an appreciation of and sensitivity to social problems.

The Collegiate Subculture. This group ranks relatively low on values associated with intellectual commitment. They evidence less sensitivity to great ideas and art forms than the Academics or Nonconformists.

The general attitudes of this group toward the institution are approving. They seem highly satisfied with the administration and their major field of study, and they participate in extracurricular activities more than the other groups.

Of the four groups, this one ranks lowest on independence. They have moderately high academic aptitudes and grade point averages. The highest values for these men are economic and political ones.

Their socioeconomic status is not significantly different from the Academics and Nonconformists. On sensitivity to social problems and concern for others, these men rank low relative to the Academics and Nonconformists. Generally, the expected pattern emerged — a value system stressing utilitarian, political, and economic interests. Although achieving well academically, and satisfied with their major field of study, they are not particularly impressed with the competence of the faculty. Neither are they highly

satisfied with their fellow students.

The Nonconformist Subculture. These students value things cultural and artistic to a greater degree than the other groups in this study. They tend to reject the system, the University, expressing dissatisfaction with administration, students, and with their major. They participate little in extracurricular activities sponsored by the University. They are highly independent of peers and family. Despite relatively low study habits scores, they tend to achieve relatively well; however, this achievement is not as high in relation to their aptitude scores as is that of the other groups.

The Nonconformists tend to disdain practical materialistic values and are less concerned than the Collegiates and Academics about political power. They come predominately from middle class backgrounds. Their social orientations indicate much concern for human problems. They are politically liberal and are strongly interested in human rights and social issues.

The Vocational Subculture. This group, preparing to teach technical subjects, values the practical and useful more than the artistic and the intellectual. They tend to take a rational rather than an aesthetic approach to problems. They are highly satisfied with the administration and moderately satisfied with faculty, other students, and with their major field. (In these respects, they do not fulfill the expectations of the model.) They participate little in

extracurricular activities.

On patterns of independence they score relatively low, more closely resembling the Collegiate group than any others. Their academic aptitude is significantly lower than the other groups, but they achieve very well as evidenced by their grade point averages. They tend to come from a lower socioeconomic level than the other three groups and rank relatively lower on liberalism and measures of concern about social problems.

Conclusions

The great differences among college students necessitate some system of conceptual grouping. Dichotomizing value orientations on two axes: identification with the institution and intellectual commitment, provides a basis for such grouping. This study has shown that such a model provides a means whereby relationships can be studied and generalizations made.

It has been demonstrated that students assigned to the subgroups on the basis of observations and theory do differ in values, attitudes, and other personal characteristics. They differ in their approach to education and they differ in their social orientations.

By focusing on the interaction of personality systems (values, attitudes, traits) with social systems (subgroups and the University system), this study has been an attempt at a somewhat different research approach. If behavior is

a function of personality and environment, then such behavior can best be studied by taking into account both of these factors instead of studying them in isolation.

This study of the personal and social correlates of student subcultures has hopefully provided a frame of reference which will contribute to a better understanding of college students and the differing ways they adapt to higher education. The usefulness of this framework will depend upon the degree to which it helps educators to: 1) bring order and meaning to the great heterogeneity of their student bodies, 2) predict student behavior, and 3) control this behavior to a degree necessary for the achievement of the institutional purposes. The third point can best be achieved when the powers of the peer group over its members are utilized for educational purposes.

Implications

The findings of this study have implications for educational theory and practice, and for further research. Theoretically the findings can be interpreted as they contribute to an understanding of conformity and deviance. A number of implications for administrative practice and for curricular and extracurricular programs will be pointed out. Finally, ideas for further research within this theoretical framework will be suggested.

Theoretical. Because conformity and deviance are concepts without meaning apart from some standards or goals,

some general agreement concerning objectives is a prerequisite for any discussion of either theory or practice in relation to education. A fundamental assumption of this research was a statement of educational goals. These assumptions were, first of all, that the ideal student is one who is committed to learning and who identifies with the institution he attends. The objectives of the system were defined as being intellectual, personal, aesthetic, and social development. Ideally both theory and practice would be based on these objectives.

By interposing these idealistic goals of an ideal system onto Merton's typology, the Academics become Conformists; the Collegiates become Ritualists; the Nonconformists become Innovators. However, the Vocationals in this investigation fit neither the Retreatist type of Merton nor the Vocational subculture of Clark and Trow. This indicates that Technical Education majors are not as they were presumed to be. Further investigation is needed to find whether such a subculture exists.

A critical concern in any system is the type of adaptations reinforced by the formal structure. This research has asked: "What are the correlates of conformity and deviance from system means and goals?" The Academics as characterized in the first part of this chapter represent a generally conforming pattern. However, some aspects of deviant patterns will be pointed out.

The conflict between the Nonconformists and the system

often results from divergent views concerning what the goals are or ought to be. A number of the findings reported imply the need for a re-evaluation of objectives of the system. Hopefully broader outcomes than grades and degrees will be sought. If a large segment of students genuinely committed to values related to system goals appear to be somewhat alienated from and tend to rebel against that system, this should be cause for concern. Particularly is this true when the most satisfied tend to be those with a practical, utilitarian orientation. All of this is highly suggestive of a need to re-examine goals and practices.

This study casts little light on the more traditional forms of deviance such as drop-outs and deviant behavior within the system. The theoretical implications are, however, that the drop-outs are those who accepted the institutional goals, but were blocked from attaining them (low aptitude, financial problems, etc.) or those who rejected the goals and left the system in pursuit of what seemed to them to be more important objectives. Obviously any program to retain or rehabilitate drop-outs must differentiate between these two adaptive modes.

Limiting the sample to upperclassmen very probably precluded the inclusion of persons who markedly deviate from the prescribed rules, regulations, and procedures of the institution. The deviant behavior engendered by the Non-conformists is of a different type from that university administrators are accustomed to dealing with in that it

often challenges the legitimacy of the system means and goals. This study did not deal with other types of deviancy; however, it is apparent that the dedicated, single-minded grade seekers expected in the Vocational group did not appear.

Program and Practice. The following is a list of some of the kinds of implications for educational programs and practices which can be derived from this study.

1. The great differences shown among students in a single institution point up the need for flexible, varied programs both curricular and extracurricular.
2. There is an apparent need both in the curriculum and the extracurriculum for the provision of opportunities to develop artistic and intellectual appreciations and interests.
3. The extracurriculum is apparently not meeting the needs of the Nonconformist and Vocational subcultures. Means need to be sought to appeal to these groups without lowering the quality of the programs or disrupting the system.
4. Although there are significant differences among the groups on grade point average, the mean values are well above the 2.0 or "gentleman's C" level. This indicates that studying or judging students on the basis of grades alone can gloss over great variances in other perhaps more critical

characteristics.

5. There is an apparent need for curricular and extra-curricular programs to encourage social concern and to develop feelings of responsibility to others.
6. A dilemma is presented by the finding that those most rejecting of the University score highest on measures of social orientation. It would seem that this could be a point of congruence of value orientation between the Nonconformists and the University. Perhaps this interest in one's fellow man could evolve into meaningful activity toward common goals. This could be a means of starting to achieve some attitude changes.
7. An evaluation of fraternities seems to indicated. The purpose of the evaluation would be to attempt to assess the contribution of these organizations to the education of their members.

Research. A number of questions are suggested by this study which could be formulated into research problems.

1. Where does the female student fit into this scheme? Are there significant sex differences on the psychosocial variables studied?
2. Is the relatively low level of satisfaction with faculty evidenced by the subgroups an indication of feelings about faculty competence or does this reflect dissatisfaction with the interpersonal

detachment of faculty from students?

3. The existence of a highly deviant, rejecting group within any system is a cause for concern. This study indicates that many of these students hold values and interests highly desired in a university community. How can the University reinforce such desirable characteristics and make the system more congenial and attractive to these students?
4. Why do the vocational students rank higher than the other groups on satisfaction with administration? Do they have less contact than other students with administrative officials or are administrative attitudes and procedures more accepting and supporting of the vocationally-oriented?
5. What are the relationships between field of study and satisfaction with one's major?
6. Is the extracurriculum oriented toward light entertainment and social relations among students, or does it give opportunity for development of educational interests and values?
7. What are the determinants of subcultural membership? Can these be isolated and manipulated by educators to counteract the development of normative systems which oppose the achievement of educational objectives?

Studying the characteristics of groups judged a priori

to hold certain value orientations toward learning and toward the University is a means of beginning to suggest answers to such questions.

Hopefully this study has made a contribution to the understanding of college students and has shown the great differences that exist among them. It is further hoped that the study has value both for suggesting practical application of the findings and indicating directions for further research into how students approach and adapt to the means and goals of the institutions of higher education which they attend.

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APPENDIX A

LETTER TO THE SAMPLES

College of Education

October 6, 1966

You have been selected to participate in a study of Oklahoma State University student subgroups. One of the purposes of the study is to collect information about your plans, activities, and attitudes.

Your participation may be of help to current and future OSU students.

We would appreciate very much your coming to Classroom Building Room 212 at 7:00 p.m. on Tuesday, October 11 or Thursday, October 13, 1966, for a testing session. You may select the session most convenient to you.

The "tests" will be concerned with your opinions, attitudes, and values. You may be sure that the results will remain confidential and will have no effect on your grades.

The meeting should take no longer than 90 minutes and interpretive sessions will be arranged for those interested in their test results.

Your cooperation will be greatly appreciated.

Very sincerely yours,

JIMMY R. WALKER
Graduate Assistant

APPENDIX B

SOCIOECONOMIC STATUS SCALE

- C. How much formal education does (did) your father have? Indicate only the highest level reached. Mark only one of the seven alternatives.
1. Less than 7 years of school
 2. Completed 7th to 9th grade
 3. Completed 10th to 11th grade
 4. Graduated from high school
 5. Completed one or more years of college
 6. College graduate (Bachelor's Degree)
 7. Received graduate or professional degree (e.g., MA, Phd, MD)
- D. Which of the following categories comes closest to your father's occupation? If your father is retired, deceased, or unemployed, indicate his former or customary occupation. (Mark only one.)
1. Unskilled worker, laborer, farm worker
 2. Semiskilled worker (e.g., machine operator)
 3. Skilled worker (carpenter, electrician, plumber, policeman, fireman, barber, military noncommissioned officer, etc.)
 4. Owner, manager, partner of small business, clerical and sales worker, technician, military commissioned officer
 5. Profession requiring a bachelor's degree (engineer, teacher, etc.)
 6. Manager or proprietor of medium-sized business
 7. Owner, high-level executive -- large business or high-level government agency
 8. Professional requiring an advanced college degree (doctor, lawyer, college professor, etc.)

Note: The index value for the statistical analysis was derived by adding the responses. The highest possible status would be $7 + 8 = 15$.

VITA

Jimmy Reeves Walker

Candidate for the Degree of
Doctor of Education

Thesis: A STUDY OF SELECTED PSYCHOSOCIAL CORRELATES OF
COLLEGE STUDENT SUBCULTURES

Major Field: Student Personnel and Guidance

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Personal Data: Born near Merkel, Texas, September 12,
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Education: Attended Merkel Grammar School and
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College with a major in Physical Education and
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Professional experience: Taught and coached at Mason,
Texas High School from 1954 to 1958; was appointed
Assistant Professor of Health and Physical Edu-
cation and assistant coach at Texas Western
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El Paso, February, 1967.

Organizations: American Personnel and Guidance Associ-
ation, Kappa Delta Pi, and Phi Delta Kappa.