

A COLLEGE STUDENT SUBCULTURE STUDY;
AN EXAMINATION OF THE CLARK-TROW
SUBCULTURE TYPOLOGY AT A SMALL
MIDWESTERN PRIVATE NONSECTARIAN
RESIDENTIAL FOUR-YEAR LIBERAL
ARTS COLLEGE

Thesis for the Degree of Ph. D.
MICHIGAN STATE UNIVERSITY
Dorian G. Sprandel
1969

This is to certify that the

thesis entitled

A COLLEGE STUDENT SUBCULTURE STUDY: AN EXAMINATION
OF THE CLARK-TROW SUBCULTURE TYPOLOGY AT A SMALL
MIDWESTERN PRIVATE NONSECTARIAN RESIDENTIAL
FOUR-YEAR LIBERAL ARTS COLLEGE

presented by

DORIAN G. SPRANDEL

has been accepted towards fulfillment
of the requirements for

Ph.D. degree in Administration and
Higher Education

J. H. Grant

Date September 19, 196

PL-3 BIA

ABSTRACT

A COLLEGE STUDENT SUBCULTURE STUDY: AN EXAMINATION OF THE CLARK-TROW SUBCULTURE TYPOLOGY AT A SMALL MIDWESTERN PRIVATE NONSECTARIAN RESIDENTIAL FOUR-YEAR LIBERAL ARTS COLLEGE

By

Dorian G. Sprandel

The present study examined the Clark-Trow subculture typology in an effort to determine whether college students with a particular subculture preference sought and persistently interacted with students having the same subculture preference. A review of subculture research indicated that there was a dearth of research which examined the interaction dimension regarding college students who acknowledged a particular subculture preference. The study hypothesized that college students would more often name as friends other students who had the same subculture preference, as defined by the Clark-Trow classification scheme, than they would name as friends other students who had the same sex, class, residence, or major.

The institution from which the sample of 304 men and 209 women was selected was a small midwestern private nonsectarian residential four-year liberal arts college. The sample consisted of all resident students who completed a specially constructed student inventory; they represented 81 per cent of the population. The study instrument

requested the following thirteen items of information: name, sex, class, residence, major, ranking of four subculture preferences, possible future subculture preference, and names of three students at the college with whom they interacted most. The student inventory was distributed by, and returned to, campus student leaders. Chi-square was used to determine the relationships between study variables; and mean square contingency coefficient was used to test the relative strength of statistically significant chi-square values.

The study hypothesis was not supported, as students chose friends who were of the same sex, who were in the same class, or who resided in the same residence much more than they chose friends who had the same subculture preference. Study data showed an extremely weak tendency for students with the same subculture preference to interact together with some persistence. The findings suggested that currently it would be most sensible for the educational practitioner to view the Clark-Trow typology as a heuristic and simplistic way of conceptualizing four normative-value systems that college students might possess, since the typology apparently classifies types of college student attitudes rather than types of student subcultures extant on a college campus. It also was suggested that selected demographic characteristics of college students might provide very useful information about the probable characteristics of student friends and their campus interaction patterns.

A COLLEGE STUDENT SUBCULTURE STUDY: AN EXAMINATION
OF THE CLARK-TROW SUBCULTURE TYPOLOGY AT A SMALL
MIDWESTERN PRIVATE NONSECTARIAN RESIDENTIAL
FOUR-YEAR LIBERAL ARTS COLLEGE

By

Dorian G. Sprandel

A THESIS

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

DOCTOR OF PHILOSOPHY

Department of Administration
and Higher Education

1969

661781
4-27-70

ACKNOWLEDGEMENTS

Deep appreciation is expressed to Dr. Walter Johnson, Dr. Peter Manning, and Dr. Max Raines for their ready cooperation as members of the guidance committee and for their helpful assistance with the study.

Invaluable assistance was offered at all stages of this study by Dr. Harold Grant who served as chairman of the guidance committee. More importantly, the association with Dr. Grant ultimately generated for this student a more hopeful and positive view of the potential individual development of all persons.

Special mention must be directed to the many students, staff members, and faculty of the selected college who donated their time to the study. Their contribution was essential for the completion of the study.

Most of all, it must be acknowledged that the abundant love and self-sacrifice of Barbie, the writer's wife, made possible this study as well as the entire doctoral program.

TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	ii
LIST OF TABLES	v
LIST OF DIAGRAMS	vi
 Chapter	
I. THE PROBLEM	1
Importance of Student-Student Impacts	
Upon Learning	1
College Student Culture	5
Statement of the Problem	6
Hypothesis	7
Variables	7
Definitions of Terms	9
Major Limitation	11
Summary	12
Chapter I Footnotes	14
II. REVIEW OF THE LITERATURE	15
Approaches in Literature on College Students.	15
Campus Culture Concepts	19
Clark-Trow Theoretical Subculture	
Classification Scheme	22
Investigations that Operationalized Clark-Trow Classification Scheme	24
Corroboration of Clark-Trow Subculture	
Classification Scheme	24
Attempt to Partially Confirm Subcultures by Interaction Analysis	26
Proximity and Similarity Nurture Interaction and Friendship Relations	26
Summary	28
Chapter II Footnotes	30

Chapter	Page
III. RESEARCH DESIGN	34
Sample	34
Instrumentation	34
Data Gathering	36
Analysis	37
Summary	42
IV. FINDINGS	43
Sex	43
Class	44
Residence	45
Major	46
Present Subculture	47
Desired Subculture	49
Summary	50
V. DISCUSSION	51
Limitations	55
Conclusions	57
Implications for Further Research	59
Chapter V Footnotes	61
REFERENCES	73
APPENDIX	88

LIST OF TABLES

Table	Page
1. Subject's Sex and its Relationship to Friend's Sex, Class, Residence, Major, Present Subculture, and Desired Subculture	44
2. Subject's Class and its Relationship to Friend's Sex, Class, Residence, Major, Present Subculture, and Desired Subculture	45
3. Subject's Residence and its Relationship to Friend's Sex, Class, Residence, Major, Present Subculture, and Desired Subculture	46
4. Subject's Major and its Relationship to Friend's Sex, Class, Residence, Major, Present Subculture, and Desired Subculture	47
5. Subject's Present Subculture and its Relationship to Friend's Sex, Class, Residence, Major, Present Subculture, and Desired Subculture	48
6. Subject's Desired Subculture and its Relationship to Friend's Sex, Class, Residence, Major, Present Subculture, and Desired Subculture	49
7. Present Subculture Preferences of Subjects and Their Friends	62
8. Desired Subculture Preferences of Subjects and Their Friends	64
9. Subject's Sex and Their Friends' Sex	66
10. Subjects' Class and Their Friends' Class	67
11. Subjects' Residence and Their Friends' Residence	69
12. Subjects' Major and Their Friends' Major	71

LIST OF DIAGRAMS

Diagram	Page
1. Clark-Trow Subculture Model	31
2. Design for Three-Dimensional Chi-Square Analysis	38
3. Final Design for Chi-Square Analysis	39

CHAPTER I

THE PROBLEM

Importance of Student-Student Impacts Upon Learning

Among the many influences on the college student are those that come from his associations with his peers. As well, observers have described and explained the impact of the peer group on the high school adolescent (Coleman, 1961; Kraus, 1964). Such peer influence was evident in an American Council on Education research report (Astin, 1969), based on findings on a national sample of 243, 156 incoming freshmen in fall 1968, at 358 institutions of higher learning. Of that sample, 15.29 per cent reported, "Friends attending this college" as a major influence in their decision to enter that specific institution. One may reasonably speculate that those influential peers might continue to provide direction and guidance which could profoundly shape the learning of the freshmen just embarking on a new experience.

However, it is not necessary to simply speculate about the impacts of students upon one another. Numerous general functions that peer groups serve for individual college

students have been empirically observed. The individual's "crisis" of achieving independence from home has been shown to be aided by the college peer group (Sussmann, 1960; Smucker, 1947; Levine, 1966; Lozoff, 1967; and Sanford, 1956). It has been reported that the college peer group importantly can provide the occasion for and practice in social relationships with persons whose background, orientation, and interests are different from particular students (Eddy, 1959; Hartshorne, 1943; and Katz, 1967). Several investigators noted the role the peer group plays in offering general emotional support to students, fulfilling needs not sufficiently met by the faculty, curriculum, or classroom (Keniston, nd.; Bushnell, 1962; Smucker, 1947; Freedman, 1956; and Coelho, Hamburg, and Murphey, 1963). Research has found that the peer group can influence students to change and not to change. Two investigations showed that, through value reinforcement, the peer group could provide support for not changing (Coelho, Hamburg, and Murphey, 1963; and Sanford, 1961). Yet, four separate reports acknowledged that the peer group could, variously, challenge old values, provide intellectual stimulation and act as a sounding board for new points of view, present new information and new experiences to the student, suggest new career possibilities, help to clarify new self-definitions, and provide emotional support for changing students (Sanford, 1956, 1963; Coelho, Hamburg, and Murphey, 1963; and Pervin, 1966). Pervin (1966) gathered data which

revealed that friends and social relationships may aid in discouraging voluntary withdrawal from college for other than academic reasons. Many observers have offered evidence concerning the special significance of the peer group to students who are disappointed or not completely successful academically (Coelho, Hamburg, and Murphey, 1963; Kamens, 1967; Meyer and Bowers, 1965; Bushnell, 1962; and Taves, Corwin, and Haas, 1963). Kimball (1962-1963) has shown that college peer group relations can be significant to students in their post-college careers.

The most important element in research on college students, college students themselves, perhaps most notably have underlined the importance of student-student interaction on campus. The college student often has pointed to the special educational value of interpersonal relationships with other students during the college experience.

In the College Student Survey (Bauer, 1967), it was found that education was viewed by college students as a means of self-development, with social development the most valuable college experience. Seemingly supporting that finding was the research finding of Jackson (1967), who reported that association with peers was noted as the most valuable experience, by all 1499 Cornell undergraduates in the sample. The student-perceived impact of student upon student was also revealed in a study concerning subcultures at a large mid-western, state-supported university (Adams, 1965). In that

study the investigator found that the experiences and individuals within the living groups were selected by most of the students in the study as factors which strengthened and reinforced their attitudes, interests, and beliefs.

Heath (1968) reported that his small, select Haverford samples agreed that their close relationships with other students at the college were one of the most important influences upon their development while in college. All of the samples described very similar effects from interaction with fellow students. They became much more aware of themselves, allocentric and integrative in their personal relationships, and more mature generally in their values.

King (1967) reported on Harvard's 1964 and 1965 classes, from longitudinal data and intensive interviews. He noted that seniors rated the finding of meaning, goals and outlook for life as "most important." Those same students believed that their interaction with other students was very valuable to their maturing college experience.

From data obtained from several thousand students over a four-year period and intensive interviewing of a random group of two-hundred students, Katz and associates said of college students' relations, "Relations with their fellows are of great importance to college students. They enjoy them, and attribute to them great influence on personal development (Katz and Associates, 1968, p. 42). In the same study, after having asked the seniors how they had changed since they

entered college, they were asked, "What do you think contributed most to these changes?" Between one-half and one-third of the students reported that interactions with other students contributed most (Katz and Associates, 1968, p. 13).

College Student Culture

Though it is recognized that there are many important and potent influences on college students, it is an assumption of the present study that peer associations also provide significant influences.¹ It has been briefly documented that peer associations can serve important functions for college students, and college students generally place a high educational valence on their student-student interaction during their undergraduate experience. Therefore, it seems logical and reasonable to particularly focus research attention on a significant locus of college student interaction, student culture, since a genuine concern was that of understanding the college environment in educational efforts to aid each student's personal development.

Perhaps the first careful research using the culture approach was the Bennington study (Newcomb, 1943), though literary antecedents of efforts to depict the particular quality of a single campus were evident as early as the middle ages. Newcomb's study revealed that students who brought diverse cultural outlooks to the college tended to

be assimilated into the cultural outlook which predominated at the college. In more recent years many campuses have been studied with the aim of identifying their peculiar cultures.

Though student culture could be regarded as a homogeneous culture for certain purposes, it could also be seen as a plurality of heterogeneous subgroups valuing different interests and rewarding different activities. Early applications of the campus culture approach tended to strive for a single characterization of the culture of a campus, but more recent studies have focused equal attention on student subcultures within a single campus environment.

Statement of the Problem

Representative of this latter trend were theoretical writings of Burton Clark and Martin Trow and numerous investigations that led to empirical classification of students into subcultures. Chapter II will discuss the Clark-Trow subculture theory in some detail. Though the term subculture implies that a normative-value system is held by persons in persisting interaction, the common element shared by Clark and Trow and all subculture investigations was that they failed to show whether students with a particular subculture preference sought and persistently interacted with students who had the same subculture preference. The present study was directed toward gathering such information.² It tested the theoretical assumption of the Clark-Trow theory, that students with similar subculture preferences generally sought

one another and persistently interacted together. Specifically the study asked the question:

Do college students, who have been differentially classified according to the Clark-Trow subculture classification scheme, generally list students with the same subculture preference when requested to list names of students with whom they interact most at their college?

Hypothesis

The study hypothesis was:

College students will more often name as friends other students who have the same subculture preference, as defined by the Clark-Trow subculture classification scheme, than they will name as friends other students who have the same sex, class, residence, or major.

Variables

The study had six different variables. Two variables, present subculture and desired subculture, were directly related to the Clark-Trow subculture model and were included to examine the typology.³ The other four variables were: sex, class, residence, and major. It was believed that the latter four variables would significantly account for association of students with one another. The following discussion provides a rationale for the inclusion of sex, class, residence, and major in the present study.

It was believed that students would tend to choose friends who were of the same sex, class, residence, or major, under the assumption that each of those variables would provide great opportunities for students to be in proximity to

each other and to have similar characteristics. Chapter II discusses the principles of proximity and similarity.

Similarity of characteristics would be manifest in students who were of the same sex, class, residence, or major. Similar attitudes, values, and interests would spring from common problems and expectations associated with the identity of each sex. Each class may be said to have special characteristics which are the product of students' common problems and campus history. Such characteristics have led to the creation of phrases such as "green freshmen" and "slumping sophomores." It is well known by college student housing personnel that residences often have their own unique identity. For example, students who might live in a residence with a long tradition of academic excellence would likely share some degree of similar attitudes and interests regarding the need to continue that tradition. It has been well documented by Newcomb and Feldman⁴ that students pursuing different majors tend to share distinctive characteristics.

Regarding proximity, students in the present study were segregated in residences according to sex, placing the same sex in proximity and increasing opportunities for students of the same sex to frequently associate with one another. Too, because choice of major is associated with the sex of students,⁵ students of the same sex are brought into proximity to each other. A primary influence of proximity with regard to class derives from the curricular practice of prerequisites and distributive

requirements. For example, freshmen are required to take freshman English; sophomore physics students are not expected to take electricity and magnetism; and seniors are not expected to take introductory courses. As a result there is a tendency for students in the same class to frequently be in proximity to one another. Students spend many hours of their day at their place of residence, eating, sleeping, talking, relaxing, taking part in scheduled and unscheduled residence activities, etc. The proximity of resident students accordingly is increased by such activities. Major also increases students' proximity. Classroom activities and out-of-classroom activities and assignments associated with major tend to bring students of the same major into proximity to each other.

Definitions of Terms

1. Definition of Subculture Preference.--Throughout the study, reference will be made to subculture preferences. The definition of subculture identity or preference was taken from an instrument developed by Educational Testing Service; the instrument is entitled College Student Questionnaires (Peterson, 1965b).

To determine the subculture identity of each subject, each student in the sample was asked to indicate his philosophical preference, making reference to four paragraphs that described the four Clark-Trow subcultures. The paragraphs from which the subjects had to choose were, respectively:

Philosophy A--vocational subculture; Philosophy B--academic subculture; Philosophy C--collegiate subculture; Philosophy D--nonconformist subculture. The descriptive paragraphs were as follows:

Philosophy A: This philosophy emphasizes education essentially as preparation for an occupational future. Social or purely intellectual phases of campus life are relatively less important, although certainly not ignored. Concern with extracurricular activities and college traditions is relatively small. Persons holding this philosophy are usually quite committed to particular fields of study and are in college primarily to obtain training for careers in their chosen fields.

Philosophy B: This philosophy, while it does not ignore career preparation, assigns greatest importance to scholarly pursuit of knowledge and understanding wherever the pursuit may lead. This philosophy entails serious involvement in course work or independent study beyond the minimum required. Social life and organized extracurricular activities are relatively unimportant. Thus, while other aspects of college life are not forsaken, this philosophy attaches greatest importance to interest in ideas, pursuit of knowledge, and cultivation of the intellect.

Philosophy C: This philosophy holds that besides occupational training and/or scholarly endeavor an important part of college life exists outside the classroom, laboratory, and library. Extracurricular activities, living-group functions, athletics, social life, rewarding friendships, and loyalty to college traditions are important elements in one's college experience and are necessary to the cultivation of the well-rounded person. Thus, while not excluding academic activities, this philosophy emphasizes the importance of the extracurricular side of college life.

Philosophy D: This is a philosophy held by the student who either consciously rejects commonly held value orientations in favor of his own, or who has not really decided what is to be valued and is in a sense searching for meaning in life. There is often deep involvement with ideas and art forms both in the classroom and in sources (often highly original and individualistic) in the wider society. There is little

interest in business or professional careers; in fact, there may be a definite rejection of this kind of aspiration. Many facets of the college--organized extracurricular activities, athletics, traditions, the college administration--are ignored or viewed with disdain. In short, this philosophy may emphasize individualistic interests and styles, concern for personal identity and, often, contempt for many aspects of organized society.

To determine the present subculture preference of each subject, each student was asked to rank in order of importance the above four paragraphs, describing the kind of philosophy he had at that time. To determine the desired subculture preference of each subject, each student was asked to choose one of the four paragraphs to identify the philosophy he would choose if he had a choice.

2. Definition of Subject's Friend.--A subject's friend was defined as: The first student listed by each subject, on the study's instrument, in response to a request to name three students with whom they interacted most at their college.

Major Limitation

Perhaps the chief strength of this study was that it explored relatively new material. It apparently was the first empirical investigation which examined the Clark-Trow subculture typology, determining if students with a particular subculture preference generally chose friends who had the same preference. However, the chief weakness of the study was derived from its exploratory nature. The study concentrated on one college rather than comparing different colleges. The studied college was selected primarily because it was

sufficiently willing, residential, and small to permit the exploration, rather than for any representative qualities it might have had. The consequence of those decisions was that generalizability of findings to other colleges was made difficult. It is believed that conclusions were applicable beyond the present study, but a major weakness was that systematic support could not be offered.

Summary

The chapter began with a discussion of the importance of college student-student impact on learning. College student culture was described as the significant locus of such peer impacts. It was noted that there was a trend toward viewing campus culture as a plurality of heterogeneous subgroups or subcultures. Following that trend, apparently urged by the subculture theory provided by Clark and Trow, numerous investigations led to empirical classification of students into subcultures. But despite the fact that the term subculture implied a normative-value system that is held by persons in persisting interaction, all the subculture investigations failed to show whether students with similar subculture preferences generally associated with one another. For that reason the study asked the question, "Do college students, who have been differentially classified according to the Clark-Trow subculture classification scheme, generally list students with the same subculture preference when requested to list names of students with whom they interact

most at their college?" The study hypothesis was stated, followed by a discussion of the study's variables. The chapter closed with operational definitions of frequently used terms in the study and a statement of the study's major limitation.

CHAPTER I FOOTNOTES

1. Potent influences might also be derived from such sources as parents, relatives, faculty, and environments contiguous to that of the educational institution.
2. The present study did not analyze observed student behavior. Student-student interaction behavior was inferred from written responses of sample subjects to the study instrument's request to name three students with whom they interacted most at their college.
3. Present subculture and desired subculture represent two possible dimensions regarding a subject's choice of one of the four Clark-Trow subcultures. Because students may hold a particular preference but also may wish to change that preference, if given the opportunity, present and desired preferences were elicited by the study instrument.

For the Clark-Trow description of four subcultures, see Chapter II, footnote 5.

For the present study's definition of subculture preference, see "Definitions of Terms," Chapter I, pp. 9-11.

4. Newcomb and Feldman (1968) discuss findings derived from asking the empirical question, "Do students (usually juniors and seniors) enrolled in different major fields show distinctive characteristics (as shown, for example, by average student differences among majors)?" Their findings supported an affirmative answer to the question.
5. See Abe and Holland (1965); American College Testing Program (1966); Astin, Panos, and Creager (1967); Combs (1966); Davis (1965); U. S. Department of Commerce (1960); and Wertz (1966, 1967).

CHAPTER II

REVIEW OF THE LITERATURE

Thirty years ago Sorokin, speaking of social scientists, voiced the opinion that, "it is rapidly becoming true that college students are the most thoroughly understood of all groups because of their constant utilization for experimentation and investigation (Sorokin and Berger, 1939, p. 22). More recently, however, Frederick Rudolph has boldly asserted, "College students constitute the most neglected, least understood element of the American academic community (Rudolph, 1966, p. 47).

Approaches in Literature on College Students

1. Social Psychological Approach.--Perhaps to Professor Rudolph's growing satisfaction, there are what appear to be increased efforts to understand the college student qua college student. In this regard, research literature of the present decade has revealed considerable interest generated among educators, psychologists, and sociologists concerning the study of college students' attitudes and values. Those research efforts have sought, in many cases, answers to the speculative question, "What effect, if any, does the college

experience have on students?" Basically employing a social-psychological approach, major longitudinal studies have been or are being conducted at Cornell (Goldsen, 1960), Harvard (King, 1967), Haverford (Heath, 1968), Michigan State (Lehmann and Dressel, 1962), San Jose State (Plant, 1962), Santa Barbara (Foster, Stanek, and Krassowoski, 1961), Sarah Lawrence (Murphy and Raushenbush, 1960), Stanford and Berkeley (Katz and Associates, 1968), to name a few.

2. Era Approach.--In addition to the social-psychological research, the literature contains several other approaches. A second one may be termed the "era" approach. In this popular approach historians, journalists, and social critics have typified or characterized a period of time as being particularly distinguished by a dominant social characteristic. The "flapper period" of the twenties (Rudolph, 1962, p. 454), the political radical era of the thirties (Wechsler, 1935), the period of the returning GI's between 1945-50 (Mueller, 1961, p. 97), the "silent generation" of the fifties (Keniston, 1962; Sanford, 1964; Woodward, 1967), and the activist era of the sixties (Bernreuter, 1966; Cohen and Hale, 1967; Draper, 1965; Halleck, 1968; Hook, 1969; Keniston, 1962, 1968; Kennan, 1968; Peterson, 1969; and Whittaker and Watts, 1966) have been distinct periods that have been identified by many authors.

3. Behavior Approach.--A third approach has focused on student behavior and has been somewhat less frequently

used. A classic study that is representative of this approach is Angell's The Campus, A Study of Contemporary Undergraduate Life in America (1928). Bolton and Kammeyer (1967) have completed a more recent study, on the routine activities of college students. As well, more specific behaviors, such as those concerned with drinking, have been studied (Katz and Associates, 1968).

4. Social Comment Approach.--A fourth category of literature on college students has included various statements which exhort for change or deplore an existing situation. As an example, social critic Paul Goodman has publicly argued that colleges are irrelevant to student purposes (Goodman, 1962). He has proposed that students and faculty leave the present "learning environments" of the colleges, in an attempt to escape the present organizational elements that ostensibly impede personal development. Also, early in this decade, Riesman (1961, pp. 39-45) spoke in the Atlantic, urging college students to oppose the bureaucracies of society and the college. Duberman (1968, pp. 64-70), eight years later in the same magazine, issued a strong statement in support of student rebel efforts aimed in opposition to the "status quo."

5. Campus Culture Approach.--A fifth category that shall be especially noted is the campus culture approach.¹ This approach has led to many methods of describing college cultures.² Three such methods appear to deserve mention.

The press of the college environment, as the student sees it, has been extensively investigated by Pace, Stern, and others. The College Characteristics Index (Pace, 1958, 1960, 1961, 1962a, 1962b; Stern, 1958, 1960a, 1960b, 1962, 1963) consists of 300 statements about college life--rules and regulations, features and facilities, faculty, curriculum, instruction, extracurricular programs, etc. Students act as reporters about the environment of their college indicating whether, in their judgement, the various statements in the test describe a condition that is generally true or characteristic of the college. When there is a high level of consensus among the reporters, the statement is regarded as representative of something about which there is a collective and widely shared perception. With the development of the newer and briefer version of the CCI, the College and University Environment Scales (Pace, 1963; Pace, in Dennis and Kauffman, eds., 1966), the CCI currently has fallen into relative disuse.

The Environmental Assessment Technique (EAT), developed by Astin and Holland (Astin, 1961a, 1961b, 1962, 1963), is a newer method for assessing college campus culture. The EAT takes its data from eight characteristics of the student body: (1) Size, (2) intelligence, and (3) six personal orientations: (a) artistic, (b) intellectual, (c) enterprising, (d) conventional, (e) social, and (f) realistic. The six indexes are derived on the basis of the proportions of

students enrolled in courses in, respectively, (a) art, music, journalism, foreign language, etc.; (b) natural science, mathematics, etc.; (c) public administration, political science, etc.; (d) accounting, business, economics, etc.; (e) education, nursing, sociology, etc.; (f) agriculture, forestry, engineering, etc. The EAT variables were reported to have substantial correlations with many of the CCI scales.

Vreeland and Bidwell (1966) introduced an exploratory approach to the assessment of college campus culture. They attempted to provide a classification of the college social structure that was empirically independent of, and logically prior to, the measurement of student value and attitude change. Their two-dimensional scheme was based on (1) types of institutional goals and (2) the presence of certain interactional attributes. By establishing goals and attributes through an interview with faculty and staff members of the various academic departments, Vreeland and Bidwell presented a prediction concerning the possible institutional effects upon students.

Campus Culture Concepts

1. Conceptions of Three Culture Assessment Methods.--

Each of the above assessment methods embraced a particular conception of campus culture. The CCI and CUES assumed that the implicit or operational influences of the college shaped the campus culture, and students' views of those influences

clarified for them what direction their behavior had to take if they were to find satisfaction within the dominant culture. The EAT rested on the underlying assumption that campus culture was a direct reflection of selected demographic characteristics of the college's student body. The culture concept that Vreeland and Bidwell espoused was that of a campus culture derived from technical, mixed, and moral institutional goals together with faculty interest, student-faculty interaction and student peer interaction.

2. Ethnography or Research in Comparative College Cultures.--Numerous other ways of viewing campus culture were found in the literature on college students. Some investigators used the total college as a unit of analysis, with the objective of demonstrating either that the culture of a specific college differed from other colleges, or that colleges may be thought of as having a dominant theme or character which could be treated as a variable in comparing colleges. This approach may be termed college ethnography or research in comparative college cultures. Using such an approach, the dominant cultural theme of a college may be viewed as a dependent variable, in which case the researcher may ask what historical and demographic factors produced an observed culture (Sanford, 1962, pp. 174-192). The dominant cultural theme also may be treated as an independent variable, for example, when the question is asked, "How has the dominant theme of the college influenced attitudes and behaviors of students?" (Newcomb, 1943.)

3. Students and Faculty--Two Conflicting Cultures.--The contributions of Bushnell (Sanford, 1962, pp. 489-514) in the Vassar study exemplified a different usage of the culture concept. Bushnell emphasized the existence of two conflicting cultures, student and faculty, on the campus. The conflict between youth culture and academic culture also has been noted by Waller (1932), Pace (1949), Pace and Troyer (1954), Coleman (1961), and Wallace (1966).

4. Students' Collective Response to Common Problems.--Another conceptualization and use of the culture concept was advanced by Becker (1963, 1966). Becker and his associates began with the basic proposition that all students are confronted with the same basic problems. Student culture thus was viewed as a collective response of students to their common problems. Becker has contended that student culture is perpetuated by, or has its continuity because of, the communication process among college students.

5. Campus Culture--Product of Its Own History.--Berry (1967) has defined student culture as a distinctive way of living. She believed that campus culture is tied to the culture of society at large but it derives direct impact from its own traditions, customs, and ways of life that may be either consistent with or opposed to outside social forces. The pervasive traditions, the physical characteristics of the campus and its artifacts, the interaction of students with students, students with faculty, and both groups with the

outside community were all considered to be factors which, when viewed in perspective over a period of time, forged the element that Berry called campus culture.

6. Student Subcultures.--The culture concept of student subcultures has probably received most widespread attention.³ The subculture approach may be seen as focusing on dissimilarities of students, not as individual personalities, but as interacting members of groups having common attitudes, values, and behaviors. A well-known illustration of the student subculture approach is the typology developed by Burton Clark and Martin Trow (Clark and Trow, 1960, 1966; Trow, 1962, 1965). Selecting two basic dimensions, "identification with college" and "involvement with ideas," these authors deduced four logically possible subcultures which they labeled academic, nonconformist, collegiate, and vocational.⁴ The Clark and Trow description of four subcultures in 1960⁵ gave considerable impetus to the study of college student subcultures.

Clark-Trow Theoretical Subculture Classification Scheme

Clark and Trow were explicit in stating that their subcultures did not represent types of students. Subcultures, according to them, represented clusters of attitudes, norms, and modes of behavior rather than groups of people (Clark and Trow, 1966). Yet, typical sets of attitudes and behavior patterns can provide a useful basis for classifying students,

and the Clark-Trow set of subcultures has been treated as a set of student types by Clark and Trow and others (Gottlieb and Hodgkins, 1963; Pemberton, 1963; and Peterson, 1965).

At various times Clark and Trow have implied that their four subcultures were more than a mere collection of students with common orientations, suggesting that students with common orientations also commonly chose to interact with one another. Speaking of the vocational subculture, Burton Clark has said,

Its members interact less with one another than those caught up in the collegiate subculture (Clark, 1962, p. 207).

Trow has explained that,

Most colleges are not monolithic and uniform, but contain within themselves different sub-societies whose members share common codes of values, attitudes, and patterns of behavior. . . . The kind of subculture(s) a student identifies with shapes the kinds of people he spends his time with and the kinds of values and attitudes he is exposed, indeed, subjected to (Trow, 1965, p. 58).

Clark and Trow have asserted,

. . . an individual student may well participate in several of the subcultures available on his campus, though in most cases one will embody his dominant orientation (Clark and Trow, 1966, p. 19).

At no time have Clark and Trow provided any data regarding student-student interaction of subculture members. Therefore, they merely conjectured that students classified as being in the same subculture would generally interact with one another.

Investigations that Operationalized Clark-Trow Classification Scheme

Several investigators more or less directly operationalized the theoretical classification scheme of Clark and Trow, in order to empirically classify students and to search for the empirical implications of such a classification. They also sought the background, attitudinal, and behavioral correlates of the differentially classified students (Abe and Holland, 1965; Adams, 1965; Farber and Goodstein, 1964; Gezi and Cummings, 1966; Gottlieb, 1965; Gottlieb and Hodgkins, 1963; Harrington, 1965; Lehmann and Dressel, 1962; McDowell, nd.; and Peterson, 1965a, 1965b).

All of the above investigators first determined students' subculture orientations and then classified them according to similarity of orientation into one of the four types propounded by Clark and Trow. None of the investigators also made an attempt to gain information about whether students in a particular classification interacted with one another or sought one another as assumed by the Clark-Trow theory.

Corroboration of Clark-Trow Sub- culture Classification Scheme

Six independent efforts to create a student typology, on bases quite different from those used by Clark and Trow, yielded strong support for the four-fold scheme of Clark and Trow⁶ (Bolton and Kammeyer, 1967; Keniston, 1966; Newcomb,

Koenig, Flacks, and Warwick, 1967; Pemberton, 1963; Schumer and Stanfield, 1966; Warren, 1966).

Though they arrived at common findings, the bases for classification varied considerably among the researchers. Bolton and Kammeyer classified types of student orientations on the basis of arbitrary rating of University of California, Davis subject responses on an academic-intellectual dimension and a morality-interpersonality dimension. Keniston classified types of students based on impressionistic observation. Newcomb, Koenig, Flacks, and Warwick arrived at a classification of types of students by coding Bennington students' responses when asked to describe sets of people who shared particular interests, attitudes, or values. Pemberton classified types of student orientations based on factor analysis⁷ of scores of University of Delaware students on a variety of personality scales and attitude and background surveys. Schumer and Stanfield classified types of student role orientations based on factor analysis of University of Connecticut students' preferences from different activities or behaviors available to them on campus. Warren classified types of student orientations based on factor analysis of judgements by students⁸ of the degree of similarity among descriptions of eighteen hypothetical students. It may also be noted that the above classification schemes were generated from data at colleges which differed with respect to size, level, and type of control.

Thus, several typologies, created on a variety of bases at a variety of institutions of higher education, provided substantial empirical evidence in support of the Clark-Trow subculture classification scheme.⁹ Those same studies, however, did not offer evidence that students classified as being similar in attitude participated in the same subculture.¹⁰

Attempt to Partially Confirm Subcultures by Interaction Analysis

One study did present data regarding interaction of students who had similar subculture orientations. Frantz (1967) attempted to identify college student subcultures and partially confirm their existence by analysis of student-student interaction. Using two forms of the Subculture Index, specially constructed for the study, he classified 110 randomly chosen university males and 121 of their best friends. Friendships within the tentative subcultures were analyzed, and it was found that, in general, students' interaction patterns were unrelated to their tentative subculture classifications. The finding, however, was rendered uninterpretable as the result of a major finding that, identified tentative subcultures did not satisfy the requirements of the investigator's subculture model.

Proximity and Similarity Nurture Inter- action and Friendship Relations

It is axiomatic that a student can not develop friendship relations with students whom he has never met.¹¹ Neither

does he develop them with all students whom he has met, but proximity surely would determine the probability of any two students' meeting. It has been shown that marriage rates--even within a single city--vary directly with residential proximity of marriage partners (Bossard, 1932). The formation of less intimate student friendships seemingly is not immune to the same considerations. For example, Festinger et al. (1950) showed that in a housing project for married students the closest interpersonal relationships (in a statistical sense) developed not merely on the part of those whose apartment entrances faced the same court, but also, in particular, among those who used the same stairways and other facilities. Newcomb (1961) has found that, even within a small, two-floor house accommodating only seventeen students, there were significantly more close relationships among the eight men on one floor and among the nine men on the other floor than between men on different floors. Such studies strongly suggest that proximity leads to interaction, which tends to create consensual attitudes reflected in friendly relations.

The proximity principle should not obscure the equally important principle that interaction tends to begin on the basis of existing similar characteristics. For studies showing similarities of college friends with respect to values, attitudes, and interests, as well as with respect to background characteristics, see the following: Bogardus and

Otto (1936); Bonney (1946, 1949); Bowers (1964); Broderick (1956); Broxton (1963); Flacks (1963); Glick (1962); Glick and Jackson (1967, nd); Lundberg and Beazley (1948); Lundberg, Hertzler and Dickson (1949); Mitchell (1951); Morton (1959); Newcomb (1943, 1956, 1961); Newcomb, Koenig, Flacks, and Warwick (1967); Precker (1952); Reilly, Commings, and Stefic (1960); Richardson (1940); Rose (1957); Shapiro (1953); Smelser (1952); Smucker (1947); Sumner and Lee (1941); Vreeland and Corey (1935); Willer (1962); and Winslow (1937).

Speaking of both principles, Newcomb has said, "Contiguity and common interests together would seem to account for the beginning of most peer-group relationships." (Sanford, 1962, p. 476.) Thus, we would expect that those characteristics of students, the college, and the educational process that particularly enhance proximity and similarity, at the same time enhance the probability of student friendship relations.

Summary

The reviewed literature on college students was indicative of the growing concern with regard to understanding the college student qua college student. A variety of approaches were discerned from a purview of the literature. A widely used approach was the culture approach. At the beginning of this decade, Clark and Trow seemingly initiated an emphasis on the culture concept of subcultures.

A review of relevant literature concerning student subcultures revealed numerous studies which determined students' subculture orientations or preferences. However, it was noted that there was a dearth of research which attempted to determine if students with a similar subculture preference generally interacted with one another.

The chapter ended with a discussion about the principles of proximity and similarity. It was noted that they play an important role in determining interaction that may lead to student friendship relations.

CHAPTER II FOOTNOTES

1. On the basis of prevailing theories of culture, it appears that culture is not behavior but is inferred from behavior. Culture is an intervening variable, a set of shared expectancies and designs of living, consisting of standards, norms, customs, and accepted modes of dealing with life's events. In short, culture can be defined as a set of commonly learned mediators intervening between a stimulus and a potential response. The observable correlates of these mediators are the modes of behavior shared by group members (Eliot, 1948; Kluckhohn and Kelly, 1945; Kroeber and Kluckhohn, 1952; Kroeber and Parsons, 1958; Linton, 1945; Murphy, 1949; Parsons, 1965; and Ullman, 1965).

For an historical review of the study of campus cultures, see Tyler (1963).

2. For a discussion of methods for assessing college cultures, see Pace (1962). A discussion of the many studies of college environments is forthcoming in the fourth edition of the Encyclopedia of Educational Research, 1969.
3. For an early description and analysis of campus subcultures, see Angell (1928), Johnson (1946), and McConn (1928).
4. The Clark-Trow subculture typology emerges from the combination of the degree to which students are involved with ideas and the extent to which students identify with their college. Four student subcultures emerge from dichotomizing those two variables. A diagrammatic presentation of the Clark-Trow subculture model follows:

Diagram 1.--Clark-Trow Subculture Model.

		Involvement with Ideas	
		Much	Little
Identification with their college	Much	Academic	Collegiate
	Little	Nonconformist	Vocational

5. For their first description of four subcultures, see Clark and Trow (1960, pp. 4-9); also see Clark and Trow (1966, pp. 20-24).

The following is a brief summary of the subculture descriptions that Clark and Trow have provided in the above references. Students in the vocational and collegiate subcultures are not much involved with ideas. Students in the vocational subculture are neither intellectually oriented nor particularly involved in their college, which they consider as an off-the-job experience. Vocational students regard college as an organization of courses and credits leading to a diploma and a better job than they otherwise could expect. Collegiate students, though strongly attached and loyal to their college, are generally resistant or indifferent to serious intellectual demands. Their values and activities particularly focus on social life and extracurricular activities. Students in the academic and nonconformist subcultures are much involved with ideas. Academic students can be distinguished from nonconformist students by their high identification with the college; nonconformist students are not identified with their college. Academic students link their intellectual interests with the official curriculum, while nonconformist students seek intellectual satisfaction outside the curriculum. Members of the academic subculture generally identify with faculty concerns. They work hard, get the best grades, and talk about their course work outside of class. There is an attachment to their college as an institution that supports intellectual values and opportunities for learning. Nonconformist students, on the other hand, display a rather aggressive nonconformism, a critical detachment from their college and its faculty, and a generalized hostility to the administration. Nonconformists are involved both with the ideas they encounter in the classroom and

those that are current in the wider society. To a much greater degree than academic subculture members, non-conformist students use off-campus groups and cultures rather than the official college as reference points for their independence and criticism.

6. For an outline comparison of most of these typologies with the Clark-Trow typology, see Newcomb and Feldman (1968, pp. 502-503).

For other typologies, see Brown (1956); Bushnell (1962); Davie and Hare (1956); Frantz (1968); Heath (1964); Hendrix (1966); Korn (1967); McConn (1928); Mauss (1967); Mogar (1964); Pace and Baird (1966); Peck (1962); Slater (1957); Steinzor (1960); Stern, Stein, and Broom (1956); Warren (1967); Wedge and Davie (1958); and Werner (1961).

Though no data were offered to validate them, four of the typologies immediately above support at least the collegiate, vocational, and academic subcultures propounded by Clark and Trow (Bushnell, 1962; McConn, 1928; Slater, 1957; Wedge and David, 1958).

One study, with data to validate its typology, offered evidence which also strongly supported the Clark-Trow collegiate, vocational, and academic subcultures. Warren (1967) classified types of student orientations based on factor analysis of judgements by students of the degree of similarity among descriptions of eighteen hypothetical students. The study samples were from a large public junior college, a large state college, and a small private liberal arts college. Though Warren's procedure represented types of students by bi-polar dimensions rather than categories, he noted that a major consequence of his study was, "to confirm much of what Clark and Trow have to say about the academic, vocational, and collegiate subcultures." (Warren, 1967, p. 18.)

7. Winch (1947, pp. 68-75) apparently was the first to suggest using factor analysis to classify groups into empirical types as an alternative to what he called "heuristic types."
8. Students in Warren's (1966) study were from Claremont Men's College and the University of Southern California.
9. This support, perhaps, is surprising when one notes the many limitations of the Clark-Trow subculture classification scheme which have been recognized by Clark and Trow and many others. For a discussion of these limitations, see Bolton and Kammeyer (1967), Clark and Trow

(1966), Frantz (1968), Peterson (1965), and Warren (1967).

10. The mentioned studies did not analyze student-student interaction patterns of classified students. Flacks (1963) study investigated a deviant group of girls at Bennington, and it included an analysis of friendships of the group members.
11. The validity of the statement may be challenged when considering wish-fulfillment friendships. For example, it is possible for one to consider himself to "be friends with" an astronaut hero with whom he has never had face-to-face contact.

CHAPTER III

RESEARCH DESIGN

The design of the study is presented in this chapter. The chapter consists of five sections. First, information regarding the sample is offered. Second, instrumentation information will be given. Third, information about data gathering is presented. Finally, analysis is discussed, followed by a summary statement.

Sample

The institution from which the sample was selected was a small midwestern private nonsectarian four-year liberal arts college. The study sample was selected from a residential population of 635 students. It included all enrolled undergraduate students who lived in residence at the college; it excluded 113 commuting students.

The sample consisted of 513 students (304 men, 209 women) who completed the study instrument. That number represented 81 per cent of the population from which the sample was drawn.

Instrumentation

An instrument was specially constructed to gather data for the study. The instrument, a student inventory, was

designed so that data could be relatively easily coded for computer analysis. It requested thirteen different items of information from each subject (see Appendix for sample of student inventory). The inventory consisted of the following:

1. Name of subject (item 1).
2. Four variables common to educational research (items 2-5).
 - a. Sex
 - b. Class
 - c. Residence
 - d. Major
3. Subculture preferences (items 6-10). The definition of subculture identity was taken from an instrument developed by Educational Testing Service; the instrument is entitled College Student Questionnaires (Peterson, 1965b). To determine the present subculture identity of each subject, each subject was asked to rank in order of importance, the four philosophies that appeared on the inventory, describing the kind of philosophy they had at that time. The philosophies from which subjects could select were:
 - a. Philosophy A: the vocational subculture.
 - b. Philosophy B: the academic subculture.
 - c. Philosophy C: the collegiate subculture.
 - d. Philosophy D: the nonconformist subculture.

To determine the possible desired subculture identity of each subject, the subject was asked to identify

one of the four philosophies that he would choose if he had a choice.

4. Names of friends (items 11-13). Each subject was asked to list the names of three students with whom he interacted most at the college.

Data Gathering

Meetings with the Dean of Students, Director of Housing, Residence Directors, Student Advisors, Society presidents, and interested students were separately held. The need for information about the students at the college was stressed in meetings with interested students. Meetings with college officials and student leaders urged cooperation and focused on the need for accurate, individual student responses and appropriate plans for distribution and return of the instrument.

On April 17, 1969 the student inventory was distributed in person to each hall resident by the Student Advisors. The Society presidents personally distributed the inventory to members of their Society's residential unit. Student Advisors and Society presidents instructed students to accurately and honestly complete the instrument without the aid of fellow students. They were requested to complete the inventory at their earliest convenience.

One and one-half weeks after initial distribution, a "reminder" was posted on bulletin boards in public areas.

Residential units with relatively few completed inventories were visited, and student leaders were urged to cooperate to help insure a good return of accurately completed forms.

May 7, three weeks after the initial distribution date, served as an arbitrary date beyond which inventories were no longer accepted for the study. Inventories were received from 516 persons, and 513 of those were usable.

Analysis

Nonparametric statistics were used for analysis of data (Kerlinger, 1964, pp. 257-60). The statistical techniques used in the study consisted of chi-square and mean square contingency coefficient. Chi-square was used to test the study hypothesis. Mean square contingency coefficient was used to test the strength of significant chi-square values.

The formula for chi-square is as follows:

$$\chi^2 = \sum \left[\frac{(f_o - f_e)^2}{f_e} \right]$$

The significance level used for the chi-square test statistic was the .05 level of confidence.

It was important to have an appraisal of the strength of significant chi-square values (Hays, 1963, p. 614). The mean square contingency coefficient was computed for all chi-square values that were significant. Mean square contingency coefficient always has a value between zero and one; the coefficient can be zero only when there is complete

independence. The formula used for the mean square contingency coefficient is as follows:

$$\frac{\frac{\chi^2}{N}}{\text{Min. } (r-1), (c-1)}$$

χ^2 = chi-square

N = total sample

r = the number of rows in the contingency table

c = the number of columns in the contingency table

On the student inventory, subjects had been instructed to list three students with whom they interacted most at the college. Because not all did list three names, caution was taken to help insure that such differences did not represent population differences. A three-dimensional chi-square (Winer, 1962, pp. 629-632) was calculated on two arbitrarily chosen variables, with the following design (Diagram 1), as an example:

Diagram 2.--Design for Three-Dimensional Chi-Square Analysis.

No. Friends listed	Subject's Sex	Sex of first friend listed	
		Male	Female
3	male		
	female		
2 or 1	male		
	female		

Analysis by three-dimensional chi-square indicated that the number of names listed by a subject was not a significant dimension. As a consequence, the final design proceeded as above but with disregard for the number of friends listed, as shown in Diagram 2.

Diagram 3.--Final Design for Chi-Square Analysis.

Subject's Sex	Sex of first friend listed	
	Male	Female
male		
female		

It is pointed out that the above design utilized the data of only one friend, the first person listed; an explanation follows:

The study instrument requested subjects to name three students with whom they interacted most at their college. It was expected that each subject would name three student friends and each of those listed friends also would have completed the study instrument. However, the result of some subjects not listing three friends and some listed friends not completing the instrument was: 298 subjects listed three friends who had completed the instrument; 176 subjects listed two friends who had completed the instrument; 39 subjects listed one friend who had completed the instrument;

and three subjects did not list any friends. Since an assumption of chi-square required that no more than one frequency be reported for each subject, there was the option of doing any or all of the following: chi-square analysis of a subject's data and the data of the first person listed; chi-square analysis of a subject's data and the data of the second person listed, eliminating 39 subjects and their 39 friends; and chi-square analysis of a subject's data and the data of the third person listed, eliminating 215 subjects and their 391 friends. Chi-square analysis of a subject's data and the data of the first person listed was chosen for the two following reasons: (1) It was believed that it could be assumed that the first person listed was representative of all friends listed. The instrument did not ask subjects to make any differentiation between listed friends. Furthermore, several subjects remarked, verbally or on the instrument, that they had not "ranked" friends; (2) Such a choice made it possible to refrain from eliminating data that was of apparent usefulness for analysis purposes.

Hays (1963, p. 588) has reported the danger of collapsing cells using the chi-square statistic. In that regard, contingency tables with theoretical frequency cells of less than five were carefully reviewed. Such a review indicated that the college's twenty-five majors contributed to small numbers in theoretical frequency cells. For that reason, majors were grouped into six academic divisions which are

commonly found at undergraduate institutions. Those groupings were as follows:

Social Science

Sociology
Social Studies
Political Science
Psychology

Natural Science

Biology
Chemistry
Math
Physics

Business

Economics
Business

Education

Special Education
Physical Education

Undeclared

Undeclared

Arts and Letters

Liberal Arts
Religion
Philosophy
English
German
Latin
Spanish
French
Art
Music
Speech-Theatre
History

Summary

The sample consisted of 513 resident students at a small midwestern private nonsectarian four-year liberal arts college. A specially constructed inventory requested thirteen different items of information from each subject. Meetings were held with college officials and students to assist in data collection. Chi-square and mean square contingency coefficient were the statistical techniques used. A three-dimensional chi-square helped determine that number of friends listed was not a significant dimension for the final research design. A decision was made to disregard, for analysis purposes, the data of any friends listed beyond the first person listed. Finally, the variable of major had to be treated to enable appropriate analysis.

CHAPTER IV

FINDINGS

The findings of the study are presented in this chapter. The chapter begins with a restatement of the study's hypothesis. In a separate section for each variable, findings are presented in tabular form, followed by an uninterpretive discussion of those findings. The chapter closes with a summary of important findings.

The study hypothesis was:

College students will more often name as friends other students who have the same subculture preference, as defined by the Clark-Trow subculture classification scheme, than they will name as friends other students who have the same sex, class, residence, or major.

Sex

Chi-square analysis revealed no significant relationship at the .05 level between: subject's sex and friend's class; subject's sex and friend's desired subculture. It showed significance at the .05 level regarding the relationship between: subject's sex and friend's sex; subject's sex and friend's residence; and subject's sex and friend's major. (See Table 1.)

TABLE 1.--Subject's Sex and its Relationship to Friend's Sex, Class, Residence, Major, Present Subculture, and Desired Subculture.

Subject's - Friend's Variable		df	.05 Level	X ²	Mean Square Contingency Coefficient
Sex	- Sex	1	3.841	192.794***	.376
Sex	- Class	5	9.488	7.302	---
Sex	- Residence	10	18.307	198.901***	.388
Sex	- Major	5	9.488	29.280***	.057
Sex	- Present Subculture	3	7.815	3.855	---
Sex	- Desired Subculture	3	7.815	3.165	---

***.001 level

The mean square contingency coefficients were: .376 for the relationship between subject's sex and friend's sex; .388 for the relationship between subject's sex and friend's residence; .057 for the relationship between subject's sex and friend's major.

Class

Analysis revealed no significance at the .05 level between: subject's class and friend's sex; subject's class and friend's present subculture; subject's class and friend's desired subculture. Subject's class and friend's class; subject's class and friend's residence; and subject's class and friend's major showed significant relationships at the .05 level. (See Table 2.)

TABLE 2.--Subject's Class and its Relationship to Friend's Sex, Class, Residence, Major, Present Subculture, and Desired Subculture.

Subject's - Friend's Variable		df	.05	χ^2	Mean Square Contingency Coefficient
Class	- Sex	4	9.488	5.182	---
Class	- Class	20	31.410	304.044***	.148
Class	- Residence	40	55.759	111.170***	.054
Class	- Major	20	31.410	56.305***	.027
Class	- Present Subculture	12	21.026	19.170	---
Class	- Desired Subculture	12	21.026	11.897	---

***.001 level

The mean square contingency coefficients were: .148 for the relationship between subject's class and friend's class; .054 for the relationship between subject's class and friend's residence; .027 for the relationship between subject's class and friend's major.

Residence

Analysis showed no significance at the .05 level for the relationship between subject's residence and friend's present subculture. There were significant relationships at the .05 level for the following: subject's residence and friend's sex; subject's residence and friend's class; subject's residence and friend's residence; subject's residence and friend's major; and subject's residence and friend's desired subculture. (See Table 3.)

TABLE 3.--Subject's Residence and its Relationship to Friend's Sex, Class, Residence, Major, Present Subculture, and Desired Subculture.

Subject's - Friend's Variable	df	.05	χ^2	Mean Square Contingency Coefficient
Residence - Sex	10	18.307	194.897***	.380
Residence - Class	50	67.505	89.839***	.044
Residence - Residence	100	124.342	2010.299***	.392
Residence - Major	50	67.505	123.145***	.048
Residence - Present Subculture	30	43.773	41.398	---
Residence - Desired Subculture	30	43.773	50.806*	.033

*.05 level

***.001 level

The mean square contingency coefficients were: .380 for the relationship between subject's residence and friend's sex; .044 for the relationship between subject's residence and friend's class; .392 for the relationship between subject's residence and friend's residence; .048 for the relationship between subject's residence and friend's major; .033 for the relationship between subject's residence and friend's desired subculture.

Major

There was not significance at the .05 level for the relationships between subject's major and friend's present subculture and subject's major and friend's desired subculture. The following relationships were significant at the

.05 level: subject's major and friend's sex; subject's major and friend's class; subject's major and friend's residence; and subject's major and friend's major. (See Table 4.)

TABLE 4.--Subject's Major and its Relationship to Friend's Sex, Class, Residence, Major, Present Subculture, and Desired Subculture.

Subject's - Friend's Variable		df	.05	χ^2	Mean Square Contingency Coefficient
Major	- Sex	5	9.488	24.968***	.049
Major	- Class	25	37.652	73.809***	.036
Major	- Residence	50	67.505	98.211***	.038
Major	- Major	25	37.652	46.780**	.018
Major	- Present Subculture	15	24.996	19.021	---
Major	- Desired Subculture	15	24.996	13.783	---

** .01 level

*** .001 level

The mean square contingency coefficients were: .049 for the relationship between subject's major and friend's sex; .036 for the relationship between subject's major and friend's class; .038 for the relationship between subject's major and friend's residence; .018 for the relationship between subject's major and friend's major.

Present Subculture

There was not a significant relationship at the .05 level for the following: subject's present subculture and friend's sex; subject's present subculture and friend's

class; subject's present subculture and friend's residence; and subject's present subculture and friend's major. A significant relationship at the .05 level was found for the following: subject's present subculture and friend's present subculture, and subject's present subculture and friend's desired subculture. (See Table 5.)

TABLE 5.--Subject's Present Subculture and its Relationship to Friend's Sex, Class, Residence, Major, Present Subculture, and Desired Subculture.

Subject's - Friend's Variable	df	.05	χ^2	Mean Square Contingency Coefficient
Present Subculture-Sex	3	7.815	2.395	---
Present Subculture-Class	15	24.996	15.666	---
Present Subculture-Residence	30	43.773	28.780	---
Present Subculture-Major	15	24.996	19.524	---
Present Subculture-Subculture	9	16.919	37.487***	.024
Present Subculture-Subculture	9	16.919	33.216***	.022

***.001 level

The mean square contingency coefficients were: .024 for the relationship between subject's present subculture and friend's present subculture, and .022 for the relationship between subject's present subculture and friend's desired subculture.

Desired Subculture

Analysis indicated no significant relationship at the .05 level for the following: subject's desired subculture and friend's sex; subject's desired subculture and friend's class; subject's desired subculture and friend's residence. A significant relationship at the .05 level was found for the following: subject's desired subculture and friend's major; subject's desired subculture and friend's present subculture; and subject's desired subculture and friend's desired subculture. (See Table 6.)

TABLE 6.--Subject's Desired Subculture and its Relationship to Friend's Sex, Class, Residence, Major, Present Subculture, and Desired Subculture.

Subject's - Friend's Variable	df	.05	χ^2	Mean Square Contingency Coefficient
Desired Subculture-Sex	3	7.815	4.841	---
Desired Subculture-Class	15	24.996	11.381	---
Desired Subculture-Residence	30	43.773	30.589	---
Desired Subculture-Major	15	24.996	35.556**	.023
Desired -Present Subculture-Subculture	9	16.919	47.213***	.031
Desired -Desired Subculture-Subculture	9	16.919	38.011***	.025

** .01 level

***.001 level

The mean square contingency coefficients were: .023 for the relationship between subject's desired subculture and friend's major; .031 for the relationship between subject's desired subculture and friend's present subculture; .025 for the relationship between subject's desired subculture and friend's desired subculture.

Summary

Students chose friends who were of the same sex, who were in the same class, or who resided in the same residence much more than they chose friends who were in the same major or who had the same subculture preference.

CHAPTER V

DISCUSSION

Chapter I posed the study's problem with the following question: Do college students, who have been differentially classified according to the Clark-Trow subculture classification scheme, list students with the same subculture preference when requested to list names of students with whom they interact most at their college? Study data would seem to provide limited support for an affirmative answer to that question.

Table 5 showed that subject's present subculture was significantly related to friend's present subculture (.001 level), and Table 6 showed that subject's desired subculture was significantly related to friend's desired subculture (.001 level). Not only were such relationships evident, but analysis to determine which specific cells contributed to the relationship showed that subjects tended to choose friends with the same subculture preferences (see Tables 7 and 8). A subject with present and/or desired preference for the vocational subculture, collegiate subculture, or nonconformist subculture generally chose a friend who had the same preference.

In contradiction to Clark-Trow theory was the finding that subjects who held a present and/or desired preference

for the academic subculture generally chose friends in the nonconformist category. The academic subculture was relatively little desired by sample subjects. Apparently indicative of the strength of that low regard across campus was the finding that students who preferred the academic subculture did not choose friends from the same subculture. The very normative-value system that characterized the "good student" was generally rejected by students in the sample. This finding seemingly closely corresponds to the "two conflicting cultures" theme that was acknowledged in Chapter II.

The above findings seem to provide some support for the continued popular use of the Clark-Trow subculture classification scheme. Other findings, however, seriously question its popular utilization. Though there was a weak tendency for a subject to choose a friend who had a similar subculture preference, a subject also tended to choose a friend (see Tables 9-12) who was of the same sex (.001 level), same class (.001 level), same residence (.001 level), and same major (.01 level). Tables 9-12 show the strength of association between: subject's sex and friend's sex; subject's class and friend's class; subject's residence and friend's residence; and subject's major and friend's major. Data showed that subjects were very much more likely to choose friends with regard to sex, class, and residence than were they likely to choose friends on subculture preference. Subjects were only slightly more likely to have a similar

subculture preference than a similar major. Thus, students in the sample generally chose friends who were similar on characteristics of sex, class, and residence rather than friends who were similar with regard to subculture preference. Therefore, meaningful inferences about probable characteristics of a student's friend might be made easily and profitably by simply gaining knowledge of each student's sex, class, residence, and major. That information currently is routinely accumulated and readily available for each student, unlike Clark-Trow subculture classification information. Taking cognizance of the above fact and considering the strength of individual associations between students' four characteristics (sex, class, residence, major) and friends' four characteristics (sex, class, residence, major), the need to classify students into Clark-Trow subcultures would seem to diminish in educational significance.

Keeping well in mind the documentation offered in Chapter I, that student peers have much impact on one another, student-student attraction on the basis of the study's variables may raise other educational questions. First, small residential colleges, as that from which the sample was drawn, often have stressed their unique ability to provide for a diverse student body a congenial environment which enhances close student-student contacts with the entire community of their diverse fellows. It would seem to follow logically that student associations would reveal a strong

measure of diversity. It was beyond the scope of the present study to determine if any insulating effects were the result of student associations that were generally based on similarity of sex, class, residence, major, and subculture preference. Yet, the study found association on the basis of similarity of attributes much in evidence,¹ and even the potential insulating effects of that kind of association would seem to be in contradistinction to one of the primary qualities that many small colleges ascribe to themselves.

Second, students were very strongly attracted to one another on the basis of physical propinquity; the study suggests that the care with which residential assignments are made might deserve the special attention of educators. The educational soundness of leaving to chance the educational job of providing all peer association choices that are consonant with the developmental growth of each student is seriously questioned. Surely, educators should desire to claim some role in this potential educative arena.

Third, proponents of coeducational residences have noted the ability of those units to reduce the quality of isolation that is commonly associated with single-sex college residences; the present study questions that ostensible ability. Fifty-six percent of the sample (176 males and 109 females) lived in one coeducational residence hall which had shared-recreational facilities and a common central lounge. That hall's ability to reduce the degree of "unnatural"

isolation of the sexes was not apparent in study results. As in the other residential units, males tended to choose males as friends; and females tended to choose females as friends. For analysis purposes, the coeducational hall was tentatively treated as though it contained two separate units, based on sex. Indeed, it proved to contain two different residential units. Females tended to choose friends on the side of the building where all females resided. Males tended to choose friends on the side of the building where all males resided. Perhaps a single roof overhead and a modicum of planned, shared facilities and programs should not have qualified the above residence to assume the coeducational term. The issue, nonetheless, remains, because many coeducational residences on other campuses are similar in physical nature and program.

Limitations

Study design and procedures were rather straightforward and generally free from limitations. Chapter I noted the study's major limitation, which was the inability to generalize findings and enlist support from previous studies of the same problem. A discussion of the study's other limitations follows.

The study investigated dyad associations. Students generally were matched in dyads on individual characteristics of sex, class, residence, and major. They also tended to match in dyads concerning subculture preference. It may be

expected, then, that those dyads were somehow linked to form larger subcultures. A limitation of the present study is that the specific nature of dyad linking remains unknown.

Footnote 9 of Chapter II listed references for many discussions of the limitations of the Clark-Trow subculture theory. Of course, any limitation of the Clark-Trow subculture classification scheme could lead to a limitation of the study, as students were differentially classified in reference to it. In critical reviews of the theory, perhaps the singly most mentioned criticism related to the categorical nature of the classification scheme. Conceptualizing student differences in terms of student subculture preferences required categorization, which makes treatment of differences in degree level awkward. Variation in strength of commitment or identification was not considered. Such a limitation would, indeed, be serious if students found the categories inappropriate for their complete responses. The study did not find that to be true. In a very communication-free setting, only one student reported, either verbally or in written form, that the categories did not fit well his subculture preference. Fully recognizing the oversimplifying nature of the typology, it nevertheless seems appropriate to assume that sample subjects were quite able to find one subculture description which complemented their subculture orientation.

Chi-square analysis required that no more than one frequency be reported for each subject in the study. For that reason the study design made use of information about

the first person listed by each subject. Thus, it is possible, though not probable, that some information was lost.

Finally, it may have been useful to have more information about the probable characteristics of a subject's friend. The study, however, did not analyze data with the aim of establishing a formula which might predict the probable characteristics of possible friends of students.

Conclusions

The study raised a number of issues concerning the possible insulating effects that might be operating when students match one another on such characteristics as sex, class, residence, major, or subculture preference. First, it is possible to speculate that, even at a small residential college, severe limitations might be imposed on the degree of diversity of student-student contacts, as the result of student associations generally based on similarity of attributes. In fact, the smallness and residential quality might contribute to those limitations. Second, the very strong tendency for students to associate on the basis of similar residence suggested a possible role for educators in making residential assignments. Third, study findings suggest that it is likely that a coeducational residence hall does not significantly alter the same-sex pattern of close student friendship.

In Chapter II it was acknowledged that the Clark-Trow studies did not attempt to evaluate the validity of the Clark-Trow subculture typology;² the present study made such an effort by focusing on the dimension of student-student interaction. The present study's relatively negligible mean square contingency coefficients with regard to subculture preference (See Tables 5 and 6) were indicative of an extremely weak tendency for students with the same subculture preference to interact together with some persistence. Thus, a significant result of all the Clark-Trow studies, to date, is that there is little or no evidence that the theorized Clark-Trow subcultures have correlates in reality.

In the absence of evidence in support of the Clark-Trow subculture model, those working with college students seemingly would be well advised to refrain from conceptualizing and using the Clark-Trow classification scheme as a typology of actual subcultures of college students on their campus or any campus. Currently it would seem most sensible for the educational practitioner to view the Clark-Trow typology as a heuristic and simplistic way of conceptualizing four normative-value systems that college students might possess,³ since the typology apparently classifies types of college student attitudes rather than types of student subcultures extant on a college campus. Meanwhile, it is urged that future research be directed toward evaluating the validity of the Clark-Trow scheme as a subculture typology and extending

knowledge about the role of selected demographic characteristics concerning college student-student interaction and friendship relations. The present study's findings suggest that information about college students' sex, class, and residence could provide very useful information about the probable characteristics of their friends and their campus interaction patterns.

Implications for Further Research

The design and procedures of the present study were rather straightforward, and they helped provide an exploratory examination of a very important dimension of the popular Clark-Trow subculture typology. It would seem that future research of the problem could profit from a replication study, helping to clarify and extend findings of the present study. Perhaps future research could profitably employ data analysis aimed at developing a prediction formula regarding probable characteristics of students' friends. Since commuter student populations constitute such a relatively large proportion of the total college student population, further research might add a commuter population for a comparison with a residential population. It is speculated that significant differences in the populations would appear. Such a study would likely have to include non-student friends of subjects. Most useful to a better understanding of the problem would be a comparative study. Using the basic procedures of the present study, an investigation on different college

student populations at several colleges, varying with respect to size, level, and type of control, could provide valuable comparative information about the problem.

CHAPTER V FOOTNOTE

1. For studies showing similarities of college friends with respect to values, attitudes, and interests, as well as with respect to background characteristics, see the following: Bogardus and Otto (1936); Bonney (1946, 1949); Bowers (1964); Broderick (1956); Broxton (1963); Flacks (1963); Glick (1962); Glick and Jackson (1967, nd); Lundberg and Beazley (1948); Lundberg, Hertzler and Dickson (1949); Mitchell (1951); Morton (1959); Newcomb (1943, 1956, 1961); Newcomb, Koenig, Flacks, and Warwick (1967); Precker (1952); Reilly, Commings, and Stefic (1960); Richardson (1940); Rose (1957); Shapiro (1953); Smelser (1952); Smucker (1947); Sumner and Lee (1941); Vreeland and Corey (1935); Willer (1962); and Winslow (1937).
2. See Frantz (1969) for a discussion of research studies of the Clark-Trow subculture model.
3. A somewhat similar statement once was offered by Clark and Trow themselves (Clark and Trow, 1966, pp. 19-20). It is unfortunate that Clark and Trow have continued to use the term "subculture" when referring to their typology, since the subculture concept implies more than they seem to generally intend.

TABLE 7.--Present Subculture Preferences of Subjects and Their Friends.

Subject's Present Subculture	Friend's Present Subculture				Total
	Vocational	Academic	Collegiate	Nonconformist	
Vocational					
Freq.	30.00	17.00	38.00	8.00	93.00
Pct. Across	32.26	18.28	40.86	8.60	100.00
Pct. Down	30.00	22.67	14.56	10.39	18.13
Pct. of Total	5.85	3.31	7.41	1.56	18.13
Theoret. Freq.	18.13	13.60	47.32	13.96	
Cell Chi-Sq.	7.77	.85	1.83	2.54	
Academic					
Freq.	20.00	16.00	39.00	18.00	93.00
Pct. Across	21.51	17.20	41.94	19.35	100.00
Pct. Down	20.00	21.33	14.94	23.58	18.13
Pct. of Total	3.90	3.12	7.60	3.51	18.13
Theoret. Freq.	18.13	13.60	47.32	13.96	
Cell Chi-Sq.	.19	.42	1.46	1.17	
Collegiate					
Freq.	38.00	30.00	156.00	31.00	255.00
Pct. Across	14.90	11.76	61.18	12.16	100.00

Pct. Down	38.00	40.00	59.77	40.26	49.71
Pct. of Total	7.41	5.85	30.41	6.04	49.71
Theoret. Freq.	49.71	37.28	129.74	38.27	
Cell Chi-Sq.	2.76	1.42	5.32	1.38	

Nonconformist

Freq.	12.00	12.00	28.00	20.00	72.00
Pct. Across	16.67	16.67	38.89	27.78	100.00
Pct. Down	12.00	16.00	10.73	25.97	14.04
Pct. of Total	2.34	2.34	5.46	3.90	14.04
Theoret. Freq.	14.04	10.53	36.63	10.81	
Cell Chi-Sq.	.30	.21	2.03	7.82	

Total

Freq.	100.00	75.00	261.00	77.00	513.00
Pct. Across	19.49	14.62	50.88	15.01	100.00
Pct. Down	100.00	100.00	100.00	100.00	100.00
Pct. of Total	19.49	14.62	50.88	15.01	100.00

Chi Square = 37.487*** Degrees of Freedom = 9

*** .001 level

TABLE 8.--Desired Subculture Preferences of Subjects and Their Friends.

Subject's Desired Subculture	Friend's Desired Subculture			
	Vocational	Academic	Collegiate	Nonconformist Total
Vocational				
Freq.	18.00	17.00	22.00	8.00 65.00
Pct. Across	27.69	26.15	33.85	12.31 100.00
Pct. Down	23.08	10.49	10.19	14.04 12.67
Pct. of Total	3.51	3.31	4.29	1.56 12.67
Theoret.Freq.	9.88	20.53	27.37	7.22
Cell Chi-Sq.	6.67	.61	1.05	.08
Academic				
Freq.	21.00	61.00	68.00	22.00 172.00
Pct. Across	12.21	35.47	39.53	12.79 100.00
Pct. Down	26.92	37.65	31.48	38.60 33.53
Pct. of Total	4.09	11.89	13.26	4.29 33.53
Theoret.Freq.	26.15	54.32	72.42	19.11
Cell Chi. Sq.	1.01	.82	.27	.44
Collegiate				
Freq.	33.00	58.00	113.00	14.00 218.00
Pct. Across	15.14	26.61	51.83	6.42 100.00

Pct. Down	42.31	35.80	52.31	24.56	42.50
Pct. of Total	6.43	11.31	22.03	2.73	42.50
Theoret. Freq.	33.15	68.84	91.79	24.22	
Cell Chi-Sq.	.00	1.71	4.90	4.31	

Nonconformist

Freq.	6.00	26.00	13.00	13.00	58.00
Pct. Across	10.34	44.83	22.41	22.41	100.00
Pct. Down	7.69	16.05	6.02	22.81	11.31
Pct. of Total	1.17	5.07	2.53	2.53	11.31
Theoret. Freq.	8.82	18.32	24.42	6.44	
Cell Chi-Sq.	.90	3.22	5.34	6.67	

Total

65

Freq.	78.00	162.00	216.00	57.00	513.00
Pct. Across	15.20	31.58	42.11	11.11	100.00
Pct. Down	100.00	100.00	100.00	100.00	100.00
Pct. of Total	15.20	31.58	42.11	11.11	100.00

Chi Square = 38.011*** Degrees of Freedom = 9

*** .001 level

TABLE 9.--Subjects' Sex and Their Friends' Sex.

	Male Friends	Female Friends	Total Friends
Male Subjects			
Freq.	255.00	47.00	302.00
Pct. Across	84.44	15.56	100.00
Pct. Down	83.88	22.49	58.87
Pct. of Total	49.71	9.16	58.87
Theoret. Freq.	178.96	123.04	
Cell Chi-Sq.	32.31	46.99	
Female Subjects			
Freq.	49.00	162.00	211.00
Pct. Across	23.22	76.78	100.00
Pct. Down	16.12	77.51	41.13
Pct. of Total	9.55	31.58	41.13
Theoret. Freq.	125.04	85.96	
Cell Chi-Sq.	46.24	67.26	
Total			
Freq.	304.00	209.00	513.00
Pct. Across	59.26	40.74	100.00
Pct. Down	100.00	100.00	100.00
Pct. of Total	59.26	40.74	100.00

Chi Square = 192.794*** Degrees of Freedom = 1

*** .001 level

TABLE 10.--Subjects' Class and Their Friends' Class.

Subjects' Class		Friends' Class				
	Freshman	Sophomore	Junior	Senior	Special	Total
Freshman						
Freq.	141.00	20.00	23.00	11.00	1.00	197.00
Pct. Across	71.57	10.15	11.68	5.58	.51	100.00
Pct. Down	78.33	19.61	19.01	10.58	20.00	38.40
Pct. of Total	27.49	3.90	4.48	2.14	.19	38.40
Theoret. Freq.	69.12	39.17	46.47	39.94	1.92	
Cell Chi-Sq.	74.74	9.38	11.85	20.97	.44	
Sophomore						
Freq.	18.00	58.00	21.00	15.00	1.00	113.00
Pct. Across	15.93	51.33	18.58	13.27	.88	100.00
Pct. Down	10.00	56.86	17.36	14.42	20.00	22.03
Pct. of Total	3.51	11.31	4.09	2.92	.19	22.03
Theoret. Freq.	39.65	22.47	26.65	22.91	1.10	
Cell Chi-Sq.	11.82	56.19	1.20	2.73	.01	
Junior						
Freq.	15.00	17.00	45.00	30.00	2.00	109.00
Pct. Across	13.76	15.60	41.28	27.52	1.83	100.00
Pct. Down	8.33	16.67	37.19	28.85	40.00	21.25

Pct. of Total	2.92	3.31	8.77	5.85	.39	21.25
Theoret. Freq.	38.25	21.67	25.71	22.10	1.06	
Cell Chi-Sq.	14.13	1.01	14.47	2.83	.83	

Senior

Freq.	5.00	7.00	29.00	46.00	1.00	88.00
Pct. Across	5.68	7.95	32.95	52.27	1.14	100.00
Pct. Down	2.78	6.86	23.97	44.23	20.00	17.15
Pct. of Total	.97	1.36	5.65	8.97	.19	17.15
Theoret. Freq.	30.88	17.50	20.76	17.84	.86	
Cell Chi-Sq.	21.69	6.30	3.27	44.45	.02	

Special

Freq.	1.00	0.00	3.00	2.00	0.00	6.00
Pct. Across	16.67	0.00	50.00	33.33	0.00	100.00
Pct. Down	.56	0.00	2.48	1.92	0.00	1.17
Pct. of Total	.19	0.00	.58	.39	0.00	1.17
Theoret. Freq.	2.11	1.19	1.42	1.22	.06	
Cell Chi-Sq.	.58	1.19	1.77	.50	.06	

Total

Freq.	180.00	102.00	121.00	104.00	5.00	513.00
Pct. Across	35.09	19.88	23.59	20.27	.97	100.00
Pct. Down	100.00	100.00	100.00	100.00	100.00	100.00
Pct. of Total	35.09	19.88	23.59	20.27	.97	100.00

Chi-Square = 304.044*** Degrees of Freedom = 20

*** .001 level

TABLE 11.--Subjects' Residence and Their Friends' Residence.

Subjects' Residence	Friends' Residence										
	1	2	3	4	5	6	7	8	9	10	Total
1											
Pred.	3.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00
Pct. Across	37.50	12.50	12.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Pct. Down	37.50	.73	.73	0.00	0.00	0.00	0.00	14.29	0.00	0.00	1.56
Pct. of Total	.50	.13	.13	0.00	0.00	0.00	0.00	.20	0.00	0.00	1.13
Theoret. Freq.	.12	1.67	2.23	1.17	.26	.20	.25	.13	.13	.00	1.56
Cell chi-Sq.	66.27	.27	.73	1.17	.30	.20	.25	16.59	.13	.00	1.13
2											
Pred.	1.00	20.00	11.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00	14.00
Pct. Across	.45	13.89	9.17	0.00	4.55	0.00	0.00	0.00	4.55	0.00	14.00
Pct. Down	12.50	13.89	7.44	0.00	2.26	0.00	0.00	0.00	0.00	0.00	1.56
Pct. of Total	.13	1.46	.74	0.00	.23	0.00	0.00	0.00	0.00	0.00	1.13
Theoret. Freq.	.27	25.53	14.83	1.17	3.04	0.00	0.00	0.00	1.17	0.00	1.56
Cell chi-Sq.	.41	12.59	11.29	1.17	1.37	0.00	0.00	0.00	1.17	0.00	1.13
3											
Pred.	1.00	1.00	14.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00	14.00
Pct. Across	.45	4.55	13.89	0.00	4.55	4.55	4.55	0.00	0.00	0.00	1.56
Pct. Down	12.50	1.17	7.44	0.00	2.26	2.26	2.26	0.00	0.00	0.00	1.56
Pct. of Total	.13	.13	1.17	0.00	.23	.23	.23	0.00	0.00	0.00	1.13
Theoret. Freq.	.27	2.23	14.83	1.17	3.04	3.04	3.04	0.00	0.00	0.00	1.56
Cell chi-Sq.	.45	1.17	11.29	0.00	1.17	1.17	1.17	0.00	0.00	0.00	1.13
4											
Pred.	0.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	2.00
Pct. Across	0.00	0.00	0.00	0.00	0.00	4.55	4.55	0.00	0.00	0.00	1.56
Pct. Down	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pct. of Total	0.00	0.00	0.00	0.00	0.00	.13	.13	0.00	0.00	0.00	0.26
Theoret. Freq.	0.00	0.00	0.00	0.00	0.00	1.17	1.17	0.00	0.00	0.00	2.33
Cell chi-Sq.	1.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
5											
Pred.	0.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	2.00
Pct. Across	0.00	0.00	0.00	0.00	0.00	4.55	4.55	0.00	0.00	0.00	1.56
Pct. Down	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pct. of Total	0.00	0.00	0.00	0.00	0.00	.13	.13	0.00	0.00	0.00	0.26
Theoret. Freq.	0.00	0.00	0.00	0.00	0.00	1.17	1.17	0.00	0.00	0.00	2.33
Cell chi-Sq.	1.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
6											
Pred.	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
Pct. Across	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Pct. Down	0.00	0.00	.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
Pct. of Total	0.00	0.00	.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.13
Theoret. Freq.	.16	2.60	2.23	1.17	.26	.20	.25	.13	.13	.00	1.56
Cell chi-Sq.	.16	0.00	1.21	1.17	.30	.20	.25	16.59	.13	.00	1.13

7

Freq.	0.00	0.00	0.00	0.00	0.00	1.00	8.00	0.00	1.00	0.00	0.00	10.00
Pct. Across	0.00	0.00	0.00	0.00	0.00	10.00	80.00	0.00	10.00	0.00	0.00	100.00
Pct. Down	0.00	0.00	0.00	0.00	0.00	7.69	50.00	0.00	8.33	0.00	0.00	100.00
Pct. of Total	0.00	0.00	0.00	0.00	0.00	.13	1.56	0.00	.19	0.00	0.00	1.95
Theoret. Freq.	.66	2.89	2.87	1.45	.25	.25	.31	.27	.23	.25	1.85	
Cell Chi-Sq.	.16	2.99	2.87	1.45	.25	2.20	189.51	.27	2.51	.25	1.85	

8

Freq.	1.00	1.00	0.00	2.00	0.00	0.00	0.00	5.00	0.00	0.00	1.00	10.00
Pct. Across	10.00	10.00	0.00	20.00	0.00	0.00	0.00	50.00	0.00	0.00	10.00	100.00
Pct. Down	12.50	.34	0.00	2.87	0.00	0.00	0.00	35.73	0.00	0.00	1.05	1.95
Pct. of Total	.19	.19	0.00	.25	0.00	0.00	0.00	.37	0.00	0.00	.13	1.95
Theoret. Freq.	.16	2.00	2.87	1.45	.25	.25	.31	.27	.23	.25	.39	
Cell Chi-Sq.	4.57	.57	2.87	1.45	.25	.25	.31	61.88	.23	.25	.39	

9

Freq.	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	2.00	11.00
Pct. Across	0.00	0.00	0.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	20.00	100.00
Pct. Down	0.00	0.00	.54	0.00	0.00	0.00	7.69	0.00	0.00	0.00	2.11	2.14
Pct. of Total	0.00	0.00	.13	0.00	0.00	0.00	.19	0.00	0.00	0.00	.39	2.14
Theoret. Freq.	.17	2.00	2.87	1.45	.25	.25	.31	.27	.23	.25	2.04	
Cell Chi-Sq.	.17	2.00	2.87	1.45	.25	.25	.31	.27	.23	.25	2.04	

10

Freq.	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	14.00
Pct. Across	0.00	7.14	0.00	7.14	0.00	0.00	7.14	0.00	0.00	0.00	7.14	100.00
Pct. Down	0.00	.34	0.00	1.45	0.00	0.00	6.19	0.00	0.00	0.00	1.05	2.73
Pct. of Total	0.00	.19	0.00	.25	0.00	0.00	.37	0.00	0.00	0.00	.13	2.73
Theoret. Freq.	.22	2.92	4.71	2.00	.25	.25	.31	.27	.23	.25	2.59	
Cell Chi-Sq.	.22	1.29	4.71	2.00	.25	.25	.31	.27	.23	.25	2.59	

11

Freq.	2.00	8.00	7.00	1.00	1.00	1.00	0.00	2.00	1.00	1.00	62.00	92.00
Pct. Across	2.17	8.70	7.61	1.09	1.09	1.09	0.00	2.17	1.09	1.09	73.91	100.00
Pct. Down	25.00	7.44	4.76	1.32	7.69	7.69	0.00	14.29	8.33	7.69	71.58	17.93
Pct. of Total	.30	1.56	1.30	.19	1.19	1.19	0.00	.39	.39	.39	13.26	17.93
Theoret. Freq.	1.43	10.10	26.56	13.46	2.33	2.33	2.27	2.51	2.15	2.33	17.04	
Cell Chi-Sq.	.22	6.52	14.29	11.52	.76	.76	2.87	.10	.02	.76	152.45	

Total

Freq.	8.00	107.00	147.00	75.00	13.00	16.00	14.00	14.00	12.00	13.00	95.00	513.00
Pct. Across	1.56	20.86	28.75	14.42	2.53	3.12	2.73	2.73	2.34	2.53	18.52	100.00
Pct. Down	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Pct. of Total	1.56	20.86	28.75	14.42	2.53	3.12	2.73	2.73	2.34	2.53	18.52	100.00

Chi Square = 2010.299*** Degrees of Freedom = 100

*** .001 level

TABLE 12.--Subjects' Major and Their Friends' Major.

Subjects' Major	Friends' Major				
	Undecl.	Arts & Letters	Natural Science	Business	Social Science
Undeclared					
Freq.	35.00	25.00	12.00	9.00	17.00
Pct. Across	34.65	24.75	11.88	8.91	16.83
Pct. Down	30.17	15.82	17.14	20.93	16.19
Pct. of Total	6.82	4.87	2.34	1.75	3.31
Theoret. Freq.	22.84	31.11	13.78	8.47	20.67
Cell Chi-Sq.	6.48	1.20	.23	.03	.65
Arts and Letters					
Freq.	32.00	56.00	28.00	11.00	32.00
Pct. Across	19.39	33.94	16.97	6.67	19.39
Pct. Down	27.59	35.44	40.00	25.58	30.48
Pct. of Total	6.24	10.92	5.46	2.14	6.24
Theoret. Freq.	37.31	50.82	22.51	13.83	33.77
Cell Chi-Sq.	.76	.53	1.34	.58	.09
Natural Science					
Freq.	18.00	22.00	12.00	7.00	15.00
Pct. Across	23.38	28.57	15.58	9.09	19.48
Pct. Down	15.52	13.92	17.14	16.28	14.29
Pct. of Total	3.51	4.29	2.34	1.36	2.92
Theoret. Freq.	17.41	23.72	10.51	6.45	15.76
Cell Chi-Sq.	.02	.12	.21	.05	.04
Education					
Freq.					
Pct. Across					
Pct. Down					
Pct. of Total					
Theoret. Freq.					
Cell Chi-Sq.					
Total					
Freq.					
Pct. Across					
Pct. Down					
Pct. of Total					
Theoret. Freq.					
Cell Chi-Sq.					

Business

Freq.	8.00	13.00	7.00	10.00	4.00	0.00	42.00
Pct. Across	19.05	30.95	16.67	23.81	9.52	0.00	100.00
Pct. Down	6.90	8.23	10.00	23.26	3.81	0.00	8.19
Pct. of Total	1.56	2.53	1.36	1.95	.78	0.00	8.19
Theoret. Freq.	9.50	12.94	5.73	3.52	8.60	1.72	
Cell Chi-Sq.	.24	.00	.28	11.93	2.46	1.72	

Social Science

Freq.	19.00	36.00	7.00	6.00	33.00	7.00	108.00
Pct. Across	17.59	33.33	6.48	5.56	30.56	6.48	100.00
Pct. Down	16.38	22.78	10.00	13.95	31.43	33.33	21.05
Pct. of Total	3.70	7.02	1.36	1.17	6.43	1.36	21.05
Theoret. Freq.	24.42	33.26	14.74	9.05	22.11	4.42	
Cell Chi-Sq.	1.20	.23	4.06	1.03	5.37	1.50	

Education

Freq.	4.00	6.00	4.00	0.00	4.00	2.00	20.00
Pct. Across	20.00	30.00	20.00	0.00	20.00	10.00	100.00
Pct. Down	3.45	3.80	5.71	0.00	3.81	9.52	3.90
Pct. of Total	.78	1.17	.78	0.00	.78	.39	3.90
Theoret. Freq.	4.52	6.16	2.73	1.68	4.09	.82	
Cell Chi-Sq.	.06	.00	.59	1.68	.00	1.70	

Total

Freq.	116.00	158.00	70.00	43.00	105.00	21.00	513.00
Pct. Across	22.61	30.80	13.65	8.38	20.47	4.09	100.00
Pct. Down	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Pct. of Total	22.61	30.80	13.65	8.38	20.47	4.09	100.00

Chi Square = 46.780** Degrees of Freedom = 25

** .01 level

REFERENCES

REFERENCES

- Abe C., and Holland, J. L., 1965. A description of college freshmen: I. students with different choices of major field. ACT Research Reports, No. 3. Iowa City, Iowa: American College Testing Program.
- Adams, D. V., 1965. An analysis of student subcultures at Michigan State University. Unpublished doctoral dissertation, Michigan State University.
- American College Testing Program, 1966. College student profiles: norms for the ACT assessment. Iowa City, Iowa: American College Testing Research and Development Division.
- Angell, R. C., 1928. The campus: a study of contemporary undergraduate life in the American university. New York: Appleton-Century.
- Astin, A. W., and Holland, J. L., 1961a. The environmental assessment technique: a way to measure college environments. Journal of Educational Psychology, 52, 308-316.
- Astin, A. W., 1961b. A re-examination of college productivity. Journal of Educational Psychology, 52, 173-178.
- Astin, A. W., 1962. An empirical characterization of higher educational institutions. Journal of Educational Psychology, 53, 224-235.
- Astin, A. W., 1963. Further validation of the Environmental Assessment Technique. Journal of Educational Psychology, 54, 217-226.
- Astin, A. W., 1968. National norms for entering college freshmen--fall 1968. American Council on Education research report. Washington, D. C.
- Astin, A. W., Panos, R. J., and Creager, J. A., 1967. National norms for entering college freshmen--fall 1966. ACE Research Reports, Vol. 2, No. 1. Washington, D. C.: Office of Research, American Council on Education.

- Bauer, E. J., 1967. Student peer groups and academic development. College Student Survey, 1, 22-31.
- Becker, H. S., 1963. Student culture. In T. F. Lunsford (Ed.), The study of campus cultures. Boulder, Colorado: Western Interstate Commission for Higher Education, Berkeley, California; Center for the Study of Higher Education, University of California, Berkeley, New York: Committee on Personality Development in Youth, Social Science Research Council. pp. 11-25.
- Becker, H. S., 1966. Student culture as an element in the process of university change. In R. J. Ingham (Ed.), Institutional backgrounds of adult education: dynamics of change in the modern university. Notes and Essays on Education for Adults, No. 50. Cambridge, Mass., Center for the Study of Liberal Education for Adults, Boston University. pp. 59-80.
- Bernreuter, R. G., 1966. The college student: he is thinking, talking, acting. Penn State Alumni News.
- Bogardus, R., and Otto, P., 1936. Social psychology of chums. Sociology and Social Research, 20, 260-270.
- Bolton, C. D., and Kammeyer, K. C., 1967. The university student: a study of student behavior and values. New Haven, Conn.: College and University Press.
- Bonney, M. E., 1946. A sociometric study of the relationship of some factors to mutual friendships on the elementary, secondary, and college levels. Sociometry, 9, 21-47.
- Bonney, M. E., 1949. A study of friendship choices in college in relation to church affiliation, in-church preferences, family size, and length of enrollment in college. Journal of Social Psychology, 29, 153-169.
- Bowers, W. J., 1964. Student dishonesty and its control in college. U. S. Department of Health, Education, and Welfare Cooperative Research Project No. OE-1672. New York: Bureau of Applied Social Research, Columbia University.
- Brown, D. R., 1956. Some educational patterns. Journal of Social Issues. 12, 44-59.
- Broxton, J. A., 1963. A test of interpersonal attraction predictions derived from balance theory. Journal of Abnormal and Social Psychology, 66, 394-397.

- Bushnell, J., 1962. Student culture at Vassar. In N. Sanford (Ed.), The American college: a psychological and social interpretation of the higher learning. New York: Wiley. pp. 489-514.
- Clark, B. R., and Trow, M., 1960. Determinants of college student subcultures. Unpublished paper. Berkeley, Calif.: Center for the Study of Higher Education.
- Clark, B. R., 1962. Educating the expert society. San Francisco: Chandler.
- Clark, B. R., and Trow, M., 1966. The organizational context. In T. M. Newcomb and E. K. Wilson (Eds.), College peer groups: problems and prospects for research. Chicago: Aldine. pp. 17-70.
- Coelho, G. V., Hamburg, D. A., and Murphey, Elizabeth B., 1963. Coping strategies in a new learning environment: a study of American college freshmen. Archives of General Psychiatry, 9, 433-443.
- Cohen, M., and Hale, D. (Eds.), 1967. The new student left: an anthology. Boston: Beacon Press.
- Coleman, J. S., 1961. The adolescent society: the social life of the teenager and its impact on education. New York: Free Press.
- Combs, J., 1966. Responses to the one year follow-up questionnaires. In J. C. Flanagan and W. W. Cooley (Eds.), Project talent: one year follow-up studies. U. S. Department of Health, Education, and Welfare Cooperative Research Project No. 2333. Pittsburg, Pa.: School of Education, University of Pittsburg. pp. 27-74.
- Davie, J. S., and Hare, A. F., 1956. Button-down collar culture: a study of undergraduate life at a men's college. Human Organization, 14, 13-20.
- Davis, J. A., 1965. Undergraduate career decisions: correlates of occupational choice. Chicago: Aldine.
- Draper, H., 1965. Berkeley, the new student revolt. New York: Grove.
- Duberman, M., 1968. On misunderstanding student rebels. The Atlantic. pp. 63-70.

- Eddy, E. D., Jr., 1959. The college influence on student character. Washington, D. C.: American Council on Education.
- Eliot, T. S., 1948. Notes toward a definition of culture. New York: Harcourt.
- Encyclopedia of Educational Research, forthcoming.
- Farber, and Goodstein, L., 1964. Student orientation survey--preliminary report. State University of Iowa. (Mimeo)
- Flacks, R., 1963. Adaptations of deviants in a college community. Unpublished doctoral dissertation, University of Michigan.
- Foster, J., et al., 1961. The impact of a value-oriented university on student attitudes and thinking. U. S. Department of Health, Education, and Welfare Cooperative Research Program Project No. 729. Santa Clara, Calif.: University of Santa Clara.
- Frantz, T. T., 1968. An investigation of college student subcultures. Unpublished doctoral dissertation.
- Frantz, T. T., 1969. Student subcultures. The Journal of College Student Personnel, 16-20.
- Freedman, M. B., 1956. The passage through college. Journal of Social Issues, 12, 13-27.
- Gezi, K. I., and Cummings, R. W., 1966. Relationship between certain measures of academic potential and college achievement. Paper read at the annual meeting of the California Educational Research Association.
- Glick, O. W., 1962. The effects of behavioral norms on the selection of associates. Unpublished master's thesis, University of Kansas.
- Glick, O. W., and Jackson, J. M., 1967. A longitudinal study of behavior norms and some of their ramifications in a small liberal arts college. Paper read at the 75th Annual Meeting of the American Psychological Association.
- Goldsen, Rose, Rosenberg, M., Williams, M., Jr., and Suchman, E. A., 1960. What college students think. Princeton, N. J.: Van Nostrand.

- Goodman, Paul, 1962. The community of scholars. New York: Random House.
- Gottlieb, D., 1965. College climates and student subcultures. In W. B. Brookover (Ed.), The college student. New York: Center for Applied Research in Education. pp. 78-99.
- Gottlieb, D., and Hodgkins, B., 1963. College student subcultures: their structure and characteristics in relation to student attitude change. School Review, 71, 266-289.
- Halleck, S., 1968. 14 Hypotheses to explain student unrest. Paper read at the National Conference of the American Association of Higher Education in Chicago.
- Harrington, T. F., Jr., 1965. The interrelation of personality variables and college experiences of engineering students over a four year span. Unpublished doctoral dissertation, Purdue University.
- Hartshorne, E. Y., 1943. Undergraduate society and the college culture. American Sociological Review, 8, 321-332.
- Hays, W. L., 1963. Statistics for psychologists. New York: Holt, Rinehart and Winston.
- Heath, D. H., 1968. Growing up in college. San Francisco: Jossey-Bass Inc.
- Heath, R., 1964. The reasonable adventurer: a study of the development of thirty-six undergraduates at Princeton. Pittsburgh, Pa.: University of Pittsburg Press.
- Hendrix, V. L., 1966. Environmental press preferences of students and faculty. In C. H. Bagley (Ed.), Research on academic input: proceedings of the Sixth Annual Forum of the Association for Institutional Research. Cortland, N. Y.: Office of Institutional Planning, State University of New York at Cortland. pp. 189-194.
- Hodgkins, B., 1964. Student subcultures: an analysis of their origins and effects on student attitude and value change in higher education. Unpublished doctoral dissertation, Michigan State University.
- Hook, S., 1969. The war against the democratic process. The Atlantic. pp. 45-49.

- Jackson, R. P., 1967. The academic-vocational orientation of college students. Dissertation Abstracts, 2028A.
- Johnson, B., 1946. Campus versus classroom. New York: Ives Washburn.
- Kamens, D. H., 1967. Fraternity membership and college dropout in different institutional settings. Paper read at the 72nd Annual Meeting of the American Sociological Association.
- Katz, J. (Ed.), 1967. Growth and constraint in college students: a study of the varieties of psychological development. U. S. Department of Health, Education, and Welfare Project No. 5-0799. Stanford, California: Institute for the Study of Human Problems, Stanford University.
- Katz, J., and Associates, 1968. No time for youth. San Francisco: Jossey-Bass Inc.
- Keniston, K., 1962. American students and the political revival. The American Scholar, 32, 40-64.
- Keniston, K., 1966. The faces in the lecture room. In R. S. Morison (Ed.), The Contemporary University: U.S.A. Boston: Houghton Mifflin. pp. 315-348.
- Keniston, K., 1968. Young radicals: notes on committed youth. New York: Harcourt, Brace & World, Inc.
- Keniston, K., nd. Proposal for study of dropouts and stay-ins. Unpublished ms.
- Keenan, G. F., 1968. Rebels without a program. New York Times Sunday Magazine, Jan. 21.
- Kerlinger, F. N., 1964. Foundations of behavioral research: educational and psychological inquiry. New York: Holt, Rinehart and Winston, Inc.
- Kimball, S. T., 1962-63. Social science research and higher education. Human Organization, 21, 271-279.
- King, S. H., 1967. Personality stability: early findings of the Harvard Student Study. Paper read at the American College Personnel Association Conference.
- Kluckhohn, C., and Kelly, W. H., 1945. The concept of culture. In R. Linton (Ed.), The Science of Man in the World Crisis. New York.

- Korn, H. A., 1967. Student differences in the response to the curriculum: the open, the straight, and the narrow. In J. Katz (Ed.), Growth and constraint in college students: a study of varieties of psychological development. U. S. Department of Health, Education, and Welfare Project No. 5-0799. Stanford, Calif.: Institute for the Study of Human Problems, Stanford University. pp. 253-278.
- Krauss, I., 1964. Sources of educational aspirations among working class youth. American Sociological Review, 29, 867-869.
- Kroeber, A. L., and Kluckhohn, C., 1952. Culture: a critical review of concepts and definitions. Cambridge, Mass.: Peabody Museum of American Archaeology and Ethnology.
- Lehmann, I. J., and Dressel, P. L., 1962. Critical thinking, attitudes, and values in higher education. U. S. Department of Health Education, and Welfare Cooperative Research Project No. 590. East Lansing, Michigan: Michigan State University.
- LeVine, R. A., 1966. American college experience as a socialization process. In T. M. Newcomb and E. K. Wilson (Eds.), College peer groups: problems and prospects for reserach. Chicago: Aldine. pp. 107-132.
- Linton, R., 1945. The Science of Man in the World Crisis. New York.
- Lozoff, M. M., 1967. Personality differences and residential choice. In J. Katz (Ed.), Growth and constraint in college students: a study of varieties of psychological development. U. S. Department of Health, Education, and Welfare Project No. 5-0799. Stanford, California: Institute for the Study of Human Problems, Stanford University. pp. 294-372.
- Lundberg, G. A., and Beazley, V., 1948. "Consciousness of kind" in a college population. Sociometry, 11, 59-74.
- Lundberg, G. A., Hertzler, V. B., and Dickson, L., 1949. Attraction patterns in a university. Sociometry, 12, 158-169.
- McConn, M., 1928. College or kindergarten? New York: New Republic, Inc.

- McDowell, J. V., nd. Student role orientation in the freshmen year: its stability, change and correlates at 13 small colleges. Plainfield, Vt.: Project on Student Development in Small Colleges.
- Mauss, A. L., 1967. Toward an empirical typology of junior college student subcultures. Paper read at the annual meeting of the Pacific Sociological Association.
- Meyer, J. W., and Bowers, W. J., 1965. The social organization of the college and its influence on student behavior. Proposal submitted to National Science Foundation. (Mimeo)
- Mitchell, P. H., 1951. An evaluation of the relationships of values to sociometric choice. Unpublished doctoral dissertation, University of Michigan.
- Mogar, R. E., 1964. Value orientations of college students: preliminary data and review of the literature. Psychological Reports, 15, 739-770.
- Morton, A. S., 1959. Similarity as a determinant of friendship: a multidimensional study. Unpublished doctoral dissertation, Princeton University.
- Mueller, K. H., 1961. Student personnel work in higher education. Boston: Houghton Mifflin.
- Murphy, G., 1947. Personality: a biosocial approach to origins and structure. New York: Harper.
- Murphy, L., and Raushenbush, E. (Eds.), 1960. Achievement in the college years. New York: Harper.
- Newcomb, T. M., 1943. Personality and social change: attitude formation in a student community. New York: Holt.
- Newcomb, T. M., 1956. The prediction of interpersonal attraction. American Psychologist, 11, 575-586.
- Newcomb, T. M., 1961. The acquaintance process. New York: Holt.
- Newcomb, T. M., Koenig, K. E., Flacks, R., and Warwick, D., 1967. Persistence and change: Bennington College and its students after twenty-five years. New York: Wiley.

- Newcomb, T. M., and Feldman, K. A., 1968. The impact of college on students. San Francisco: Jossey-Buss.
- Pace, C. R., 1954. University-wide studies in evaluation of general education at Syracuse University. In P. L. Dressel (Ed.), Evaluation in General Education. Dubuque, Iowa: Brown. pp. 1-27.
- Pace, C. R., 1960. Five college environments. College Board Review, No. 41, 24-28.
- Pace, C. R., 1961. The validity of the CCI as a measure of college atmosphere. Paper read at the 69th Annual Meeting of the American Psychological Association.
- Pace, C. R., 1962a. Implications of differences in campus atmosphere for evaluation and planning of college programs. In R. L. Sutherland et al. (Eds.), Personality factors on the college campus: review of a symposium. Austin, Texas: The Hogg Foundation for Mental Health, University of Texas. pp. 43-61.
- Pace, C. R., 1962b. Methods of describing college cultures. Teachers College Record, 63, 267-277.
- Pace, C. R., 1963. Preliminary technical manual: College and University Environment Scales. Princeton, N. J.: Educational Testing Service.
- Pace, C. R., and Baird, L., 1966. Attainment patterns in the environmental press of college subcultures. In T. M. Newcomb and E. K. Wilson (Eds.), College peer groups: problems and prospects for research. Chicago: Aldine. pp. 215-242.
- Pace, C. R., and Stern, G., 1958. An approach to the measurement of psychological characteristics of college environments. Journal of Educational Psychology, 49, 269-277.
- Pace, C. R., and Troyer, M. (Eds.), 1949. Report to the faculty: university self-survey. Syracuse, N. Y.: Syracuse University.
- Peck, R. F., 1962. Student mental health: the range of personality patterns in a college population. In R. L. Sutherland et al. (Eds.), Personality factors on the college campus: review of a symposium. Austin, Texas: The Hogg Foundation for Mental Health, University of Texas. pp. 161-199.

- Pemberton, W. A., 1963. Ability, values, and college achievement. University of Delaware Studies in Higher Education, No. 1. Newark, Del.: University of Delaware.
- Pervin, L. A., 1966. The later academic, vocational, and personal success of college dropouts. In L. A. Pervin, L. E. Reik, and W. Dalrymple (Eds.), The college dropout and the utilization of talent. Princeton, N. J.: Princeton University Press. pp. 37-62.
- Peterson, R. E., 1965a. On a typology of college students. Research Bulletin RB-65-9. Princeton, N. J.: Educational Testing Service.
- Peterson, R. E., 1965b. Technical manual: college student questionnaires. Princeton, N. J.: Institutional Research Program for Higher Education, Educational Testing Service.
- Peterson, R. E., 1969. The scope of organized student protest in 1967-68. Princeton, N. J.: Educational Testing Service.
- Plant, W. T., 1962. Personality changes associated with a college education. U. S. Department of Health, Education and Welfare Cooperative Research Project 148 (SAE7666). San Jose, California: San Jose State College.
- Precker, J. A., 1952. Similarity of valuing as a factor in selection of peers and near-authority figures. Journal of Abnormal and Social Psychology, 47, 406-414.
- Reilly, M. ST. A., Commins, W. D., and Stefic, E. C., 1960. The complementarity of personality needs in friendship choice. Journal of Abnormal and Social Psychology, 61, 292-294.
- Richardson, H. M., 1940. Community of values as a factor in friendships of college and adult women. Journal of Social Psychology, 11. 303-312.
- Riesman, D., 1961. Where is the college generation headed? The Atlantic. April. pp. 39-45.
- Rose, P. I., 1957. Student opinion on the 1956 presidential election. Public Opinion Quarterly, 21, 371-376.
- Rudolph, F., 1962. The American college and university: a history. New York: Alfred A. Knopf.

- Rudolph, F., 1966. Neglect of students as a historical tradition. In L. E. Dennis, and J. F. Kauffman (Eds.), The college and the student. Washington, D. C.: American Council on Education. pp. 47-58.
- Sanford, N., 1956. Personality development during the college years. Personnel and Guidance Journal, 35, 74-80.
- Sanford, N., 1961. Recent research on the American college student: 1. In N. C. Brown (Ed.), Orientation to college learning--a reappraisal: report of conference on introduction of entering students to the intellectual life of the college. Washington, D. C.: American Council on Education. pp. 18-25.
- Sanford, N., 1962. The American college: a psychological and social interpretation of the higher learning. New York: Wiley.
- Sanford, N., 1963. Factors related to the effectiveness of student interaction with the college social system. In B. Barger and E. E. Hall (Eds.), Higher Education and Mental Health. Gainesville, Fla.: Mental Health Project, University of Florida. pp. 8-26.
- Sanford, N., 1964. The college student in the world today. W. P. Street (Ed.), Creativity in its classroom context. Lexington, Kentucky: College of Education bulletin, 36, 6-19.
- Schumer, H., and Stanfield, R., 1966. Assessment of student role orientations in a college. Paper read at the 74th Annual Meeting of the American Psychological Association.
- Shapiro, D., 1953. Psychological factors in friendship choice and rejection. Unpublished doctoral dissertation, University of Michigan.
- Slater, M., 1957. Perception: a context for considering persistence and attrition among college men. Personnel and Guidance Journal, 35, 435-440.
- Smelser, N. J., 1952. Sociometric structure and its correlates: social class background and courtship-marriage attitudes. Unpublished bachelor's thesis, Harvard University.
- Smucker, O., 1947. The campus clique as an agency of socialization. Journal of Educational Sociology, 21, 163-168.

- Sorokin, P. A., and Berger, C. Q., 1939. Time budgets of human behavior. Cambridge, Mass.: Harvard University Press.
- Steinzor, B., 1960. The development of intellectual qualities through the college years. In L. B. Murphy and E. Raushenbush (Eds.), Achievement in the college years: a record of intellectual and personal growth. New York: Harper. pp. 156-194.
- Stern, G. G., 1960a. Congruence and dissonance in the ecology of college students. Student Medicine, 8, 304-339.
- Stern, G. G., 1960b. Student values and their relationship to the college environment. In H. T. Sprague (Ed.), Research on college students: institute lectures considering recent research on college students' motivations, values, and attitudes, and campus cultures. Boulder, Colo.: The Western Interstate Commission for Higher Education; and Berkeley, California: The Center for Higher Education. pp. 33-58.
- Stern, G. G., 1963. Characteristics of the intellectual climate in college environments. Harvard Educational Review, 33, 5-41.
- Stern, G. G., Stein, M. I., and Bloom, B. S., 1956. Methods in personality assessment. Glencoe, Ill.: Free Press.
- Sumner, F. C., and Lee, J. A., 1941. Some resemblances between friends of like sex and between friends of unlike sex among a group of Negro college students. Journal of Psychology, 12, 199-201.
- Sussman, L., 1960. Freshman morale at M. I. T.: the class of 1961. Cambridge, Mass.: Institute of Technology.
- Taves, M. J., Corwin, R. G., and Haas, J. E., 1963. Role conception and vocational success and satisfaction: a study of student and professional nurses. Bureau of Business Research Monograph No. 112. Columbus, Ohio: Bureau of Business Research, College of Commerce and Administration, Ohio State University.
- Trow, M., 1960. The campus viewed as a culture. In H. T. Sprague (Ed.), Research on college students. Boulder, Colo.: Western Interstate Commission for Higher Education. pp. 105-124.

- Trow, M., 1962. Student cultures and administrative action. In R. L. Sutherland et al. (Eds.), Personality factors on the college campus: review of a symposium. Austin, Texas: The Hogg Foundation for Mental Health, University of Texas. pp. 203-225.
- Trow, M., 1965. Social research and educational policy. Research in Higher Education: Guide to Institutional Decisions. New York: College Entrance Examination Board. pp. 53-62.
- Ullman, A. D., 1965. Sociocultural Foundations of Personality. Boston: Houghton Mifflin Company.
- U. S. Department of Commerce, 1960. Farm population: educational status and school plans of farm and nonfarm youth, October, 1959. U. S. Department of Commerce, Bureau of the Census Series Census AMS (P-27), No. 27. Washington, D. C.: U. S. Department of Commerce and U. S. Department of Agriculture.
- Vreeland, R. S., and Bidwell, C. E., 1966. Classifying university departments: an approach to the analysis of their effects upon undergraduates' values and attitudes. Sociology of Education, 39, 237-254.
- Vreeland, F. M., and Corey, S. M., 1935. A study of college friendships. Journal of Abnormal and Social Psychology, 30, 229-236.
- Wallace, W. L., 1966. Student culture: social structure and continuity in a liberal arts college. Chicago: Aldine.
- Waller, W., 1932. The sociology of teaching. New York: John Wiley & Sons, Inc.
- Wechsler, J., 1935. Revolt on the campus. New York: Covici, Friede.
- Wedge, B. M., and Davie, J. S., 1958. The psychosocial position of the college man. In B. M. Sedge (Ed.), Psychological problems of college men. New Haven: Yale University Press. pp. 1-14.
- Werner, F. H., 1961. Cultural shock in student transition. Paper read at the Southwestern Anthropological Meeting.
- Werts, C. E., 1966. Career choice patterns: ability and social class. NMSC Research Reports, Vol. 2, No. 3. Evanston, Ill.: National Merit Scholarship Corporation.

- Werts, C. E., 1967. Career choice patterns. Sociology of Education, 40, 348-358.
- Whittaker, D., and Watts, W. A., 1966. Personality and value attitudes of Intellectually Disposed, Alienated Youth. Paper read at American Psychological Association, New Yor,.
- Willer, D. E., 1962. Value change: a panel study of Purdue engineers. Unpublished master's thesis, Purdue University.
- Winch, R. F., 1947. Heuristic and empirical typologies: a job for factor analysis. American Sociological Review, 12, 68-75.
- Winer, B. J., 1962. Statistical Principles in Experimental Design. New York: McGraw-Hill.
- Winslow, C. N., 1937. A study of the extent of agreement between friends' opinions and their ability to estimate the opinions of each other. Journal of Social Psychology, 8, 433-442.
- Woodward, C. V., 1967. What happened to the civil rights movement? Harpers Magazine, 234, 29-37.

APPENDIX

COLLEGE STUDENT INVENTORY

This very brief inventory is part of a Michigan State University doctoral dissertation, as well as another attempt of the college to provide the best possible education for you. Your responses will provide valuable information about student life at the college.

Please place an X in the appropriate spaces and provide name information where indicated at the beginning and end of the inventory. Our only reason for asking for names is to enable us to collate present and possible future data. Replies will be held in strict confidence, and data will be analyzed by categories only. The inventory will take approximately eight minutes to complete.

Those who participate in the study will receive a summary report of the study's results. Thank you for your cooperation.

1. (NAME) _____
 (first) (initial) (last)

2. (SEX) M F 3. (CLASS) Fr Soph Jr Sr Spec

4. (RESIDENCE) Long Apts. Shipherd Blair Dole

 Adelphic Alpha E Kappa Sig Phi Alpha Sigma Beta Soronian

5. (MAJOR) Undeclared Art Biol Bus Chem Econ

 Eng French Germ Hist Latin Math

 Music Philos Phys Ed Physics Pol Sci Psych

 Relig Soc Stud Soc Span Sp-Theat

(Items 6-10)

On every college or university campus students hold a variety of attitudes about their own purposes and goals while at college. Such an attitude might be thought of as a personal philosophy of higher education. Below are descriptive statements of four such "personal philosophies" which there is reason to believe are quite prevalent on American college campuses. As you read the four statements, attempt to determine how close each comes to your own philosophy of higher education.

PHILOSOPHY A: This philosophy emphasizes education essentially as preparation for an occupational future. Social or purely intellectual phases of campus life are relatively less important, although certainly not ignored. Concern with extra-curricular activities and college traditions is relatively small. Persons holding this philosophy are usually quite committed to particular fields of study and are in college primarily to obtain training for careers in their chosen fields.

PHILOSOPHY B: This philosophy, while it does not ignore career preparation, assigns greatest importance to scholarly pursuit of knowledge and understanding wherever the pursuit may lead. This philosophy entails serious involvement in course work or independent study beyond the minimum required. Social life and organized extracurricular activities are relatively unimportant. Thus, while other aspects of college life are not to be forsaken, this philosophy attached greatest importance to interest in ideas, pursuit of knowledge, and cultivation of the intellect.

PHILOSOPHY C: This philosophy holds that besides occupational training and/or scholarly endeavor an important part of college life exists outside the classroom, laboratory, and library. Extracurricular activities, living-group functions, athletics, social life, rewarding friendships, and loyalty to college traditions are important elements in one's college experience and necessary to the cultivation of the well-rounded person. Thus, while not excluding academic activities, this philosophy emphasizes the importance of the extracurricular side of college life.

PHILOSOPHY D: This is a philosophy held by the student who either consciously rejects commonly held value orientations in favor of his own, or who has not really decided what is to be valued and is in a sense searching for meaning in life. There is often deep involvement with ideas and art forms both in the classroom and in sources (often highly original and individualistic) in the wider society. There is little interest in business or professional careers; in fact, there may be a definite rejection of this kind of aspiration. Many facets of the college -- organized extracurricular activities, athletics, traditions, the college administration -- are ignored or viewed with disdain. In short, this philosophy may emphasize individualistic interests and styles, concern for personal identity and, often, contempt for many aspects of organized society.

The following four questions ask you to rank these four statements according to the accuracy with which each portrays your own point of view. Be sure to assign a different rank to each "philosophy."

6. Philosophy A:

- _____ 1. Most accurate (i.e. of the four statements, this one is the best description of my point of view)
- _____ 2. Second most accurate
- _____ 3. Third most accurate
- _____ 4. Least accurate

7. Philosophy B:

- _____ 1. Most accurate (i.e. of the four statements, this one is the best description of my point of view)
- _____ 2. Second most accurate
- _____ 3. Third most accurate
- _____ 4. Least accurate

8. Philosophy C:

- _____ 1. Most accurate (i.e. of the four statements, this one is the best description of my point of view)
- _____ 2. Second most accurate
- _____ 3. Third most accurate
- _____ 4. Least accurate

9. Philosophy D:

- _____ 1. Most accurate (i.e. of the four statements, this one
is the best description of my point of view)
- _____ 2. Second most accurate
- _____ 3. Third most accurate
- _____ 4. Least accurate

10. Which of the four philosophies comes closest to describing the kind
of person you would like to be if you had a choice?

- _____ 1. Philosophy A
- _____ 2. Philosophy B
- _____ 3. Philosophy C
- _____ 4. Philosophy D

(Items 11-13)

Please name the three ██████ College students with whom you interact most.

11. _____
(first) (last)

12. _____
(first) (last)

13. _____
(first) (last)

MICHIGAN STATE UNIVERSITY LIBRARIES



3 1293 03177 5808