A MULTIVARIATE ANALYSIS STUDY OF STUDENT ACTIVIST LEADERS, STUDENT GOVERNMENT LEADERS, AND NON-ACTIVISTS

Thesis for the Degree of Ed. D.

MICHIGAN STATE UNIVERSITY

GEORGE S. PAULUS

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ABSTRACT

A MULTIVARIATE ANALYSIS STUDY OF
STUDENT ACTIVIST LEADERS, STUDENT GOVERNMENT
LEADERS, AND NON-ACTIVISTS

by

George S. Paulus

This study is an attempt to understand the student who becomes an office holder of a student activist group. The specific purpose of the study was to determine major factors which differentiate the student activist leader of the "new left" from his counterpart in student government and his fellow students classified as non-activists.

The three populations under study consisted of:

1. Michigan State University student activist leaders aligned with the "New Student Left" through leadership in organizations such as; The Student Nonviolent Coordinating Committee (SNCC); Students for a Democratic Society (SDS); or The Committee for Students' Rights (CSR), an organization indigenous to M.S.U.

   In addition, the student activist leader was further defined as an individual who:

   a. Involved himself in the activities of his organization to the minimum extent of one hour per week.

   b. Had demonstrated commitment to his organization in at least one instance, and

   c. Proselytized for his organization.

2. Michigan State University student government leaders--elected office holders in the Associated Students of M.S.U.
3. Michigan State University non-activists i.e., students who reject the operational definition of Population 1.

In addition to rejecting the definition of the first population, the control group was matched to the activist group on the following criteria; sex, grade level, major, grade point average, and measured verbal ability.

With these population qualifications observed, 25 students from each population were selected to respond to a series of scales.

The measurements of the study consisted of the 13 scales of the College Student Questionnaires (CSQ) and the 5 scales of the College University Environmental Scales (CUES). The CSQ measures dealt with various aspects of Satisfaction, Independence, and Socio-Cultural Awareness. The (CUES) scales were used to measure student perceptions of the total university setting.

Multiple discriminant analysis, a statistical technique for defining linear combinations of variables which maximize differences among groups and minimize differences within groups, was used to analyze the data.

The first linear combination, or discriminant function, maximizes the dispersion among groups, and subsequent functions maximize dispersion among groups with the effects of previous functions removed.

The analysis of the data yielded two significant discriminant functions and thus the following null hypothesis was rejected:

> There are no differences in the degrees of: Satisfaction with the University Environment, Socio-Cultural Awareness, or Perceived Self Independence, among groups of students classified as student activist leaders, student government leaders, and as student non-activists.

The first discriminant function accounted for over 82% of the variance as defined by the variables, and was primarily an Independence/Socio-Cultural Awareness function. The second discriminant function accounting for the remaining 17% of the variance was interpreted as a satisfaction function, maximizing satisfaction with fellow students.

The Independence/Socio-Cultural Awareness discriminant function differentiated most effectively between the student activist leaders and the student government leaders. The non-activists fell between the two extremes.

The second discriminant function, the satisfaction continuum, effectively discriminated the non-activists from the two leader groups.

In summary, the generalizations suggested by these two discriminant functions are:

1. Student activist leaders are the most independent and socially aware of the three groups; student government leaders are the least independent and socially aware.

2. Non-activists are more satisfied with the overall setting of the University than are student activist leaders and student government leaders.

3. Student government leaders disapprove of non-activists to a greater extent than do activist leaders.

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By

George S. Paulus

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1967

To My Parents

This study is dedicated to my mother, Susan Talaba Paulus, and to the memory of my father, the late George Paulus

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Man carries within himself not only his individuality but all of humanity, with all its potentialities, although he can realize these potentialities in only a limited way because of the external limitations of his individual existence.

Goethe

CHAPTER I

THE PROBLEM

NEED: Empirical Studies of Activists

During the past few years we have witnessed what appears to be an increase in social and political interest and action on the part of students in various parts of the world.[1-6] Widespread social action by youth also appears to represent a relatively recent social development in the United States, including not only widespread campus demonstrations and student political movements, but also vanguards for civil rights advancements.[7, 8]

This upsurge of dissent among American college students is one of the more puzzling phenomena in recent American history, according to

---

[1]Gitlin, Todd. "The Student Political Scene 1960-63." Paper presented at the Howard University Conference on Youth and Social Action, Oct., 1963.

[2]Mowrer, R.S. "Student Tension Grows in Madrid." The Washington Post, February 26, 1965.

[3]Powledge, Fred. "Eastern College Students Adopt a 'Bill of Rights' Scoring Administrators." The New York Times, March. (?)

[4]Zinn, Howard. SNCC: "Portugal Arrests 987 in Student Crackdown." (AP) The Washington Post, May 11, 1962.

[5]Zinn. Howard. "Students Battle Police in Japan." The Washington Post (AP), May 14, 1963.

[6]Zinn, Howard. "Students Riot as French Feelings Erupt." (AP) The Washington Post, December 13, 1962.

[7]Solomon, F., and Fishman, J.R. "Youth and Social Action: II Action and Identity Formation in the First Student Sit-In-Demonstration." The Journal of Social Issues (April) 1964. XX. No. 2. 36-45.

[8]Zinn, Howard. SNCC: The New Abolitionists. Boston: Beacon Press. 1964.

Keniston.[9] According to Buell Gallagher. President of City College of New York. it is one of higher education's most pressing problems.[10]

A great deal of discussion has focused on American college student activism. Mass media--popular magazines, television, newspapers and paperbacks--have all made interpretations available. However, in this ever growing body of interpretations only a few have gone beyond the commentary stage. Empirical studies of student activists, to date, number less than ten.

Only two data based studies are reported in the four most quoted books: Student Revolt Facts and Interpretations, edited by Lipset and Wolin; Revolution at Berkeley, edited by Miller and Gilmore; The New Radicals, by Jacobs and Landau; and Berkeley: The New Student Revolt by Hal Draper.

The need for data based studies designed to yield a picture of the activist student is critical.

PURPOSE OF THE STUDY

The general purpose of this study is to contribute to a more complete understanding of the student who becomes an office holder of a student activist

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[9]Keniston, Kenneth. "The Sources of Student Dissent" for The Journal of Social Issues, 1967. In Press.

[10]Gallagher, Buell. "Student Unrest." College and University Business (1965) Vol. 38, No. 4, pp. 51-55.

group. The specific purpose of this study is to determine major factors which differentiate the student activist leader from the student government leader and the non-activist.

Rationale for the Study

Researchers have explored the hypothesis that self-conscious sub-cultures and movements among adolescents tend to develop where there is a sharp disjunction between two sets of values and expectations--those embodied in the traditional families in a society, and those prevailing in the social or occupational sphere.

Richard Flacks[11] takes the position that such a disjunction exists as a matter of course, since families are, by definition, particularistic, ascriptive, and diffuse. In contrast, the occupational sphere is universalistic, impersonal, achievement-oriented, and functionally specific.

Parsons, and others, emphasize that in America, the middle class family has developed a form and style which articulates with the social occupational sphere; this situation would most likely engender a youth culture well integrated with conventional values and not rebellious.[12]

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[11]Flacks, Richard. The Liberated Generation: An Exploration of Student Protest. An unpublished working paper of the Youth and Social Change Project. University of Chicago.

[12]Parsons, T., Youth in the Context of American Society in Erikson, The Challenge of Youth; Eisenstadt, op. cit.; Erikson, Identity and the Life-Cycle, Psychological Issues, Vol. I, No. 1, 1959.

In light of recent social events—the emergence of the student movements, and other expressions of estrangement among youth--we find sociologists asking the inverse of the Parsons' position.

> Are there families in the middle class which embody values and expectations which do not articulate with those values and expectations prevailing in the social sphere?[13]

Flacks develops an argument which leads to this concern. His argument can be summarized as follows:

First, it assumes that two related trends are important:

1. the increasing rationalization* of student life in high schools and universities, symbolized by the "multiversity," which entails a high degree of "self-rationalization," impersonality, competitiveness, and an increasingly explicit and direct relationship between the university and corporate and governmental bureaucracies;

2. the increasing unavailability of coherent careers independent of bureaucratic organizations.

It is the convergance of these trends when accompanied by the emergence of upper middle class families having

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[13]Flacks, op. cit., p. 12.

[14]Ibid.

*To derive superficially rational or plausible explanations to excuses for one's acts, beliefs or values—usually without being aware that these are not the real motives.

—a strong emphasis on democratic, equalitarian interpersonal relations,

—a high degree of permissiveness with respect to self regulation,[15]

—an emphasis on values other than achievement, in particular, a stress on the intrinsic worth of living up to intellectual, asthetic, cultural and political ideals,

that young people, especially those raised in this kind of family setting, find it difficult to accommodate institutional expectations requiring submissiveness to adult authority, respect for established status distinctions, and firm regulation of expressive impulses. Paralleling these interactions, many of these young people are likely to experience a strong sense of being "different" or "isolated" in school. This difference or isolation is a result of their unique interests, values and inability to accept conventional norms.

It seems plausible to conclude that youth reared in this construct would not be motivated by the modal incentives of our occupational sphere. In other words, for these individuals, achievement of status or material advantage would not be a pressing concern.

According to Flacks, we now have such a generation. A generation in which a substantial number of youth are expressing their impulses to free themselves from conventional status concerns and can afford to do so. In this sense, the students who engage in protest or participate in independent

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[15]See—Bronfenbrenner, U. "The Changing American Child," In Values and Ideas of American Youth. New York: Columbia University Press. 1961, pp. 71-84.

styles of life are often not actualizing generational dissonance with their deviant behavior, but are people who have been socialized into a developing cultural tradition.

All of the foregoing possibilities have suggested this study, which will investigate student activist leaders.

The activist leaders will represent the anti-institutional generation of which Flacks and others speak. For contrast, similar data will be obtained from student government leaders who have, for the most part, demonstrated a commitment to the establishment.

In attempting to increase our knowledge of "liberated youth" or student activists, the approach of this study is different from previous investigations in two respects:

1. It investigates the leaders of activist groups rather than activist group members--who might not be truly committed, and

2. the methodology is unique because it is the first known attempt to use a multivariate technique in the study of student activists.

The multivariate technique, discussed in Chapter Three, will be valuable in defining the relative contribution or importance of variables in the differentiation among student activist leaders, student government leaders, and student non-activists.

The Hypothesis to be Tested

Following directly from the previously stated purposes and rationale of the study, the subsequent hypothesis was formulated:

> It is possible to differentiate among groups of students classified as student activist leaders, student government leaders, and student non-activists.

For the purpose of the statistical test, the above hypothesis was stated in the null form, as follows:

> There are no differences in the degrees of: Satisfaction with the University Environment, Socio-Cultural Awareness, or Perceived Self Independence, among groups of students classified as student activist leaders, student government leaders, and as student non-activists.

The null hypothesis tests the assumption that these groups of students may be considered members of the same parent population and no difference exists among them in their levels of satisfaction with the university, socio-cultural awareness, and perceived self-independence.

If, subsequent to the analysis of the data, the null hypothesis is rejected, the differences among the groups will be examined.

In summary, the importance of the study, the goals and objectives, and the directions of inquiry have been set forth. A review of the literature and a summary-report of findings related to this topic are presented in the next chapter.

CHAPTER II

THE REVIEW OF THE LITERATURE

The research studies of the student activist, his student movements and his protests have findings which are largely consistent.

A systematic reivew of the literature of the past five years has revealed eight empirical (data-based) studies. All eight of these studies were, with varying degrees of emphasis, designed to establish a "picture" of the activist student. These studies were, in a sense, obliged to discover whether selected characteristics of students in the movement were in line with what social scientists were surmising or whether the student activist was truly like the impressions and convictions of most of the public.

In general, the studies placed their emphasis on obtaining directly from the student activist a variety of assessment data, such as his:

1. Sex
2. Age
3. Student Status
4. College Major
5. Academic Achievement
6. Family Social Status
7. Religious Affiliations and Attitudes
8. Personal Motives for Participating in Activist Groups
9. Political Leanings
10. Cultural Awareness

11. Parents' Educational Accomplishments

12. Parents' Child Rearing Practices

13. Parents' Religious and Political Affiliations

In an attempt to present this data in some orderly fashion, the review of each study, whenever possible, will be divided into four categories:

I. The Sample Studied,

II. A Statement of the Methodology.

III. Analysis of the Data; and.

IV. The Conclusions.

BERKELEY STUDIES

Student activists have been studied at Berkeley in three investigations. A fourth study which researched the views of the Berkeley student body during the heat of the Free Speech Movement controversy, provides us with the thinking of the non-activists.

I. The Watts/Whittaker Study

The Watts/Whittaker Study[1] compared highly committed members of the Free Speech Movement at Berkeley with the student population at large on three socio-psychological foci; general biographical data, religious orientation, and rigidity-flexibility.

[1]William Watts and David Whittaker, "Free Speech Advocates at Berkeley" Journal of Applied Behavioral Science, V. 2, 1966, pp. 41-26.

Method: A questionnaire was administered to 172 participants of the estimated ten to twelve hundred persons who entered the Administration Building and "sat-in" after a noon-hour rally in December, 1964. The students were selected on a chance basis and were asked to complete an anonymous questionnaire. Although this procedure did not allow for true random sampling, there is no reason to believe that any source of bias was introduced in the selection of participants. However, a question can be raised regarding the authors' assumption of "the highly committed" nature of those selected.

The authors assumed that most, if not all, of those sampled had a high degree of commitment since all of the demonstrators faced possible punitive action at any time. This was a rally situation, however, and under such circumstances, and in light of our knowledge of contagion, individual vulnerability and collective defense[2] the committed nature of the individual is extremely difficult to determine. It is true that ten hours later 773 of these demonstrators were arrested; nevertheless, this is after the fact and can in no way be considered a reflection of the "highly committed" nature of the sample. Even a post mortem verification was not possible in this case. No attempt could be made to determine what portion of the sample were among those arrested because of the anonymity of the respondents.

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[2]For a discussion of the concepts of Contagion and Individual Vulnerability and Collective Defense see: Lang and Lang. Collective Dynamics. Chapters 5 and 8. N.Y. Thomas Crowell Company, 1961.

For comparative purposes, a random sample of the Berkeley student population was obtained. (N=146)

The questionnaires completed by these two groups contained items of a biographical nature covering the student's age, sex, year in school, major, educational level of parents, number of siblings, birth order, religious affiliation and that of his parents, frequency of worship, and extent to which religion had been an influence in his life and his attitude toward minority groups. In addition, questions were asked which were designed to measure religious attitude and general feelings on the campus. A scale to determine flexibility-rigidity was also included. This scale was composed of 27 true-false items selected from two sources: 14 items from the (F_x) Scale in Gough's California Personality Inventory and 13 items from the empirically derived (Ri) Scale by Rehfisch.

Data and Generalizations

Upon comparison of the two samples, Watts and Whittaker concluded:

1. The Free Speech Movement group was younger and more homogeneous than the general campus population.
2. That no differences existed between the groups either in the number of siblings or in the students' birth order.
3. That the members of the FSM were enrolled in nearly all departments of the University but that the humanities and social science majors supplied the largest numbers.

4. That no differences in grade point averages existed between the cross section and the FSM, somewhat dispelling the charge that the FSM membership was composed of academically disinterested "beatniks" and the countercharge that they represented academically superior individuals. (Data obtained from official records of the Registrar.)

5. That the FSM members tended to come from more academically elite families than did their counterparts in the cross section. The study reporting that 26% of the demonstrators' fathers and 16% of their mothers possessed either a Ph.D. or an M.A. degree, compared with 11% and 4% respectively, in the cross section.

6. Half ot the FSM members reported no religious affiliation. In contrast, only 25% of the cross section reported no formal religious ties.

7. Formalized religion played a less important part in the lives of FSM members than in the lives of the cross section members.

8. FSM members are of greater flexibility[3] in their thinking and behavior than members of the cross section group.

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[3]"Among the descriptions of the flexible, as contrasted with the rigid individual are such adjectives as active, adaptable, adventurous, argumentative, fluent, independent, liberal, and uninhibited. Individuals tending in these directions would be expected to be attracted to the FSM just as persons tending to the other extreme could be expected not to vary their traditional student role." Statement direct from the Watts/Whittaker report.

II. The Heist Study

Paul Heist of the Center for the Study of Higher Education, Berkeley conducted a study of 188 Free Speech Movement participants.[4] The participants were selected randomly from a list of more than 800 persons arrested at the Berkeley "sit ins" of December, 1964. In addition to surveying this group, a smaller sample of FSM students, suggested by members of the arrested sample, was researched along with a random sample of current seniors. The senior sample actually comprised a third reference or comparison group, the two others being an entering class at Berkeley some years back and a sample of seniors from the spring semester, 1963.

Method: Two psychological instruments, a biographical questionnaire and an attitude inventory were completed by all groups. Specific questions were also asked in order to establish the percentage of FSM members who were transfer students.

Analysis of Heist's data indicates that:

1. The majority of FSM participants were transfers, approximately 47% having spent one or more undergraduate years in one of the selective liberal arts colleges of the east or in private "big image" universities.

---

[4]Paul Heist, "Intellect and Commitment: The Faces of Discontent," in O. W. Knorr and W. J. Minter, eds., Order and Freedom on the Campus: The Rights and Responsibilities of Faculty and Students. (Boulder, Colorado: Western Interstate Commission for Higher Education, 1965).

2. The FSM participants were predominantly from the divisons of the social sciences and humanities.

3. The FSM members studied had higher degrees of autonomy and general independence than did the individuals of the comparison groups.

The two FSM samples singly or combined. were significantly higher (at the .01 level) than all reference groups on the measures of the degree of autonomy. religious orientation, and impulsivity. Heist concluded that. taken collectively. these results suggest that the activists have a higher level of cultural sophistication. and a greater release from the institutional influences of the past. He further implied that these scores explain the students' strong liberal orientation and perhaps, in part. why many support organizations like CORE or SNCC. Heist's generalizations purporting higher levels of cultural sophistication and liberality of activists seem intuitively sound enough for the purpose of conjecture but not for drawing conclusions. In order to make such conclusions empirical. research is needed. research designed specifically to establish the degree to which the dimensions of cultural sophistication and liberality are characteristic of student activists.

Intellectual Disposition and Academic Achievement

Highly supportive evidence is presented in the Heist Study indicating that the FSM had extraordinarily larger proportions of students. at all class levels freshman through graduate. with strong intellectual orientations.

Intellectual disposition was represented by an index composed of six semi-related scales.[5] These scale scores were then distributed across eight categories; categories which are in Heist's words, somewhat arbitrary. They are:

1. Broad, diverse interest with strong literary and esthetic perspectives.

2. Broad, intrinsic interests, oriented toward use of symbols and abstractions.

3. Interests emphasize problem solving and rational thinking.

4. Interests tempered by achievement orientation and disciplinary focus.

5. Interests in academic matters hedged by means-ends emphasis.

6. Interests vocationally oriented.

7. Limited or no intellectual interests; low receptivity to ideas or esthetics.

8. Oriented toward the pragmatic and concrete; essentially anti-intellectual.

For the FSM group, 70% were in the top three categories with none in the bottom three. Heist reported that of the two senior groups combined only 28% were in these upper categories. Seemingly, a commitment to the FSM causes and issues, and the related activity did not appeal to students of lesser or non-intellectual interests.

Regarding academic achievement, the FSM groups had average grade points which were above the University average. The seniors in FSM

---

[5]Interest in Ideas. Theoretical Orientation. Estheticism, Complexity. Autonomy, and Religious Liberalism. (No Reliability or Validity data for these scales was reported.)

achieved a significantly higher average GPA than the 1965 seniors in the reference group, as did the sophomores and juniors. Heist pointed out that many of the students interviewed stated that their grades dropped from the 1964-65 fall term, therefore the GPA difference in favor of the FSM groups could possibly be even greater.

In summary, the Heist study pictures the person participating in the FSM as:

1. More autonomous and independent of his cultural past than his non-participating counterpart;
2. Having stronger and broader intellectual dispositions than his peers; and,
3. Being a better academic achiever than the average Berkeley student.

III. The Lyonns Study

Glen Lyonns conducted a study of 618 persons who participated in the now infamous "Police Car Demonstration."[6] His intent was to gain information which would clarify the activists' base of student support, the degree of commitment held by the students, and the motivation of their protests.

To obtain his data, Lyonns left questionnaires at a table sponsored by the FSM. He assumed that the more interested and involved students would

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[6]Glen Lyonns, "The Police Car Demonstration: A Survey of Participants," in Lipset and Wolin, eds., The Berkeley Student Revolt. New York: Doubleday, 1965.

take the trouble to pick up, fill out, and return the rather lengthy document. Such an assumption seems unwarrented, since it seems just as logical to assume that the most interested and involved students would be too involved and too interested in the movement to take time out to report about themselves. However, if Lyonns was correct in his assumption, then the proportion of politically active students should be considerably higher in the sample. There is also a probable bias toward the left of the political spectrum, since the most active students tend to be leftist.[7]

In short, the nature of Lyonns' activist sample is, due to his data collection process, not clearly definable. This should be kept in mind when considering the results.

Activists Compared to Berkeley Population

The comparison figures for the Berkeley population are from data collected by Robert Somers.[8] Lyonns analyzes his data in two ways. First by comparing his total sample with the Somers sample of the student population as a whole and second by comparing students who had participated previously in one or more demonstrations of any kind with those students who had never participated in a demonstration prior to the Police Car affair.

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[7]Richard Peterson, The New Left in American Higher Education.

[8]Robert Somers, "A Survey of Berkeley Students" in Lipset and Wolin, (Eds.) The Berkeley Student Revolt. New York: Doubleday, 1965.

The majority of Lyonns' conclusions must be classified as "peripheral," and will not be reported here, for, in his own admission, they do not follow from the data.

The conclusions which can be attributed to his data are:

1. The activists seem to be more liberal politically and live in less restrictive housing than the total student population.
2. The activist, according to the Clark-Trow typology, is classified as non-conformist and academic.
3. Seventy-seven percent of the activists sampled stated that the administration's handling of the FSM was the strongest factor influencing their commitment.
4. Sixty-two percent of the activists reported their parents' annual income in excess of $15,000 compared to 30% reporting the same for the University as a whole.
5. Eighty-seven percent of the activists reported that they never or almost never attend church. Seventy-one percent of the University sample indicated the same.

By way of evaluation, the Lyonns' Study possesses many serious limitations. The sample was not clearly definable and the specific goals of the study were not accomplished. No statistical design was discussed and no statements of probability of difference were given. In addition, no comparison groups with similar data were available forcing the author to compare his findings with the results of another study, the results of which were

obtained from interviews rather than responses to a questionnaire. Recognizing the limitations of this study, the generalizations of the findings should be restricted.

IV. The Somers Study

In this study[9] 285 carefully selected students representing the entire Berkeley student body were interviewed. Somers points out that although 285 seems like a relatively small number of interviews to represent a student body of 27,500, the usual calculation of sampling variability indicates the results should not depart from the population figures by more than 6%. Hence, this size would seem to suffice to give a relatively accurate picture of the attitudes ot students—at least accurate enough to make a great deal ot progress beyond the speculations derived from personal observations and conversations. Additional checks on the sample showed that in the categories of sex and class level the population proportions departed from the sample by less than 4%, well within sampling error.

Since this study does not investigate activists, it will not be reviewed in detail. However, since it is well designed and controlled, a brief review of the more important findings will be presented.

Somers found sympathy for the FSM demonstrators to be widespread and dispersed throughout the campus, even to the extent of one-third of the students in the sample approving the tactics used by the demonstrators. He

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[9]Robert Somers, op. cit.

points out, and this is significant, that the support was clearly concentrated among students in the social sciences, humanities, and also the physical sciences. Support was as strong among freshmen as among graduate students, and was not related to the number of semesters a student had been on campus. Another significant finding was that the support of the activists was not particularly related to feelings of dissatisfaction with the educational functions of the University. In fact, Somers found a great deal of reported satisfaction with courses, professors, and the efforts being made by the administration to provide top-quality education for students. These findings seem to dispell somewhat the gross condemnations ot the educational situations presently existing in the "multiversity." It is the contention of Somers that Berkeley students in general are not resentful of their academic programs. Rather, it appears they resent—to the point of supporting action—their being deprived of their rights to political citizenship, a sentiment especially strong among those emotionally involved in civil rights movements.

Thus, Somers' material suggests that the mainspring of the Berkeley rebellion was an optimistic idealism about the type of society which can be shaped by the new generation.

NON-BERKELEY STUDIES

The Flacks Studies

In order to test more directly and systematically various hypotheses concerning the socialization of student activists. Flacks undertook at the

University of Chicago, in the summer of 1965, a study of student activists and their parents.

A sample of students was drawn from lists of students involved in several student movement organizations, including Students for a Democratic Society. Fifty students were selected at random from these lists; in order to be available for interview an additional criterion for selection was that the student's parents be residents of Chicago or Chicago suburbs.

To reduce the degree of error in the classification of students as "activists" and "non-activists" Flacks constructed an index of activism. This index was based on interview responses to questions about participation in seven kinds of activity. These activities included attendance at rallies, picketing, being jailed for civil disobedience, working on a project to help the disadvantaged, canvassing, working full time for a social action organization, or serving as an officer in such an organization.

For each of these activities, two points were given for participating "once or twice," and three points for anything beyond two involvements. The scores ranged from 0 - 19 with a median of 6. As Flacks had expected, there were some students whose names were on the activist lists but ended up with Activism scores below the median, whereas eight students in his "control" sample had scores above the median. On the basis of these scores, and prior to proceeding with the interview schedule, Flacks did some shifting of students from "activist" to "control" groups, and vice versa.

A Second Study

In May, 1966, about 500 students sat-in at the University of Chicago Administration Building virtually barring the building from official use for two and one-half days.

This situation provided Flacks with an opportunity to obtain further data about activists. It also provided somewhat more controlled conditions than his study ot activists and parents.

The main purpose of this study was to compare protestors, non-protestors and anti-protestors with respect to a number of demographic and attitudinal variables. To this end, a random sample of 65 student protestors was drawn from a petition signed by all members of the sit-in. One hundred sixty non-protestors were randomly selected from college dormitories and 35 anti-protestors were randomly selected from signers of an anti-demonstration petition.

Preliminary Findings

The analysis phase of the Flacks' studies is still in process. He has, however, reported some preliminary findings based on data obtained in both studies. These findings may be summarized as follows:

1. Activists perceive themselves to be upper middle class.
2. Activists tend to come from high-income families.
3. Activist fathers are disproportionately professionals.
4. Activist fathers are disproportionately highly educated.

5. Activists' mothers are more likely to be employed than non-activists' mothers.

6. Activists' mothers are disproportionately highly educated.

7. Activists are disproportionately Jewish.

8. Activists tend to come from recent immigrant stock. There is also a tendency for fathers of activists to have been foreign-born, as compared with fathers of non-activists.

9. Grandparents of activists tend to be disproportionately highly educated.

10. Activists are unlikely to have small town or rural origins. This conclusion is drawn only from data obtained from the second study.

The preliminary findings from both studies indicate that students involved in protest activity tend to come from families which are urban, highly educated, Jewish or irreligious, professional, and affluent. There is also some indication that despite the fact that activists have recent immigrant ancestry, the high educational and occupational status of their families extends over at least two generations. The over-representation of Jewish students in activist organizations and the findings which show a preponderance of immigrant parents among activist groups may relate to the emphasis on intellectual values in the Jewish culture as well as to an historically determined indentification with the oppressed.

Additional findings of the Flacks Study are:

1. Both activist and non-activist students move away from identification with political parties--a high percentage call themselves "independents."
2. Activist students come from families with politically liberal leanings. No father of an activist was willing to describe himself as even a "moderate" conservative, whereas 50% of the non-activist fathers placed themselves in that category.
3. The overwhelming majority of Movement participants come from families which may be described as "liberal Democratic." These families are probably quite unrepresentative of people at their social status level, the majority of whom would probably describe themselves as "moderate Republicans."
4. Activists overwhelmingly endorse civil disobedience--54% of their fathers do not.
5. Families of activists not only perceive themselves as politically liberal, they are also likely to be unusually active in politics. Students in Study II were asked whether either of their parents were active in politics. Forty percent of the sit-in participants reported the affirmative, whereas, only 25% of the non-participants reported political activism on the part of their parents.
6. Sixty-two percent of the activists wish to pursue some form of an academic career. The next most popular career chosen

by this group is the arts. They greatly de-emphasize law, medicine, the sciences and business.

These findings, in a crude way, suggest that activists identify with life goals and career aspirations which are intellectual and "humanitarian."

7. Student activists have superior academic records. Eighty percent of the activists with the highest Activism scores had GPA's of B or better.

8. Activist sons and daughters tend to rate their parents as "milder," and "more lenient," than do non-activists. Both mothers and fathers of activists tend to rate themselves as more permissive than do the parents of non-activists.

Clearly the data reported by Flacks, which is only a small sampling of the material he has yet to analyze, seems to support the impressions and expectations he had when undertaking these studies. Those being, as reported in Chapter I of this dissertation, that student activists come from families in the upper middle class which embody values and expectations not articulating with those values and expectations prevailing in the social sphere; and that student activists coming from such families are not "converts" to a "deviant" form of anti-social behavior but rather are people who have been socialized in many ways to behave in what we consider to be an activist manner.

The Solomon/Fishman Study[10]

On February 16 and 17, 1962 more than four thousand student peace demonstrators came to Washington, D. C. from colleges in various parts of the country. The authors were able to obtain data from 247 participants or approximately 6% of the total number of registered demonstrators. Two hundred and eighteen demonstrators filled out short-answer questionnaires and 29 other subjects were interviewed "in depth" for periods of one and one-half to two hours each.

The subjects for the interviews were selected at the headquarters area by the five interviewers (four psychiatrists and one psychologist) who then conducted private interviews utilizing an outline prepared in advance.

Some of the leading findings of the Study include:

1. The demonstrators were quite young (18 1/2 was the mean age).
2. By and large they had no well-formed. comprehensive political ideology.
3. The majority expressed themselves moralistically about the cold war and nuclear weapons--in spite of the majority reporting no personal religious commitment. In their statements there seemed to be a moralistic quality of "striving for purity," along with a high degree of idealism.

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[10]Fredric Solomon and Jacob R. Fishman, "A Psychological Study of Student Peace Demonstrators in Washington. D.C." Journal of Social Issues, V. 20. p. 54., 1964.

4. There is suggestive data to the effect that the age period in which these activists first formulated their feelings for social and political "causes" was around the age of 14 or 15. This can be viewed as supporting the socialization position taken by Richard Flacks.

5. The majority of students came from politically liberal families, with less than 25% of the students characterizing their homes as politically conservative.

Personal Motivations to Participate

The Solomon/Fishman Study is notable in that the psychiatrists conducting the interviews were able to identify a range of personal motivations which stimulated these students to demonstrate.

The students reported that being part of this demonstration served to reduce their feelings of isolation—both in political and personal terms. On another personal level, many students emphasized the need to combat helplessness, anxiety, and uncertainty about the future. Keep in mind that this was a "peace" march, with many involved expressing fear of an accidental war.

A third sort of personal motivation was a straight forward desire for assertion and expression—a need to take action rather than merely use words. Believing strongly in certain goals was one thing for these students, trying to achieve them was even more relevant.

There were still other reasons reported. One cluster of responses centered around guilt. "I have certain guilt feelings. Even if the situation is hopeless, I want to have done something to at least tried to have stopped war," said one 22-year old leader.

According to Solomon and Fishman, there is an affirmative idealism interwoven with nearly all student protest movements.

The Westby/Braungart Study

The Westby/Braungart Study[11] like the majority of studies reviewed in this chapter has its theoretical point of departure in socialization theory. It attempts to explain the political beliefs and actions of student activists in terms of family-based experience and family structure.

This study focused on "left" and "right" activists in a large public university in the eastern United States, and was conducted during the spring of 1965. The data revealed the class and party backgrounds of the membership of two campus activist organizations, SENSE (Students for Peace) and the Young Americans for Freedom.* There are other activist groups at the institution in question, especially on the left, but the authors report that the

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[11]David Westby and Richard Braungart, "Class and Politics in the Family Backgrounds of Student Political Activists," American Sociological Review, V. 31, 1966, pp. 690-692.

*For a discussion of this "conservative" group, See Chapter IV, "Young Americans for Freedom," in Evans, Revolt on the Campus. Chicago: Henry Regnery Company, 1961.

SENSE group can be considered representative in light of its heavy overlapping with other "leftist" groups.

A questionnaire was administered to 29 students at a SENSE meeting and to 19 students at two Y.A.F. meetings.

It should be made clear that the authors of this study, as well as the authors of the other studies reviewed, consider their findings—taken individually—to be only suggestive in nature, and not sufficient for the establishment of valid generalizations.

The Westby and Braungart findings show:

1. A significant difference in family median income for the two groups.* SENSE members reporting higher family incomes.
2. A significant difference in social class distribution for the two groups $P < .10$. SENSE members perceiving themselves as coming from the upper-middle class and the upper class.

The predominantly upper-middle class high income origins of SENSE members contrast sharply with the generally low income and lower-middle or working-class backgrounds of Y.A.F. members.

The authors interpret these findings in terms of current stratification theory. They suggest as Hofstadter does in The Pseudo-Conservative Revolt[12] that the conformity of the conservative students is a way of guaranteeing and

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[12]Richard Hofstadter, "The Pseudo-Conservative Revolt," in Bell's (ed.), The Radical Right, New York: Doubleday, 1962, pp. 63-80.

*$P < .005$

manifesting their respectability. Respectability being something they are not sure they have.

Upper-middle class status, on the other hand, typically provides the social and economic security lacking in lower-middle and upper-working classes.

Based on these views, Westby and Braungart conclude that the upper social strata provide a kind of protective belt insulating the upper-middle classes from any immediate challenges. Therefore, as members of a fully "arrived" stratum, students from the upper-middle class can afford the luxury of "deviance" from straight-line conformity.

While this interpretation may seem plausible, it is too universal to account for the behavior of a few. Classes are enormous aggregates, while student activists are a small portion of the student body at any university or college. The real task is to demonstrate what dimensions discriminate activists from non-activists—within strata.

In conclusion, Westby and Braungart concur with Flacks in suggesting that even though student activists seem to be expressing extreme ideological positions, they are in the main consistent with the political orientations of their families.

A STUDY OF ISSUES

The general purpose of Richard Peterson's Study[13] was to chart the

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[13]Richard Peterson, The Scope of Organized Student Protest in 1964-1965. New Jersey: Educational Testing Service, 1966.

student activism of the 1964-65 academic year. A survey instrument consisting of brief statements of 27 issues falling into five categories—Instruction, Faculty, Freedom of Expression, Student Administration, and Off-Campus Issues—was mailed to the dean of students at all the accredited four-year institutions in the country. For each issue, the respondent indicated either no protest, or the frequency/persistence of protest activities and the approximate proportion of the student body involved.

Peterson's results are based on an unusually high 85% return (849 out of 996).

Three limitations were made explicit by the author:

1. The results represent only the perceptions of deans of students.
2. For several categories of institutions, particularly teachers colleges. three could be a bias due to low return rates.
3. The results apply only to the situation as of the period June. 1964 to June, 1965.

In compiling his data to form a national picture. Peterson observed the following:

1. Issues pertaining to instruction. faculty, and freedom of expression rarely evoked organized student activism.
2. Issues bearing on personal freedoms and student participation in the administration of the college generated protest somewhat more often.

3. A local civil rights matter was the single most frequent issue cited as leading to activism (reported by 38% of the deans).

Peterson also reported that the incidence of organized protest varied considerably among different types of institutions, with 61% of the independent universities reporting protests and only 6% of the teachers colleges. This is as would be expected in light of our present knowledge of the activist being predominantly upper middle class and upper class in origin.

Generally speaking, Peterson found that what stirred the largest numbers of students into activism were situations affecting their personal lives which they could ascribe to arbitrary administrative decisions. Nonetheless, under any circumstance, he found student activists constituting at best only a small minority of their respective student bodies.

SUMMARY

The foregoing review of the literature consisted of reports on four Berkeley studies of activists, three non-Berkeley studies of activists, and one study of issues. In general, the hypotheses, methodology, techniques of analysis, findings and conclusions were reported.

The main conclusions to be derived from the review of research on student activists are as follows:

1. Student activists are upper middle-class in their social origins. In terms of occupational prestige level, income, and education, parents of activists stand above those of most other college

students (Flacks. Westby and Braungart).

2. Parents of student activists are politically liberal to strongly liberal (Flacks. Westby and Braungart); many have themselves been involved in radical politics and causes (Flacks. Lyonns).

3. Both the students and their parents consider themselves to be either non-religious or liberal and non-formalistic in their religious orientation (Flacks, Heist, Lyonns, Solomon and Fishman, Watts and Whittaker).

4. Parents of activists are permissive and democratic in their child-rearing practices (Flacks).

5. Student leftists are both highly intelligent and intellectually oriented (Flacks, Heist, Lyonns). Their academic records are above the average for their colleges (Flacks. Heist. Somers).

6. Activist students are not career-oriented (Flacks. Solomon and Fishman). In the curriculum. they are concentrated in the social sciences and humanities. rather than in pre-professional programs (Heist, Solomon and Fishman. Somers, Watts and Whittaker).

7. They perceive themselves as individualistic and independent from various sources of social influence and authority—family. age. peers. religious traditions, and other social conventions (Flacks. Heist).

8. They are interested in and sensitive to various forms of artistic and esthetic expression (Flacks. Heist).

9. They perceive in themselves an altruistic, helping, sense of responsibility in relation to mankind (Flacks, Solomon and Fishman).

10. They possess an idealized view of interpersonal relationships that stresses empathy, openess, and honesty (Flacks, Solomon and Fishman).

11. Relatively few have concerns regarding academic matters, instead preferring to concentrate their attention on more purely political and social issues (Peterson, Flacks, Somers).

The findings resultant from the review of literature were used in planning the design and methodology of this study. The account of the methodology of the study is presented in the next chapter.

CHAPTER III

THE METHODOLOGY

Definition of the Populations

The three populations under study consisted of:

I. Michigan State University student activist leaders who have identified with the "New Student Left"* through leadership in organizations such as; The Student Nonviolent Coordinating Committee (SNCC); Students for a Democratic Society (SDS); or the Committee for Students' Rights (CSR), a group indigenous to Michigan State University. In addition, the student activist leader was further defined as an individual who:

   1. Involved himself in the activities of his organization to the minimum extent of one hour per week.
   2. Had demonstrated commitment to his organization in at least one instance, and
   3. Proselytized for his organization.

II. Student Government Leaders (elected office holders) in the Associated Students of Michigan State University.

III. Student Non-Activists - (students who reject the operational definition of Population I).

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*Among the new leftists, non-organization is almost an article of faith. They are split at least two major ways; There is a sizeable majority who talk about "participating democracy" and there is a smaller faction loyal to the old doctrines of Marxism and, in some part, bound by its discipline. For a detailed discussion of the new leftists, see Penina Glazer's article, "The New Left," Journal of Higher Education, V. 38; 119-130, March, 1967.

In addition to rejecting the definition of the first population, the control group was matched to the activist leaders on the following criteria:

a. Sex

b. Grade Level

c. Major

d. G.P.A. (Grade Point Average)

e. Verbal Ability

The above matching was done in order to minimize "systematic variance."

> "Systematic variance is the variation in measures due to some known or unknown influences that "cause" scores to lean in one direction more than another. Any natural or man-made influences that "cause" events to happen in a certain predictable way are systematic influences."[1]

Sample

With the population qualifications observed, 25 students from each population were selected to respond to a series of instruments.

Any future references to the population of the study, or generalizations and conclusions to be drawn from the results of the analysis of sample data, should be interpreted in terms of these restricted populations.

INSTRUMENTATION

In order to achieve the purposes of this study, it was necessary to obtain measurements of the morale (satisfaction), socio-cultural awareness,

[1]Kerlinger, Foundations of Behavioral Research, 1965, pp. 96-97.

self independence and the total setting perceptions of all students in the sample.

The following instruments were selected to measure the above characteristics.*

I. Morale or Satisfaction

The College Student Questionnaires

(Educational Testing Service)

Scales:

a. Satisfaction with Faculty (SF)

b. Satisfaction with Administration (SA)

c. Satisfaction with Students (SS)

d. Satisfaction with Major (SM)

e. Study Habits (SH)

II. Socio-Cultural Awareness

The College Student Questionnaires

Scales:

a. Cultural Sophistication (CS)

b. Social Conscience (SC)

c. Liberalism (L)

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*During the registration period of January, 1966, a meeting was held for five student activist leaders. These leaders were asked the extent to which they would support the proposed research. The group agreed that cooperation for the study would depend upon the instruments selected for the study. A discussion followed. The College Student Questionnaires and the College University Environmental Scales, two non-psychological instruments, were presented and were accepted by the group.

III. Perceived Independence

The College Student Questionnaires

Scales:

a. Family Independence (FI)

b. Peer Independence (PI)

c. Extracurricular Involvement (EI)

IV. Perceptions of Total University Setting

College University Environment Scales

(Educational Testing Service)

Scales:

a. Practicality

b. Community

c. Awareness

d. Propriety

e. Scholarship

Each of these instruments will be discussed with special attention given to their purposes, validity, reliability, and other distinguishing characteristics.

College and University Environment Scales (CUES)

The College and University Environment Scales developed by C. Robert Pace[2] were used to measure student perceptions of the University as a whole.

[2]Pace, College and University Environment Scales, 1963.

CUES contains 150 statements about varied aspects of university environment; facilities of the campus; faculty; curricula; student life; and, other features about the intellectual - social - cultural climate. Students responded TRUE or FALSE to each statement; TRUE when they thought the statement was generally characteristic of the University; was a condition which existed; an event which occurred as might occur; was the way most people acted; and responded FALSE when they thought the contrary. All 150 statements in CUES were used.

Description of the Scales

Five scales described characteristics of the total University setting.

Scale 1. Practicality - Emphasis is on personal status and practical benefit. Order and supervision are characteristic of the administration and of the classwork. Status is gained by knowing the right people, being in the right groups, and doing what is expected.

Scale 2. Community - Items in this scale describe a friendly, cohesive, group-oriented atmosphere. Emphasized are group welfare and congeniality, rather than personal autonomy.

Scale 3. Awareness - High scores indicate emphasis on personal, poetic, cultural, and political understanding. Opportunities to search for personal meaning, wide ranges of creative relationships to the arts, and a concern for the welfare of mankind

are evident.

Scale 4. Propriety - Items in this scale reflect the degree to which politeness, protocol, and consideration are emphasized. Low scores reflect a more rebellious, assertive, convention-flouting atmosphere.

Scale 5. Scholarship - Competitive high academic achievement and intellectual discipline are emphasized. The pursuit of knowledge and theories, scientific or philosophical, is carried on rigorously.

VALIDITY

Pace[3] derived the five scales, or dimensions, of CUES from a factor analysis of institutional mean scores on the Pace-Stern College Characteristics Index. Fifty institutions of various size and purpose were used for this analysis, and the five factors identified a set of dimensions along which perceptions of these college enviornments differed from one another.

Pace[4] validated each factor by correlating CUES scores with other known institutional data. He reported that: (1) the practicality scale was positively correlated with the number of fraternities and sororities, and the number of ROTC units; and negatively correlated with verbal ability of

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[3]Pace. College and University Environment Scales, 1963, pp. 13-17.

[4]Ibid., pp. 63-65.

students enrolled, size of the library, proportion of Ph.D.'s on the faculty, and an institution's productivity of subsequent Ph.D.'s when the talent input of the institutions are roughly equated; (2) the community scale was negatively related to the number of students, the number of graduate students, the size of the town or city in which the campus is located, and faculty-student ratio; (3) the awareness scale was positively correlated with verbal ability of students, library volumes, percentage of Ph.D.'s on the faculty, percentage of seniors in the liberal arts and the percentage of students who go to graduate school; it was negatively correlated with the number of fraternities and sororities, and with required chapel; (4) the propriety scale was correlated with the percentage of females in the student body and with the absence of fraternities, sororities and ROTC units; and, (5) the scholarship scale was positively related to high verbal ability among students, an institution's productivity of subsequent Ph.D.'s in the natural sciences (with talent input equated), and library resources. Scholarship scores were negatively correlated with the number of fraternities and sororities.

These correlational studies provide some validity for the scales when measuring total setting perception.

RELIABILITY

Usually, reliability is a function of the dispersion of individual scores, the object being to have test scores which are widely dispersed in order to maximize the discrimination among individuals. Of major interest in this

study, however, were group scores; more specifically, the mean score obtained on each of the five scales for each of the three groups.

Individual score reliability has been computed by Centra.[5] using the analysis of variance as first discussed by Hoyt.[6] In applying this test, the variance among students and the variance among items are subtracted from the total variance. The remainder theoretically estimates the discrepancy between obtained variance and true variance and is also known as error variance. Thus, using this formula:

$$r_{tt} = \frac{\text{Variance among individuals} - \text{error variance}}{\text{Variance among individuals}}$$

Centra reports the following coefficients of reliability for individual scores:

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[5]Centra, Student Perceptions of Total University and Major Field Enviornments, p. 36, 1965, Unpublished dissertation, M.S.U.

[6]Cyril Hoyt, "Test Reliability Estimated by Analysis of Variance," Psychometrika, 6, pp. 153-160, June, 1941.

Table 1

COEFFICIENTS OF RELIABILITY

Scale	Reliability* of Individual Scores
Practicality	.50
Community	.58
Awareness	.80
Propriety	.69
Scholarship	.78

*Hoyt's reliability by analysis of variance.

The reliability of groups means, as discussed by Lindquist,[7] were also estimated by Centra. In this case:

$$r_{tt} = \frac{\text{Variance among group means} - \text{error variance}}{\text{Variance among groups}}$$

[7]E. F. Lindquist, "Estimation of Variance Components in Reliability Studies." Design and Analysis of Experiments in Psychology and Education, Boston: Houghton Mifflin Co., 1953.

Table 2

COEFFICIENTS OF RELIABILITY OF MEAN SCORES

Scale	Reliability of Group Means
Practicality	.67
Community	.87
Awareness	.86
Propriety	.71
Scholarship	.91

All of Centra's reliability coefficients for individual scores reported in Table 1 are below .82. Similarly, Berdie[8] reported individual scores reliabilities ranging from .40 to .75 for the five CUES scales. Hence, it would appear that CUES should not be used for describing individuals, but based on the coefficients reported in Table 2 for group means, it appears that as an instrument for group measurement, CUES can be justified. Hence, the scales are more reliable in describing groups than differentiating between individuals.

College Student Questionnaires

Scales from the College Student Questionnaires developed by the Institutional Research Program for Higher Education of the Educational Testing

[8]Berdie. Perceptions of the University of Minnesota. 1965.

Service, were used to measure student satisfaction, socio-cultural awareness, and perceived self-independence.

The scales of the CSQ are of the Likert-type, a type sometimes referred to as a "summated" scale. The four alternatives on each item (except for the FS items) have score values ranging from 1 for the first alternative through 4 for the fourth alternative. An individual's scale score is the sum of each of the ten item values. For example, if a student were to mark the first alternative for all ten items in a given scale, his score would be 10 (the lowest possible). If he should mark alternative four every time, his score would be 40 (the highest possible). In short, with the exception of the Family Status Scale, the score range for each of the scales is 10 through 40.

Definitions of Scales Used to Measure the Three Factors of Satisfaction, Socio-Cultural Awareness and Independence

Morale or Satisfaction

Scales:

(SF) Satisfaction with Faculty refers to a general attitude of esteem for instructors and the characteristic manner of student-faculty relationships at Michigan State University. Students with high scores regard their instructors as competent, fair, accessible, and interested in the problems of individual students. Low scores imply dissatisfaction with faculty and the general nature of student-faculty interaction.

(SA) Satisfaction with Administration is defined as a generally agreeable and uncritical attitude toward the college administration and administrative rules and regulations. High scores imply satisfaction with both the nature of administrative authority over student behavior and with personal interactions with various facets of the administration. Low scores imply a critical, perhaps contemptuous view of an administration that is variously held to be arbitrary, impersonal, and/or overly paternal.

(SM) Satisfaction with Major refers to a generally positive attitude on the part of the respondent about his activities in his field of academic concentration. High scores suggest not only continued personal commitment to present major field, but also satisfaction with departmental procedures, the quality of instruction received, and the level of personal achievement within one's chosen field. Low scores suggest an attitude of uncertainty and disaffection about current major field work.

(SS) Satisfaction with Students refers to an attitude of approval in relation to various characteristics of individuals comprising the total student body. High scores suggest satisfaction with the extent to which such qualities as scholastic integrity, political awareness, and particular styles and tastes are perceived to be characteristic of the student body. Low scores imply disapproval of certain characteristics that are attributed to the overall student body.

(SH) Study Habits refers to a serious, disciplined, planful orientation

toward customary academic obligations. High scores represent a perception of relatively extensive time devoted to study, use of systematic study routines and techniques, and a feeling of confidence in preparing for examinations and carrying out other assignments. Low scores suggest haphazard, perhaps minimal, attempts to carry through on instructional requirements.

Socio-Cultural Awareness

Scales:

(L) Liberalism is defined as a political-economic-social value dimension, the nucleus of which is sympathy either for an ideology of change or for an ideology of preservation. Students with high scores (liberals) support welfare statism, organized labor, abolition of capital punishment, and the like. Low scores (conservatism) indicate opposition to welfare legislation, to tampering with the free enterprise system, to persons disagreeing with American political institutions, etc.

(SC) Social Conscience is defined as moral concern about perceived social injustice and what might be called "institutional wrongdoing" (as in government, business, unions). High scorers express concern about poverty, illegitimacy, juvenile crime, materialism, unethical business and labor union practices, graft in government, and the like. Low scores represent reported lack of concern, detachment, or apathy about these matters.

(CS) Cultural Sophistication refers to an authentic sensibility to ideas and art forms, a sensibility that has developed through knowledge and experience. Students with high scores report interest in or pleasure from such things as wide reading, modern art, poetry, classical music, discussions of philosophies of history, and so forth. Low scores indicate a lack of cultivated sensibility in the general area of the humanities.

Perceived Self Independence

Scales:

(FI) Family Independence refers to a generalized autonomy in relation to parents and parental family. Students with high scores tend to perceive themselves as coming from families that are not closely united, as not consulting with parents about important personal matters, as not concerned about living up to parental expectations, and the like. Low scores suggest "psychological" dependence on parents and family.

(PI) Peer Independence refers to a generalized autonomy in relation to peers. Students with high scores tend not to be concerned about how their behavior appears to other students, not to consult with acquaintances about personal matters, and the like. They might be thought of as unsociable, introverted, or inner-directed. Low scores suggest conformity to prevailing peer norms, sociability, extraversion, or other-directedness.

(EI) Extracurricular Involvement is defined as relatively extensive participation in organized extracurricular affairs. High scores denote

support of and wide involvement in student government, athletics, religious groups, preprofessional clubs, and the like. Low scores represent disinterest in organized extracurricular activities.

For added edification, the following scales were also administered.

(MG) Motivation for Grades refers to a relatively strong desire — retrospectively reported—to earn good marks in secondary school. High MG scores represent the respondent's belief that others (e.g., teachers, classmates) regarded him as a hard worker, that the respondent, in his own estimation, studied extensively and efficiently, was capable of perseverance in school assignments, and considered good grades to be personally important. Low scores indicate lack of concern for high marks in secondary school.

(FS) Family Social Status is a measure of the socio-economic status of the respondent's parental family. The scale is comprised of five questions, each having nine scaled alternatives. The five items have to do with: father's occupation, father's education, mother's education, family income, and father's nationality-ethnic background. Father's occupation is given a weight of three. Raw scores may range from 7 through 63.

Scale Factor Loadings which tended to define each of the aforementioned factors are reported in the following Table. Complete intercorrelations for the CSQ scales and the CUES scales can be found in Table 9.

Table 3

SCALE FACTOR LOADINGS OF THE
COLLEGE STUDENT QUESTIONNAIRES

	I Satisfaction	II Socio-Cultural Awareness	III Independence
SF	.72	.25	-.08
SA	.76	-.18	-.06
SM	.44	.14	-.21
SS	.51	-.08	.13
SH	.38	.25	-.20
EI	.01	.21	-.46
FI	-.16	.25	.48
PI	-.02	.22	.50
L	.02	.39	.11
SC	.13	.43	-.05
CS	-.05	.74	.06

The above data reported by Educational Testing Service were based on the responses of a stratified subsample of 700 undergraduates. The three principal axes factors with iterated communalities were extracted and rotated to the normalized varimax solution.[9]

[9]Peterson, College Student Questionnaires, Educational Testing Service, Princeton, New Jersey, p. 20, 1965.

CONSTRUCT VALIDITY OF THE CSQ SCALES

The general problem of validity has to do with how well an instrument actually assesses the factor or factors it is purported to assess.

The construct validity of the CSQ scales is based on correlational data compiled by the Educational Testing Service of New Jersey.

The strategy used by ETS for adducing evidence for the construct validity of these scales can be described as follows:

> "Construct validity is evaluated by investigating what psychological qualities a test measures, i.e., by demonstrating that certain explanatory constructs account to some degree for performance on the test. To examine construct validity requires both logical and empirical attack. Essentially, in studies of construct validity we are validating the theory underlying the test. The validation procedure involves two steps. First, the investigator inquires: From this theory, what predictions would we make regarding the variation of scores from person to person or occasion to occasion? Second, he gathers data to confirm these predictions."[10]

ETS validated each of the CSQ scales by correlation scores with 47 other biographical and attitudinal characteristics.

The correlation data presented in Table 3 are based on a subsample of 700 students selected from 6,680 undergraduates at 16 colleges in the Spring

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[10] American Psychology Association. Technical Recommendations for Psychological Tests and Diagnostic Techniques: Psychological Bulletin Supplement, 1954.

of 1963.[11] The subsample was stratified according to published enrollment-by-institution figures for 1963; it is regarded as somewhat more representative of the aggregate of American college students than the larger sample of 6,680.

Across this range of colleges, ETS further validated each scale by correlating CSQ scores with other known institutional data. They reported:

Satisfaction with Faculty

The SF correlated .39 with the study habits measure and .24 with self-reported overall college grade average. SF correlated negatively (-.24) with the belief that "grades . . . last term grossly under-represented my ability." It also correlated .24 with "definite" plans to attend graduate school. In addition, the pattern of correlations between the SF scale and students classified according to the Clark-Trow typology is roughly as would be predicted. Academics scored highest; nonconformists scored lowest.

Satisfaction with Administration

Scores on the SA scale were negatively correlated with a cluster of traits which suggest a value-behavioral style that is characteristically

[11]The 16 institutions are: Appalachian State Teachers College, Bellarmine College, Brown University, Pembroke College, Carnegie Institute of Technology, Clarkson College, East Carolina College, Flint Junior College, Fordham University, Georgia Southern College, Kutztown State College, Orange Coast College, Pomona College, University of Connecticut, University of Delaware, Whitman College. Additional details of this data pool are given in the report, Preliminary Comparative Data for the College Student Questionnaires.

independent and individualistic rather than conforming and acquiescent.

Future in creative arts (-.27)

Freedom to be original (-.34)

No formal religion (-.16)

Preference for independent study (-.20)

Nonconformist in Clark-Trow Model (-.40)

Succinctly stated, the "independent thinker," insofar as he emerges from this group of characteristics, tends to be critical of college administration—a not unexpected relationship.

Satisfaction with Students

Possibly the best evidence for the validity of the SS scale came from the classification of students according to living arrangement. The correlation between fraternity - sorority living (membership) and SS was an inverse (-.22). This relationship, when contrasted with the positive correlation (.15) for the non-organization commuters, rather clearly indicates a lesser tolerance of the diversity of students in attendance on the part of the affiliated students. It is reasonable to expect a kind of "ingroup - outgroup" perspective to characterize students in particular living groups, and this phenomenon was reflected by SS scores.

Extracurricular Involvement

As would be expected, the EI score was positively related to the fact of living on campus. (.34) and was negatively related to living at home and

commuting to campus (-.30). A second type of student who is not extracurricularly involved (as defined by EI score) is the "independent thinker," EI correlated (-.21) with Peer Independence scale, and (-.22) with the Family Independence score, and (-.24) with Clark and Trow's nonconformist orientation.

Family Independence

FI correlated positively with the measure of independence from peers (.33); it was negatively associated with participation in extracurricular activities (-.21). It was associated with a preference for independent academic work (.20) over conventional classes—as would be expected—and with the nonconformist ot Clark and Trow types (.27).

Peer Independence

The pattern of correlations involving the PI scale was similar to that of the FI scale. PI correlated substantially with FI (.33), and in a predictable manner, with the Clark-Trow typology [vocational, (.04); academic (.29); collegiate, (-.33); nonconformist, (.33)].

Liberalism

The chief evidence reported for the validity of the Liberalism scale comes from the comparison of students in various major fields. L scores correlated positively with social science (.30) and arts and letters (.37) majors, and with low school plans (.31). It correlated negatively with the fact

of being a business major (-.32) and also with plans to go on to a graduate school of business (-.25). L score correlated positively with the Clark-Trow academic types (.23) and negatively with vocational types (-.18).

Social Conscience

SC is associated in the expected manner with responses suggesting either materialistic or altruistic attitudes, to wit, inversely with "above average income" as the prime job requirement (-.32) directly with "opportunity to help others" (.21).

SC scores correlated negatively (-.21) with fraternity or sorority affiliation, a relationship implicit in the notion of "encapsulation" or "insulation."[12]

Cultural Sophistication

The most direct evidence for the validity of this scale is its relationship to the question about preferred (intended) career area. SC correlated (.52) with "a life centering on some aspect of the creative arts." It correlated negatively with a "business life" (-.32) and in the negative direction with other indicators of the essentially materialistic value orientation.

Measured cultural sophistication tended also to be an attribute of the "independent thinker" syndrome, a not-surprising finding in view of the individualistic forms of expression presumably required in the humanities and the

[12]Goldsen, Rose K., et. al., What College Students Think. Princeton, New Jersey: VanNostrand, 1960.

arts curricula where these high CS students would be concentrated. For the ETS sample, CS correlated (.24) and (.18) with measured family and peer independence respectively; it also correlated positively with "no formal religion" (.33), with a preference for independent work (.52) and with the Clark-Trow nonconformist type (.28).

It is the opinion of this writer that these correlational findings provide adequate validity for the scales when they are used to measure morale or satisfaction, socio-cultural awareness, and the perceived self independence of college students.

RELIABILITY

Since analysis of responses of individual students on the CSQ is not recommended, and was not the intent of this study, a discussion of the reliability of scale scores of individuals is not presented.

Reliability of Group Means

In studies of groups where the CSQ is administered to random samples, rather than to an entire population, the standard error of the mean is an appropriate statistic for determining how representative a given scale mean is of the total population. It reflects sampling as well as measurement errors. The standard error of the mean may be easily computed by means of the formula;

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

SD being the standard deviation for the scale and sample under consideration.

The illustrative data in Table 4 are based on a sample of 700 cases from the same pool of 6.680 undergraduates, which is described in the preceeding section on validity.

Table 4

ILLUSTRATIVE SCALE MEAN RELIABILITY ESTIMATES

Scale Designation	Usable N	1 Mean	2 Stand. Deviation	3 Stand. Error of Msmt.	4 Stand. Error of the Mean
Satisfaction with Faculty	695	26.51	4.93	2.74	.19
Satisfaction with Administration	692	27.28	5.17	2.58	.20
Satisfaction with Major Field	487*	28.02	4.67	2.68	.21
Satisfaction with Students	691	26.80	4.61	2.57	.18
Study Habits	699	26.29	4.40	2.67	.17
Extracurricular Involvement	699	20.31	4.50	2.50	.17
Family Independence	684	22.79	5.21	2.85	.20
Peer Independence	689	24.15	4.13	2.48	.16
Liberalism	682	26.06	4.57	3.00	.18
Social Conscience	690	28.58	4.56	2.99	.18
Cultural Sophistication	688	24.35	5.71	2.97	.22

*Only students enrolled in specific major fields.

Since the group of 700 is regarded as a random sample, the standard error of the mean (column 4) is the appropriate reliability estimate for the obtained scale means (column 1). Means for similar samples from the overall populations would be expected to fall two-thirds of the time within about .20 of a score point from any obtained mean.

The preceding discussion of the standard error of the mean is based on the assumptions of random sampling and independence of observations.

Since the assumption of randomness was not met in this present study due to the select nature of the groups involved, it opens to question whether the reliability of scales reported by ETS can be considered as supporting the use of these scales for the study of non-random samples with small N's.

In light of this question, the standard error of the mean for each scale for each of the three groups of the study is reported in Table 5.

An examination of Table 5 shows only 10 of the 33 SE_M to be greater than .99, the largest of that group being a 1.81.

Although these SE_M are larger than those reported for the ETS random sample with an N of 700 (Table 4), they are still within an acceptable range of error.

Table 5

STANDARD ERROR OF THE MEAN FOR EACH SCALE OF EACH GROUP

Scale Designations	I Student Activists				II Student Government				III Non-Activists			
	N	$\bar{X}$	SD	SE_M	N	$\bar{X}$	SD	SE_M	N	$\bar{X}$	SD	SE_M
SF	25	24.72	5.28	1.06	25	21.64	6.16	1.23	25	24.76	4.79	.96
SM	25	23.88	8.07	1.61	25	23.80	9.05	1.81	25	24.76	8.97	1.79
SS	25	23.12	2.76	0.55	25	23.68	4.11	.82	25	26.36	3.15	.63
SA	25	14.32	3.33	.67	25	22.92	4.93	.99	25	24.12	4.73	.95
SH	25	25.68	5.06	1.01	25	22.36	4.53	.91	25	25.92	3.77	.75
EI	25	14.92	3.58	.72	25	27.48	2.96	.59	25	19.04	4.98	1.00
FI	25	33.16	5.05	1.01	25	25.52	3.80	.76	25	27.20	4.63	.93
PI	25	29.56	3.79	.76	25	23.60	3.30	.66	25	26.12	3.76	.75
L	25	36.92	3.45	.69	25	26.80	3.48	.70	25	28.52	4.88	.98
SC	25	33.36	3.97	.79	25	27.32	4.18	.84	25	28.68	5.13	1.03

COLLECTION OF DATA

The collection of data for group I (student activist leaders) was accomplished almost entirely on an individual basis. Initial contacts were made with several campus activist leaders at the beginning of fall term 1965. The actual collection of data began in January 1966, although it was not until six months later that the sample was finally completed.

The fact that six months was required to complete a set of questionnaires, which in a group situation with a little cooperation could have been completed in two and one-half hours, is a marked reflection of the anti-institutional attitudes of such students. Lack of cooperation was expected, however, in light of the campus situation during this particular span of time. It was during this period that local student protests were at a peak. Protests were being directed at both the University administration and the local city government. All protests were issue-oriented. On campus, they ranged from the perceived arbitrary suspension of a fellow activist leader to University policies regarding the censorship of certain publications. Off campus, demonstrations were civil rights oriented. One such demonstration culminated in the arrest of over 50 activists. It should be apparent, in light of the situations mentioned, why this researcher was somewhat suspect in the eyes of the activist leaders.

The collection of data for group 2 (student government leadership) was much less demanding in terms of time and was accomplished in one evening by collectively administering the instruments to the ASMSU* President, cabinet and board.

*Associated Students of Michigan State University.

Data from group 3 (non-activists - control group) were obtained at two testing sessions, arranged during the registration period of fall term, 1966. The subjects of this group were responding to a request mailed to them on August 18, 1966 and to a follow-up letter of request mailed on August 30, 1966. (Copies of these letters can be found in Appendix F.)

THE STATISTICAL MODEL AND COMPUTATION PROCEDURES

After a review of several possible statistical models, multiple discriminant analysis was selected as the most appropriate technique. Multiple discriminant analysis is a statistical method of combining scale scores or other available data so as to maximize the differences among groups and minimize the differences within each group. Through the separation of individuals who are known to belong to mutually exclusive groups, it is possible to determine the combinations of variables which will maximally discriminate among the different groups. It is also possible to observe the magnitude of the group differences and to classify future individuals into one of these groups on the basis of similar data. In this study, individuals had been classified as student activist leaders, student government leaders and non-activists.

A series of observations of measurements for each member of three defined and mutually exclusive groups was collected. The problem required a statistical methodology which would maximally discriminate among the three groups on the basis of the information available. It was desirable to use a statistical tool which would indicate the intensity and direction of the difference.

Because many of the variables used in the study were interrelated, it was also advisable to use a technique designed to identify basic, independent factors which accounted for possible group differences.

Description of Multiple Discriminant Analysis Program

The computational program used was Discrim: Multiple - Discriminant Analysis programmed by P. Lohnes and modified for the M.S.U. CDC 3600 by A. V. Williams.[13]

This program computes multiple discriminant functions for up to 50 variables and any number of groups. There is no limit to the number of subjects in each group; further, groups may have differing numbers of subjects. Input is on punched cards. Printed output includes:

a. correlation analysis for each group with means, standard deviations, deviation sums of squares, variance - covariance matrix, correlation matrix, eigenvalues and eigenvectors, percentage of the trace of the deviation and correlation matrices accounted for by each root, and adjusted factor loadings.

b. pooled W matrix
(the within-groups deviation scores cross-products matrix)

c. A matrix
(the among-groups cross-products of deviations of group from grand means weighted by group size)

[13]Technical Report 33 of the Computer Institute for Social Science Research, Michigan State University.

d. T matrix

(the total sample deviation score cross-products matrix)

e. total dispersion, correlation and correlations estimate with associated degrees of freedom.

f. F ratios for individual variables.

g. measures of dispersion in discriminant space.

h. Wilk's lamda.

i. F test for test of H_1

j. F test for test of H_2

A detailed development of the multiple discriminant analysis technique has been published by Cooley and Lohnes.[14]

Assumptions of the Statistical Model

The assumptions which are made in using multiple discriminant analysis are that the scale scores of the populations under study are:

1. Multivariate normal
2. Have equal variance and coveriance matrices
3. Are continuous measures with equal intervals

Assumption of Multivariate Normality

A review of the literature was made to determine the availability of methods to test the assumption of multivariate normality. The review of literature

[14]W. Cooley and P. Lohnes, Multivariate Procedures for the Behavioral Sciences. New York: John Wiley and Sons, Inc., 1962.

revealed no complete test of this assumption. However, an inspection for marked departures from normality was made of the univariate scale score distributions. No such departures were discovered in the data; and since we know by the Central Limit Theorem that linear functions are more likely to be normal than are the component variates, the multiple-discriminant scores used in this study, therefore, satisfy the important assumption of multivariate normal distributions better than the original scale scores, which showed no marked departure from normality.

Assumption of Equal Variance and Covariance Matrices

Just as a test of the homogeneity of variances is available in univariate analysis of variance, so a test of the homogeneity of groups dispersions is available in the multiple discriminant analysis of variance.

The null hypothesis of this test, known as H_1 asserts that,

$\Delta_1 = \Delta_2 = \Delta_3$ where Δ_j is the population dispersion sampled by D_j. The test of H_1 involves the dispersion estimate D,* computed from the pooled group deviation sums of squares and cross-products matrices, as well as D_g for each of the groups.

An F of 1.254 was obtained to test H_1. With this F^2_{72} value, H_1 could not be rejected at any tabled level of confidence—evidence that, for this study, the assumption of equal variance and covariance matrices had been met.

*D and D_g are matrices representing multivariate dispersions and are logical extensions of the univariate S^2 and $S_g{}^2$.

Assumption of Continuous Measures with Equal Intervals

Since the measures analyzed in this study were ordinal in nature. (Likert-type) and not interval scales as called for by the assumptions of the statistical model, a parametric and nonparametric analysis of variance was made of the individual variates.[15] The parametric and nonparametric* interpretations of the individual variates were found to be 100% compatible, which indicates that even though the assumption of equal intervals was violated the conclusions drawn from the data are most likely not in error.

SUMMARY

The populations of this study consisted of Michigan State University Student Activist Leaders, Michigan State University Student Government Leaders and Michigan State University Non-Activist Students who matched the student activist leaders on the following characteristics: sex, grade level. grade point average, verbal ability and academic major.

After obtaining a sample of 25 individuals from each of the populations. a total of three groups were available for study.

The instruments used in the study included the College Student Questionnaires and the College University Environmental Scales. These instruments

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[15]Results reported in Appendix C.

*Kruskal-Wallis one-way analysis of variance by ranks.

were assumed , on the basis of prior and current research, to have sufficient validity and reliability to be included as the criterion measures of the study.

Multiple discriminant analysis was used to analyze the data. The solution of a determinantal equation yields the linear combinations of variables which maximize the differences among groups and minimize the differences within groups. The first linear combination maximizes the ratio of the dispersion among groups to the dispersion within groups. The residual linear combination continued to maximize the ratio of the among groups to the within groups dispersion after the effects of the preceding linear combination had been removed. The assumptions of the statistical model were set forth and the tests of these assumptions reported.

The results of the analysis are presented in Chapter Four.

CHAPTER IV

THE ANALYSIS OF DATA

All of the data offered by the informants was processed on punched cards by Michigan State University's CDC 3600. Lists of student responses were obtained, as well as a multivariate analysis of the 18 scale scores.

DESCRIPTIVE DATA

Group Characteristics

In order to minimize "systematic variance," the activists and non-activists were matched on the following:

a. Sex

b. Grade Level

c. College of Major

d. Grade Point Average

e. Verbal Ability

Table 7 reports the results of the matching and also offers a comparison of the five aforementioned characteristics with the student government group.

Members of the activist group, as well as the student government group, were predominantly of the male sex, came from the colleges of Arts and Letters and Social Science, and were upper classmen. Both groups had better than average academic standings, but the student activists' average grade point of 2.7 ranked above the 2.4 average grade point of the student government leaders. In addition to the above-grade-point averages, the student activists ranked very high in verbal ability, as measured by the CQT. The group of activists as a

whole ranked at the 89th percentile, having 12 members of the group scoring above the 95th percentile. The average percentile ranking of the student government leaders was 71.5.

Table 6

SUMMARY OF GROUP COMPARISONS TABLE

Characteristic	Activists	Non-Activists (Control)	Student Government
Sex			
Males	17	17	19
Females	8	8	6
College			
Arts and Letters	12	12	8
Communication Arts	1	1	0
Education	3	3	0
Business	0	0	5
Natural Science	3	3	2
No Preference	2	2	0
Social Science	4	4	10
Grade Level			
Freshman	4	4	0
Sophomore	2	2	5
Junior	12	12	18
Senior	3	3	2
Graduate	4	4	0
Average Grade Point	2.73	2.73	2.47
Average Verbal Percentile Ranking	89	88	71.5

Table 7

COMPARISONS OF SEX, GRADE POINT AVERAGE, COLLEGE OF MAJOR, GRADE LEVEL, AND VERBAL ABILITY FOR THE THREE GROUPS

Activists					Non-Activists (Control)					Student Government				
Sex	G.P.A.	College	Verbal Percentile	Level	Sex	G.P.A.	College	Verbal Percentile	Level	Sex	G.P.A.	College	Verbal Percentile	Level
M	2.9	AL	65	J	M	2.9	AL	61	J	M	2.3	SS	62	J
M	2.9	AL	99	J	M	2.9	AL	99	J	M	2.5	SS	73	Soph.
M	3.2	NP	97	S	M	3.2	NP	97	S	M	3.2	SS	91	J
M	1.9	NS	99	F	M	1.9	NS	99	F	M	2.4	SS	67	J
M	2.7	NS	97	F	M	2.7	NS	99	F	M	2.3	SS	88	Soph.
M	1.7	NS	99	F	M	1.7	NS	91	F	M	2.0	SS	64	J
F	1.7	ED	99	J	F	1.7	ED	81	J	M	2.4	SS	80	J
F	2.2	AL	51	S	F	2.2	AL	57	S	M	2.2	SS	51	J
F	2.7	SS	87	J	F	2.7	SS	94	J	M	2.6	SS	63	Soph.
M	2.9	CA	96	J	M	2.9	CA	88	J	M	3.1	SS	55	J
M	3.6	AL	96	J	M	3.6	AL	95	J	M	2.8	AL	90	J
M	3.6	AL	99	Sr.	M	3.6	AL	92	Sr.	M	2.5	AL	64	J
F	2.4	ED	85	J	F	2.4	ED	89	J	M	2.2	AL	57	J
F	2.6	AL	89	J	F	2.6	AL	91	J	M	2.7	AL	91	J
M	2.8	AL	93	J	M	2.8	AL	92	J	M	3.2	AL	89	J
F	3.7	SS	87	Sr.	F	3.7	SS	87	Sr.	M	2.6	AL	63	J
M	2.6	NP	99	F	M	2.6	NP	95	F	M	2.2	AL	51	Sr.
F	3.6	AL	99	J	F	3.6	AL	99	J	M	3.0	AL	88	J
M	2.4	AL	88	J	M	2.4	AL	87	J	M	2.5	BUS	93	Soph.
F	2.5	AL	84	Sr.	F	2.5	AL	86	Sr.	F	3.1	BUS	66	J
M	0.4	AL	63	J	M	0.6	AL	64	J	F	2.2	BUS	64	J
M	3.7	SS	XX	G	M	3.7	SS	XX	G	F	2.5	BUS	87	Sr.
M	3.1	ED	XX	G	M	3.1	ED	XX	G	F	2.4	BUS	53	J
M	3.1	SS	XX	G	M	3.1	SS	XX	G	F	3.2	NS	91	J
M	3.4	AL	XX	G	M	3.4	AL	XX	G	F	2.3	NS	46	Soph.

Scholarships

The groups varied somewhat in the scholarship category. Seventeen of the student activist leaders held a scholarship of some type. with 7 holding National Merit Scholarships. The control group had 8 scholarship holders. 4 of whom were merit scholars; the student government group with 7 scholarship winners had 2 merit scholars.

These findings, especially regarding the student activist leaders, are in keeping with the results of surveys carried out on Free Speech Movement members at Berkeley. These results were reported in Chapter Two of this study.

Secondary School Backgrounds

Considering all three groups, there is very little difference in their secondary school backgrounds. With the exception of one or two individuals in each group, all came from co-educational public high schools. Graduating classes ranged in size from less than 25 to more than 1.000, but the modal situation for each group was a graduating class of 100 - 200 students. Academically, members from all groups were predominantly B+ to A students. They graduated in the top 10% of their classes, studied much more than their classmates, and were concerned about grades. Their favorite subjects at this level were English, social science and science with physical education being the subject enjoyed the least. Participation on athletic teams was also minimal.

Although the three groups were similar in many ways, there were some noticeable differences.

When asked whether they had been friendly with any of their high school teachers, i.e., well enough acquainted to talk about matters not necessarily related to school or course work, we find 18 of the 25 activist leaders responding "no," whereas, the majority of students in the student government and control groups reported they had this kind of rapport with as many as five or six of their high school teachers.

Peer relationships especially with the opposite sex were also minimal for the activists. They reported that even during their junior and senior years they seldom or never dated. This is in contrast with the other groups whose members predominantly reported themselves as having a series of steady girl friends or boy friends during this period of life.

The activists also differed with the other groups in the extent of participation in extracurricular activities. They either did not participate at all or they participated but not very actively.

All things considered, not just academic preparation, the student activist leaders reported they were dissatisfied and in many cases very dissatisfied with their secondary school experience. It must be pointed out, however, that the members of the other two groups also reported being somewhat dissatisfied but to a lesser degree.

DEMOGRAPHIC CHARACTERISTICS

Family Backgrounds

In comparing the family backgrounds of the three groups, we find the

greatest similarities existing between the student activist group and the student government group.

The community in which they grew up is best described as a city of 50,000 to 150,000 located either in Michigan or one of the North Central states. Their parents live together. In the case of the activists. they were in 16 of 25 cases the eldest child, having on the average two or three brothers and sisters. In comparison, 18 of the 25 control group members were from rural settings, i.e., towns of less than 10,000 and farms. Their parents were also living together, but unlike the activist who tended toward being the eldest child, the control member was in 13 cases an inbetween child and in 9 out of 25 instances, the youngest.

Religious Preferences of Parents

Religious Preference	Parents of Activists	Parents of Govt. Leaders	Parents of Non-Activists
Protestant	12	18	19
Catholic	4	6	5
Jewish	7	1	1
No Formal Religion	2	0	0

In terms of the parental religious traditions reported by the samples it is found—as was also reported by Flacks and Watts—that the parents of activists tend to be disproportionately Jewish and non-religious. Thirty-six percent of the student activists' parents would fall in these two categories.

whereas only 4% of the other groups parents could be so classified.

Family Economic Backgrounds

The fathers of the student activists and student government leaders were employed in a wide range of occupations, from skilled craftsmen to professionals. Considering these two groups combined, only four fathers were members of trade unions. Salaries of the total group ranged from $10,000 to $32,000 annually. Sixteen fathers from each group held college degrees. with 7 from each group holding a graduate or professional degree.

The father of the control group member was often an unskilled or service worker (policeman. fireman. baker. farmer). They had finished high school and in seven cases held a college degree. Their average annual salary was in the $5.000 to $9.000 bracket and in four instances a control group member reported his father's economic position somewhat lower than it was 10 years ago.

MISCELLANEOUS PARENTAL CHARACTERISTICS

National Politics and Cultural Involvement

In the area of political leanings and attendance of cultural events such as operas. lectures. and concerts we find differences among all three groups.

The parents of the student activists are evenly divided between conservative Republicans and liberal Democrats.

The student government parents were overwhelmingly conservative Republicans. with the control group reporting parents with liberal Republican leanings.

Regarding involvement in cultural events. we find the parents of the activists most involved, the parents of student government leaders less involved, and the parents of the control group least involved.

In almost every respect the aforementioned descriptive data lends credibility to statements such as the following:

> Interestingly enough, the "rabble." which the pundits so meticulously dissect, turns out to be the sons and daughters of the American dream. Most of us were reared in families that had acquired the tools to harvest and enjoy the abundance of the world's most abundant society and were given all that good Americans are supposed to want--money, suburban living, cultural opportunities ranging from home environments carefully developed to provide stimulus to whatever potential we had, to summer camps and trips to Europe. Our parents were well educated. were most frequently professionally employed, and had acquired moderately high, almost comfortable status. We grew up believing that we would inherit all of these things--money, status, security, cultural abundance--taking them for granted, which was a reasonable thing to do, given their rich and bountiful array around us.
>
> Somehow, and for reasons that are not entirely clear to me, this group of young people, who had everything that their society could give to them, found that gift hollow and rejected it. In their rejection they began to fashion a movement which has comprehended many issues and touched on a number of the nation's most exposed nerve ends.
>
> The experience of students in universities has had a great deal to do with their disaffection.[1]

Religious Orientations of the Activist Leaders

Most of the student leaders engaging in protest described themselves as non-religious--20 of 25 instances, whereas, only 6 student government leaders

[1]Potter, Paul., "Student Discontent and Campus Reform." from Order and Freedom on the Campus. Western Interstate Commission for Higher Education, Colorado, 1965, pp. 71-72.

and 8 non-activists considered themselves in this category. The individuals from the government and non-activist groups reported protestant religious preferences in 25 of 50 cases. Nine students from these two groups preferred Catholicism. Judaism was indicated as preferred by only two members of these latter groups.

PERSONAL PHILOSOPHY OF HIGHER EDUCATION

To determine the general philosophy of higher education held by the three treatment groups, the individuals from each group were asked to rank four descriptive statements[2] according to the accuracy with which each statement portrays his own point of view. These statements are:

> 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

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[2]Items 49-52, College Student Questionnaires, Part I, Section I. Educational Testing Service, Princeton, New Jersey.

aspects of college life are not to be 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 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.

Twenty student activist leaders cited Philosophy D as the most accurate. Four cited Philosophy B. One cited A. Philosophy C was not cited at all by the activists.

The fact that Philosophy C was not cited at all by the activists is significant since 24 of the 25 student government leaders marked this philosophy as the most accurate description of their point of view. Philosophy C was also the best portrayal of the non-activist's point of view.

Both the student government group and the non-activist group felt that Philosophy D, the statement best reflecting the activists' point of view of higher education, was the least accurate description of their views.

STATISTICAL ANALYSIS

The data were initially analyzed to determine the group status on each of the 18 variables. Following are a profile of the CSQ Part 2 means and a table of F ratios of among/within means squares which are used to determine on which scales the groups differ significantly. The reader should keep in mind, however, that the objective of this study is to establish the combinations of these variables which maximize the differences among the three groups and minimize the differences within them. The univariate results are presented only in hope that they will assist the reader toward a clearer understanding of the multiple discriminant analysis which is to follow.

COLLEGE STUDENT QUESTIONNAIRES; PART 2

Profile of Group Means

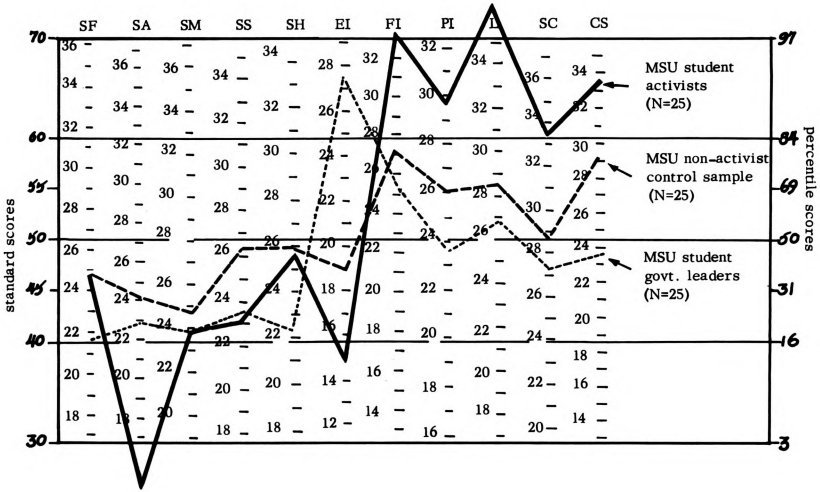

FIGURE I

Table 8

F RATIOS USED TO DETERMINE
SIGNIFICANT DIFFERENCE OF VARIABLES

Scale	Among Means Square	Within Means Square	F-Ratio
CSQ Scales			
Satisfaction with Faculty	80,093	29.574	2.71 -
Satisfaction with Major	7,093	75,850	0.09 -
Satisfaction with Students	74,973	11,470	6.54 *
Satisfaction with Administration	714,333	19,249	37.11 *
Study Habits	98,973	20,126	4.92 *
Extracurricular Involvement	1,024,840	15,459	66.29 *
Family Independence	402,973	20,439	19.72 *
Peer Independence	223,773	13,122	17.05 *
Liberalism	733,053	15,946	45.97 *
Social Conscience	250,973	19,842	12.65 *
Cultural Sophistication	592,253	24,964	23.72 *
Motivation for Grades	26,493	44,250	0.60 -
Family Social Status	141,613	101,408	1.40 -
CUES Scales			
Practicality	38,653	12,574	3.07 -
Community	46,360	12,573	3.69 **
Awareness	318,280	24,658	12.91 *
Propriety	15,240	13,382	1.14 -
Scholarship	188,253	25,003	7.53*

Degrees of Freedom are 2 and 72

*Significant at .01 level
**Significant at .05 level

- No significant difference

A clear understanding of the basic interrelationships among the scales used in the study is also helpful in the interpretation of the multivariate linear combinations of variables in the discriminant functions.

Based upon the appropriate F test with 75 degrees freedom, a correlation coefficient of .29 is significantly different from zero at the 1% level of confidence. A coefficient of .22 is significant at the 5% level of confidence.[3]

It is evident from Table 9 that the satisfaction measures are related. The highest correlation coefficient was .39 between the Satisfaction with Faculty Scale and the Satisfaction with Administration Scale. The lowest coefficient of correlation was .34 between the Satisfaction with Faculty. Satisfaction with Major, Satisfaction with Students and Study Habits Scales.

A statistically significant relationship is found among the Independence Scales with the Extracurricular Involvement scale having a correlation coefficient of -.33 and -.30 with the Family Independence and Peer Independence Scales respectively.

The Social Awareness Scales are also correlated. The Liberal Scale having a correlation coefficient of .28 with the Social Conscience Scale and a correlation coefficient of .30 with the Cultural Sophistication Scale.

The Scholarship and Awareness Scales of the CUES instrument were highly correlated having a correlation coefficient of .70.

---

[3]Edwards. Allen L. Statistical Methods for the Behavioral Sciences. New York: Holt Rinehart and Winston, 1963. Table VI, p. 502.

Table 9

WITHIN GROUP CORRELATION COEFFICIENTS
AMONG THE VARIABLES USED IN THE STUDY

	SF	SM	SS	SA	SH	EI	FI	PI	L	SC	CS	MG	FS	P	C	A	Pr	S
SF	1.00	.34	.34	.39	.34	.06	-.28	-.15	-.08	.10	.12	.27	.10	-.25	.41	.39	.13	.35
SM		1.00	-.09	.08	.27	.20	-.11	-.18	-.06	.24	.15	.15	.04	-.07	.27	.36	.05	.28
SS			1.00	.38	.22	.04	-.04	-.14	.06	-.17	-.21	.08	-.10	-.44	.03	.02	.18	.33
SA				1.00	.16	.15	-.38	-.10	-.38	.07	-.22	.05	.18	-.32	.26	.43	.12	.39
SH					1.00	-.08	-.07	-.05	.93	.11	.26	.49	.09	-.12	.31	.27	.26	.23
EI						1.00	-.33	-.30	-.30	.05	-.17	.02	.42	-.09	.11	.14	.07	.23
FI							1.00	.24	.25	-.06	.23	-.13	.003	.17	-.27	-.37	-.003	-.34
PI								1.00	.05	.03	.13	-.03	.04	.08	-.02	-.03	-.13	-.12
L									1.00	.28	.30	.07	-.12	.15	.004	-.25	.13	-.20
SC										1.00	.39	.24	-.16	.03	.31	.07	.04	.13
CS											1.00	.12	.11	.14	.15	-.15	.03	-.21
MG												1.00	.08	-.17	.14	.05	.10	.19
FS													1.00	.17	-.11	.18	.004	.19
P														1.00	.16	-.18	-.22	-.31
C															1.00	.52	.14	.44
A																1.00	.12	.70
Pr																	1.00	.28
S																		1.00

For 75 degrees freedom, an "r" of .29 is significant at the .01 level; an "r" of .22 is significant at the .05 level.

RESULTS OF THE MULTIPLE DISCRIMINANT ANALYSIS

As indicated in Chapter III, the within and among group matrices were computed in the Discrim Program by CDC 3600. The solution of the determinantal equation, $|A - \lambda W| v = 0$ where A is the among matrix, v represents the discriminant coefficients, and λ represents the latent roots of the system, was necessary for the test of the hypothesis of the study. This hypothesis, stated in null form, was as follows:

> There are no differences in the degrees of: Satisfaction with the University Environment, Socio-Cultural Awareness, or Perceived Self Independence, among groups of students classified as student activist leaders, student government leaders, and as student non-activists.

The above hypothesis stated symbolically and known as H_2, is:

$\mu_1 = \mu_2 = \mu_3$ where μ represents a group centroid.

For the test of H_2 an F of 6.80 was obtained exceeding the value necessary for rejection at the .01 level.

A test of the statistical significance of the latent roots, or discriminant functions was also carried out. The Rao procedure to test multivariate discrimination among several groups was used.[5] The formula used to test the statistical significance of the discriminant functions is:

$$\chi^2 = \left[N - 1/2\ (p + k)\right] \log_e (1 + \lambda).$$

---

[4]Computer Institute for Social Science Research, op. cit.

[5]C. Radhakrishna Rao, Advanced Statistical Methods in Biometric Research. New York: John Wiley and Sons, Inc., 1952, pp. 372-73.

where: N = The total sample of 75 individuals.

p = The total number of variates--(18).

K = The total number of groups--(3).

λ = The discriminant function, or latent root of the system.

Values of chi square computed by the above formula can be referred to the tabled distribution of chi square values with the appropriate degrees of freedom. The latent root, the chi square value, the degrees of freedom, and the significance level obtained for each of the discriminant functions are presented in the following table which shows both discriminant functions of the study to be significant beyond the .001 level of confidence.

Table 10

LATENT ROOTS, CHI SQUARE VALUES DEGREES OF FREEDOM AND STATISTICAL SIGNIFICANCE LEVELS FOR EACH OF THE DISCRIMINANT FUNCTIONS

Discriminant Function	λ	χ^2	D.F.	Significance Level
ν_1	4.367	108.367	19	.001
ν_2	.940	42.740	17	.001

If the sum of the latent roots were to be considered an estimate of the total variance or dispersion among groups as defined by the scales used in the study, the first discriminant function would account for approximately 82.7%

of the total dispersion among the groups. The second discriminant function would account for 17.3%.

Accordingly, the null hypothesis is rejected since it is possible to differentiate among these groups of students. Subsequently, the interpretation of the two discriminating functions significant to the differentiation will be presented.

INTERPRETATION OF THE TWO SIGNIFICANT DISCRIMINANT FUNCTIONS

Interpretation of the discriminant functions may be undertaken in one of three ways.

1) By an examination of the conventionalized coefficients (latent vectors)
   v_1

2) By an examination of the conventionalized coefficients weighted by the standard deviation of the corresponding variate, or

3) By an examination of the discriminant function's factor pattern.

The factor pattern eliminates the time consuming computations necessary to conventionalize the latent vectors and is an output of the Discrim Program.

Prior to the advent of Discrim, Tiedman and Bryan made the following comment regarding the interpretation of the discriminant function:

> It can be shown that the individual values of the discriminant function are independent of the units of measurement, and origin of coordinates of the initial variates,

> since the coefficients automatically adjust themselves (linearly) to the scales employed. On the other hand, the interpretation of separate coefficients does depend on the units of the initial variates.[6]

They concluded that in cases where the units of measurement are sufficiently comparable, i.e., having similar ranges, variance, and means, the interpretation of functions may be made directly from the conventionalized coefficients. When the variables used in a study do not have similar or comparable units of measurement, as was the case in this study, a weighting procedure to obtain the conventionalized coefficients is necessary. The discriminant coefficients are divided by the value of the largest coefficient which gives a value of 1 for that coefficient and subsequent lesser values for the others. Weighted, or multiplied by the standard deviation of the corresponding variate, each scale or instrument produces a conventionalized coefficient for each discriminant function. Ikenberry,[7] using three discriminant functions, gave a clear demonstration of this method of interpreting discriminant functions.

Interpretation of the First Function

The factor pattern of the first and most powerful discriminant function is presented in Table 11. The approach to interpretations of factor patterns

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[6]Tiedeman, David V. and Bryan, Joseph C. "Predictions of College Field of Concentration," 24 Harvard Educational Review, (Spring, 1954), 132.

[7]Ikenberry, Stanley O. "A Multivariate Analysis of the Relationship of Academic Aptitude, Social Background, and Attitudes and Values of Collegiate Persistence." Unpublished doctoral dissertation, Michigan State University, 1960.

uses only those loadings greater than $\pm .300$. Examination of the data in Table 11 revealed that the first function may be considered an Independence/Social Awareness/Dissatisfaction function. The Extracurricular Involvement Scale, the Family Independence Scale, and the Peer Independence Scale, were all heavily weighted--the Family Independence and Peer Independence positively and the Extracurricular Involvement negatively. The negative weight indicating a high degree of non involvement in extracurricular activities is interpreted as an indication of Independence.

The Social Awareness Scales of Liberalism, Social Conscience and Cultural Sophistication were also all weighted heavily and positively.

The dissatisfaction portion of this function is indicated by the heavy negative weighting (-.720) of the Satisfaction with Administration Scale along with the negative loadings for all of the CUES scales, Practicality, Awareness, Community, Propriety, and Scholarship.

Thus, to summarize the discussion of the first discriminant function, the factor pattern indicates that a person who:

1. Is disinterested in organized extracurricular affairs such as student government, athletics, religious groups, pre-professional clubs and the like--

2. Perceives himself as coming from a family not closely united, as not consulting with parents about important personal matters, as not concerned about living up to parental expectations, and the like--

3. Tends not to be concerned about how his behavior appears to other students--

Table 11

FACTOR PATTERN FOR THE FIRST DISCRIMINANT FUNCTION

Scale	Factor Weight
CSQ Scales	
Satisfaction with Faculty	.215*
Satisfaction with Major	-.008
Satisfaction with Students	-.159
Satisfaction with Administration	-.720
Study Habits	.269
Extracurricular Involvement	-.819
Family Independence	.656
Peer Independence	.624
Liberalism	.821
Social Conscience	.563
Cultural Sophistication	.674
Motivation for Grades	-.137
Family Social Status	.038
CUES Scales	
Practicality	-.308
Community	-.214
Awareness	-.498
Propriety	-.188
Scholarship	-.403

*To facilitate interpretation all factor weights have been multiplied by -1. This should be kept in mind when interpreting the group centroids.

4. Has sympathy for an ideology of change--

5. Has an intensive moral concern about perceived social injustice and what might be called "institutional wrong-doing"--

6. Has interest in or obtains pleasure from such things as reading widely, modern art, poetry, classical music, discussions of philosophy and so forth--

will likely hold a critical, perhaps even a contemptuous view of an administration that is variously held to be arbitrary, impersonal, and/or overly paternal.

At Michigan State University this person would be dissatisfied for he would perceive an environment lacking in personal, poetic, cultural, and political understanding. He would consider the "situation" lacking in opportunities to search for personal meaning and limited in its concern for the welfare of mankind.

He would also perceive an environment where the emphasis on competitively high academic achievement and serious interest in scholarship is minimal. In his opinion the rigorous pursuit of knowledge and theories, scientific and philosophical, is not a characteristic of the environment.

In general, a person with a high degree of self perceived independence and cultural awareness will be dissatisfied with, and will hold negative views of, the multiversity environment as it presently exists.

Interpretation of the Second Discriminant Function

The factor pattern for the second discriminant function is presented

in Table 12. This function maximizes the ratio of among to within groups dispersion for the component of the among-groups dispersion not accounted for by the first discriminant function. It should be kept in mind that this function is orthogonal to, i.e., uncorrelated with, the first function of this analysis.

The second function can clearly be labeled a satisfaction continuum. The reasons for this are indicated by the heavy negative weights on the Satisfaction with Students, Satisfaction with Administration, Study Habits, Community Awareness, and Scholarship Scales. Examination of the factor weights of the non-satisfaction measures suggests the influence of various socio-cultural elements, such as the positive (.27) weight of the Family Social Status Scale and the slight positive (.16) weight on the Liberalism Scale. None of these weights, however, are such that a correlation with levels of satisfaction can be assumed.

The high positive weighting given the Extracurricular Involvement Scale is difficult to explain, but it most likely is the result of the extreme difference in the scores obtained by the activist leaders and the government leaders on this scale.

Table 12

FACTOR PATTERN FOR THE SECOND DISCRIMINANT FUNCTION

Scale	Factor Weight
CSQ Scales	
Satisfaction with Faculty	-.258*
Satisfaction with Major	-.072
Satisfaction with Students	-.524
Satisfaction with Administration	-.420
Study Habits	-.356
Extracurricular Involvement	.460
Family Independence	.085
Peer Independence	-.101
Liberalism	.162
Social Conscience	.070
Cultural Sophistication	-.239
Motivation for Grades	-.046
Family Social Status	.273
CUES Scales	
Practicality	.055
Community	-.339
Awareness	-.359
Propriety	-.064
Scholarship	-.291

*To facilitate interpretation all factor weights have been multiplied by -1. This should be kept in mind when interpreting the group centroids.

GROUP DIFFERENCES ON THE SIGNIFICANT DISCRIMINANT FUNCTIONS

Interpretation of Group Centroids and Individual Discriminant Scores

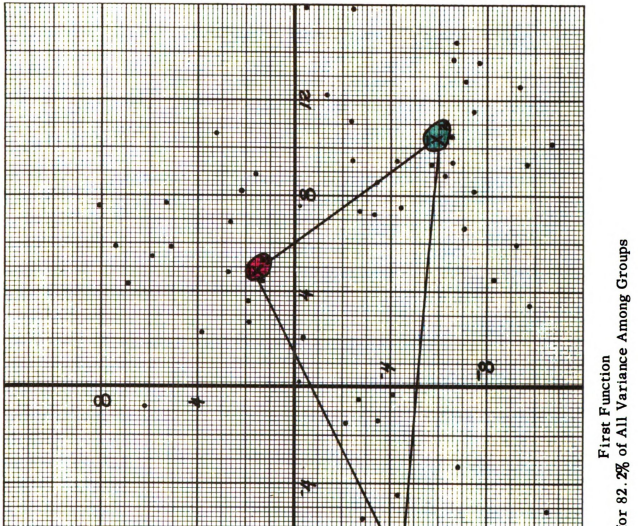
The position of each individual,* from each of the three groups, along with the centroid or the mean discriminant score for each group, has been ploted in the two dimensional space defined by our two discriminant functions. (Figure II) It is apparent that the Independence/Social Awareness/Dissatisfaction discriminant function, plotted horizontally, differentiates most effectively between the student activist leaders and the student government leaders, the non-activists falling between the two extremes.

The second discriminant function, the satisfaction continuum, plotted vertically, effectively discriminants the non-activists from the two leader groups. Such a conclusion is based on an examination of the lines in Figure II which connect the group centroids. The lines connecting the non-activist group centroid with the centroids of the leader groups are vertical in nature indicating group differences on the second function. The further conclusion that this second function does not differentiate the student activist leaders and the student government leaders is supported by the fact that the line connecting their group centroids is non-vertical.

Low placement of both the leader groups on this second function is explained, in part, by the heavy weightings assigned the Satisfaction with Students Scale and the Satisfaction with Administration Scale--scales on which the scores

*Individual discriminant scores can be found in Appendix D.

FIGURE II
INDIVIDUAL DISCRIMINANT SCORES
IN TWO DIMENSIONAL DISCRIMINANT SPACE



Second Function
Accounts for 17.7% of All the Variance Among Groups

of both the leader groups differed significantly from the scores of the non-activists.

In summary, the generalizations suggested by an examination of Figure II are:

1. Student activist leaders are the most independent and socially aware of the three groups; student government leaders are the least independent and socially aware.

2. Non-activists are more satisfied with the overall setting of the University than are student activist leaders and student government leaders.

3. Student government leaders disapprove of non-activists to a greater extent than do activist leaders.

The results of this study are in keeping with an earlier study of student activists at Berkeley. Heist, concluded his study[8] of Free Speech Movement members with the following generalizations:

> The persons participating in the Free Speech Movement, as compared to the average or non-participating students:
>
> (1) are more autonomous and independent of their cultural past,
>
> (2) have stronger and broader intellectual dispositions, and
>
> (3) are better students and obtain higher grade point averages.

---

[8]Heist, Paul., "Intellect and Commitment: The Faces of Discontent." Reported in: Order and Freedom on the Campus. Boulder, Colorado: Western Interstate Commission for Higher Education, 1965. p. 64.

Classification of Subjects by Discriminant Scores

A question that discriminant analysis and the resulting centroids is designed to answer. is -- "What group am I most like?"

This question can be answered by finding to which group mean each individual discriminant score is closest.[9] For example, if an individual's discriminant score is 3.5 units from the student activist mean, 5.6 units from the student government mean, and 4.7 units from the non-activists' mean score, we would then classify him as being a member of the activist group.

An examination of Table 13 reveals that the discriminant scores obtained in this study classified 24 of the 25 student activists as being student activists. Discriminant scores classified all of the student government leaders as being in the student government leader group, and classified 20 of the non-activists as belonging to the non-activist group.

In other words, 92% of the sample was properly classified by discriminant scores indicating a very low degree of overlap between the corresponding groups.

Such results not only support the multivariate hypothesis of this study, but indicate the discriminating power of the instruments used in the study as well.

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[9]Results reported in Appendix E.

Table 13

CLASSIFICATION OF ALL SUBJECTS BY
THEIR DISCRIMINANT SCORES

	Number Classified in Each Group By Discriminant Scores		
	Student Activist Leaders	Student Government Leaders	Student Non-Activist Leaders
25 Student Activist Leaders	24	1	0
25 Student Government Leaders	0	25	0
25 Student Non-Activists	2	3	20

Diagonal values indicate proper classification. Values off the diagonal indicate the degree of overlap between groups.

Classification of Subjects by the Clark-Trow Typology

The Clark-Trow typology[10] has been represented by short paragraph statements of each of four "orientations"--vocational, non-conformist, academic, and collegiate--followed by instructions to rank them in order of their accuracy as self descriptions.

The statements are:

Vocational*

This kind of person is interested in education, but primarily to the point of preparation of his occupational

[10]Trow, Martin. Student Cultures and Administrative Action. In R.L. Sutherland. et al.. (Eds.) Personality Factors on the College Campus. Austin Texas: The Hogg Foundation for Mental Health. 1962.

* Headings are not shown to the respondent.

future. He is not particularly interested in the social or purely intellectual phases of campus life, although he might participate in these activisties on some limited basis. This person does his homework so that grades can be maintained, but otherwise restricts his reading to the light, general entertainment variety. For the most part, this person's primary reason for being in college is to obtain vocational or occupational training.

Non-Conformist

This person is interested in learning about life in general, but in a manner of his own choosing. He is very interested in the world of ideas and books, and eagerly seeks out these things. Outside of the classroom, this person would attend such activities as the lecture-concert series, Provost lectures, foreign films, etc. This person wants to go beyond the mere course requirements and will frequently do extra readings in order to obtain a more complete understanding of the world in which he lives. From a social point-of-view, this person tends to reject fraternities, sororities, and the social events that are a part of campus life. When this person does join, it will usually be one of the political or more academic campus organizations. For the most part, this person would consider himself to be someone who is primarily motivated by intellectual curiosity.

Academic

This person is in many respects like the type noted above. He is concerned with books and the pursuit of knowledge, but is also the kind of person who does not cut himself off from the more social phases of campus life. He is interested in getting good grades and usually tries to maintain a farily high grade-point-average. He is the kind of person who will work with student government, the campus U.N. and activities of this type. He is the kind of person who feels that the social side of college life is not the most important but is certainly significant for his general development.

Collegiate

This is the kind of person who is very much concerned with the social phases of college life. He identifies closely with the

college and tries to attend as many of the campus social and athletic events as possible. This person may be interested in intellectual kinds of things but will, for the most part, find greater satisfaction in parties, dances, football games, etc. He is concerned about his education, but feels that the development of his social skills is certainly important. His college years are centered about fraternity and sorority activities even though he might not be a member. This person attempts to "make grades" but will rarely go out of his way to do extra or non-assigned reading.

Each of the 75 subjects were requested to respond to the following questions:

1. Which of the above statements comes closest to describing the kind of person you consider yourself to be?

2. Which is least descriptive?

3. Which comes closest to describing the kind of person you were when you first came to college?

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

5. Which comes closest to describing the typical Michigan State University student?

An examination of Table 14 revealed results as would be predicted.

1. Twenty-four of the 25 student activist leaders classified themselves as non-conformists.

2. None of the non-activists classified themselves as non-conformists.

3. None of the student government leaders classified themselves as non-conformists.

4. None of the 75 subjects perceived the non-conformist classification as being the best description of the typical Michigan State University student.

Table 11

SELF AND PEER PERCEPTION
ACCORDING TO THE CLARK-TROW TYPOLOGY*

Item	Classification	Student Activists	Student Govt. Leaders	Control (Non-Activists)
1. Which of the statements comes closest to describing the kind of person you consider yourself to be now?	Vocational	1	4	5
	Non-Conformist	24	0	0
	Academic	0	19	16
	Collegiate	0	2	4
2. Which of the statements is least descriptive of the kind of person you consider yourself to be now?	Vocational	6	4	6
	Non-Conformist	0	5	8
	Academic	0	1	0
	Collegiate	19	15	11
3. Which of the statements comes closest to describing the kind of person you were when you first came to MSU?	Vocational	6	9	8
	Non-Conformist	13	2	4
	Academic	4	13	10
	Collegiate	2	1	3
4. Which of the statements comes closest to describing the kind of person you would like to be if you had a choice?	Vocational	0	0	0
	Non-Conformist	23	15	8
	Academic	2	10	17
	Collegiate	0	0	0
5. Which of the statements comes closest to describing the typical MSU student?	Vocational	11	7	5
	Non-Conformist	0	0	0
	Academic	1	4	0
	Collegiate	13	14	20

*Based on equal N's of 25.

It is worth noting that 15 members of the non-activist group and 8 members of the student government group selected the non-conformist classification as coming closest to the type of person they would like to be if they had a choice This supports Kenniston's [11] conjecture--that to a great extent the uncommitted of our society are "acting out" the inner feelings of their committed peers.

SUMMARY

The findings of the study failed to support the null hypothesis that there are no differences in morale, socio-cultural awareness, degrees of perceived self independence and perceptions of the total university environment among groups of students classified as study activist leaders, student government leaders and student non-activists. It may therefore be concluded that such differences do exist among groups of students so classified.

Two statistically significant discriminant functions were found. The strongest discriminant function, accounting for more than 82% of the total variance among groups, was heavily loaded with Independence and Social Awareness variates. In addition, critical attitudes toward the administration and perceiving a lack of a scholarly environment also contributed to the first function. Both the nature of the discrimination among groups and the weights accord the variables indicated that the first discriminant function was primarily an Independence/Social Awareness function.

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[11] Keniston, Kenneth. The Uncommitted. New York: Harcourt. Brace and World, Inc., 1965. Chapter 13.

The complex of variates forming the second significant discriminant function indicated that the function primarily discriminanted along a satisfaction continuum.

Group status on the two functions was discussed. The first or Independence/Social Awareness function differentiated most effectively between the activist leaders and the student government leadership. When the non-activists were compared on this function, they were found to be more independent and socially aware than the student government group. This finding, however, must be tempered in knowledge of the fact that the non-activist group of this study was atypical in grade-average achievement and verbal ability.

Examination of group status on the second discriminant function revealed that it differentiated most effectively between the non-activists and the two leadership groups. This, coupled with the heavy negative weighting of the Satisfaction with Students Scale, lead to the conclusion that a significant portion of the non-activists' environmental satisfaction rests with their approval of fellow students. It cannot be concluded that this statement of approval includes their approval of student activist leaders or student government leaders. It can be concluded, however, that the activist leaders and government leaders are not overly approving of their fellow students; in particular non-activists.

Classification of subjects was carried out in two procedures. The first procedure classified all subjects under study by their discriminant scores.

The discriminant scores correctly classified 69 of the 75 subjects indicating a low degree of overlap between the three groups studied. The second classification procedure, specifically designed to test the student activist leaders and the non-activists, was the Clark-Trow typology. The results supported the initial classification of the study. Twenty-four of the activists classified themselves as non-conformists while none of the non-activists classified themselves as non-conformists.

In the chapter to follow, the implications and conclusions of the study will be discussed. In addition, attention will be directed toward those questions suggested by, but not answered by, this study.

CHAPTER V

SUMMARY AND CONCLUSIONS

SUMMARY

The purpose of this investigation was to study various characteristics of the student who is an office holder of a student activist group. The study was designed to differentiate among student activist leaders, student government leaders, and non-activists.

The variables of perceived Environmental Satisfaction, Social Background, Independence, and Socio-Cultural Awareness were shown to be theoretically related to student activists' and non-activists' styles of life. Accordingly, the following hypothesis was formulated and subsequently tested.

> It is possible to differentiate among groups of students classified as student activist leaders, student government leaders, and student non-activists.

The Methodology

The populations under study consisted of Michigan State University Student Activist Leaders, Michigan State University Student Government Leaders and Michigan State University Non-Activist Students who matched the Student Activist Leaders on the following characteristics: sex, grade level, grade point average, tested verbal ability, and academic major.

A sample of 25 activist leaders, 25 student government leaders, and a control group of 25 students falling outside either of the first two categories served as the treatment groups of the study.

The control sample--and this is important--is not a representative sample of Michigan State University undergraduates; instead, they represent a group of non-activist students that is in a number of important ways similar to the activist sample.

To test the hypothesis of the study, it was necessary to collect data relevant to the social backgrounds, perceived self independence, perceptions of the University setting, and the socio-cultural awareness of the members of the sample.

These characteristics were measured by having all 75 students complete the College Student Questionnaires (CSQ) Part 1 and Part 2, Section II, and also the College and University Environment Scales (CUES). Combined, the instruments test the following dimensions:

CSQ Scales

(SF) Satisfaction with Faculty

(SA) Satisfaction with Administration

(SM) Satisfaction with Major

(SS) Satisfaction with Students

(SH) Study Habits

(EI) Extracurricular Involvement

(FI) Family Independence

(PI) Peer Independence

(L) Liberalism

(SC) Social Conscience

(CS) Cultural Sophistication

(MG) Motivation for Grades

(FS) Family Social Status

CUES Scales

Practicality

Community

Awareness

Propriety

Scholarship

Detailed definitions of all of the above scales can be found in Chapter III.

Multiple discriminant analysis was selected as an appropriate statistical technique. Through the use of multiple discriminant analysis, it was possible to define the linear combinations of the previously mentioned variates (the 18 scales) which maximized the differences among the three sample groups and minimized the differences within them. Through an examination of the discriminant co-efficients which determine the linear combinations, it was possible to gain some insight into the nature of the basic phenomena which differentiate student activist leaders from student government leaders and non-activists.

The first linear combination of the multiple discriminant analysis maximized the discriminant criteria, the second combination maximized the

the discriminant criteria after the effects of the first combination had been removed.

The Test of the Hypothesis

The analysis of data yielded two significant discriminant functions. The null hypothesis was, therefore, rejected. A test of significance of the latent roots of the determinental equation indicated that both discriminant functions were statistically significant beyond the .001 level of confidence.

The Nature of the Discriminant Functions

The first discriminant function accounted for over 82% of the total dispersion among the treatment groups, and was considered to be an independence/social awareness/dissatisfaction function. The Extracurricular Involvement Scale, the Family Independence Scale and the Peer Independence Scale all received heavy weightings. The (EI) scale negatively and the (FI) and (PI) scales positively.

The social awareness dimension is attributed to the high positive weights also received by the Liberalism Scale, the Social Conscience Scale and the Cultural Sophistication Scale. The (L) scale having received the heaviest weighting of all variates in the function. The negative weights given to the Satisfaction with Administration Scale and all five of the College and University Environmental Scales suggested the dissatisfaction portion of the function.

Careful examination of the factor loadings of the second discriminant function revealed that the function could be considered a satisfaction continuum.

Such a conclusion was based on the loadings received by the Satisfaction with Students Scale, Satisfaction with Faculty Scale and the Satisfaction with Administration Scale. In addition, weightings of the same direction were received by four of the five College and University Environmental Scales.

Group Differences on the Two Discriminant Functions

Each individual's discriminant score along with the centroid or mean discriminant score for each group was plotted in a two dimensional space defined by the two significant functions. (Figure II) It was evident, from an examination of this graph, that the independence/social awareness/dissatisfaction function, plotted horizontally, differentiated most effectively between the student activist leaders and the student government leaders--the non-activists falling between the two extremes.

The second discriminant function, i.e., the satisfaction continuum, was not nearly as powerful in differentiating the sample groups as was the first. The second discriminant function differentiated almost solely between the non-activist group and the two leader groups. The leader groups, which were on opposite ends of the first function, received nearly identical placement on the second function.

Classification of Subjects

Discriminant analysis is designed to answer the question -- "What group am I most like?" A classification was made, based on the individual discriminant scores of the 75 participants in the study. The discriminant scores classified

24 of the 25 activists as being student activists. The individual discriminant scores also classified all of the student government leaders as being in the student government group, and classified 20 of the 25 non-activists as being non-activists. In other words, 92% of the sample was properly classified by use of the individual discriminant scores. Such results support the multivariate hypothesis of this study and also indicate the discriminating power of the instruments used.

Classification of subjects was also performed by use of the Clark-Trow typology. Results of this classification also supported the original sampling. Twenty-four of the 25 activists classified themselves as non-conformists, whereas, none of the non-activists or student government leaders classified themselves in this category.

CONCLUSIONS AND GENERALIZATIONS

Differences Between Student Activist Leaders, Student Government Leaders and Non-Activists

The generalized findings of the multivariate analysis of this study tend to support previous research findings regarding student activists. Of the 18 dimensions considered, the study established the psycho-social function of perceived self independence, socio-cultural awareness, and environmental dissatisfaction as the main source of variance existing between student activist leaders, their counterparts in student government and their fellow students classified as non-activists. It was concluded, therefore, that independence,

social awareness and general dissatisfaction with the university setting must continue to be considered characteristics of the committed activist student.

Generalizations

The following generalizations are offered by way of describing a student activist leader at Michigan State University:

1. His social origins are upper middle class. In terms of occupational prestige level, income, and education, his parents stand above those of the non-activists.

2. His parents were permissive and democratic in their child rearing practices.

3. He is both highly intelligent and intellectually oriented. His academic achievements are above the average for the university and his college.

4. He is not career oriented. In the curriculum he is predominantly found in the humanities and the social sciences.

5. He perceives himself as individualistic and independent from various sources of social influences and authority--in particular--family, peers, religious traditions, and other social conventions.

6. He is interested in, and sensitive to, various forms of artistic and aesthetic expression.

7. He considers himself to be non-religious and liberal.

8. In contrast with the privatistic concerns of the vast majority of American college students,[1] he perceives in himself a sense of responsibility and relationship to mankind.

9. His concerns regarding the curriculum are limited. He prefers to concentrate his attention on political and social issues.

It is difficult to conclude why, but even though student activist leaders at MSU and elsewhere are the most critical of and the most dissatisfied with the university environment, we still find them expressing very little interest in the broader educational issues which confront them and their institutions. After an initial protest against a specific injustice, these students are unwilling to devote sustained thought to the complex problems of educational reform, even when administrators might welcome such consideration.

10. He is especially critical of perceived administration arbitrariness and paternalism.

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[1]Kenneth Keniston, "The Faces in the Lecture Room," in Morrison, (Ed.), The American University. (In Press).

11. He is disinterested in organized extracurricular activities, such as student government, athletics, religious groups and pre-professional groups.

12. He holds a critical, even contemptuous, view of the university administration.

13. He perceives the total university setting as lacking in personal, poetic, cultural, and political understanding.

14. He considers MSU limited in its opportunities to search for personal meaning.

15. He also perceives MSU as having an environment where little emphasis is placed on high academic achievement, and where serious interest in scholarship is minimal.

16. On the characteristics surveyed and reported to date, he epitomizes the student activists at Berkeley, the University of Chicago and Penn State.

Theory Used

The use of socialization theory as a theoretical point of departure in researching student activists was supported by the findings of this study. Of particular significance is the compatability of the findings with the socialization

argument of Richard Flacks.[2] The argument, developed in Chapter I of this study, located the roots of activism in a segment of upper middle class American families, families which, according to Flacks, are responsible for the emergence of a new pattern of familial relations. It was Flacks' contention that young people reared according to these newer precepts would find it increasingly difficult to accept the traditional social values that require submission to authority, competition, ambition, and self control.

The results of this study indicate that such a contention appears worthy of further consideration.

IMPLICATIONS FOR FURTHER RESEARCH

The study of students at Michigan State University who became dedicated to and intensely identified with the work and future of student movements--especially movements of the "new left"--has revealed several unanswered questions and possibilities for further research. The more important of these suggestions are listed on the following pages.

1. Of first priority is the need to obtain CSQ data from a random sample of MSU undergraduates. The discriminant scores from this group, when placed in the discriminant space would greatly increase the interpretive powers of this study. The addition of such a group to the design would

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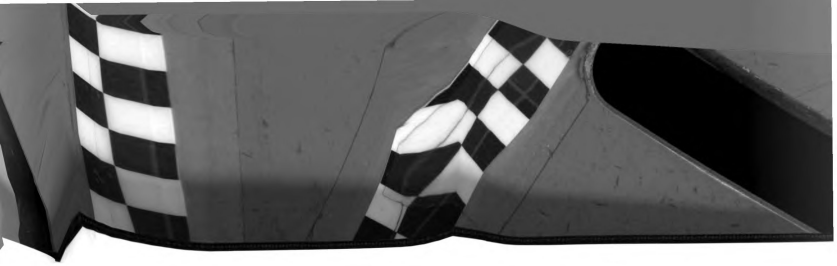
[2]Richard Flacks, "The Liberated Generation," op. cit.

also establish a third discriminant function. The examination of this third function would have possibilities of achieving a deeper understanding of the more subtle variance existing among the groups.

2. Of equal importance is the need to establish similar data representing the membership of Michigan State University's activist groups. Such data would allow for a comparison study contrasting the leadership of these groups with their rank and file members. A study of this nature would indicate to what extent MSU rank and file activists are similar to activist group members on other campuses, a point left unanswered by the present investigation.

3. Several statements in CUES required the treatment groups to report on how students behave at this institution. On such an item, students do not report on their values or value-relevant behavior. Perhaps, in so doing, they are reporting stereotypes of MSU's environment which no longer exist. Would responses differ if through the use of an interview schedule activists reported only their <u>own</u> actions and interests?

4. It would be desirable to use the basic design of this study to investigate student activists at other institutions. Such replications would serve to validate or invalidate the findings of this study, and would also add the longitudinal dimension of time, a necessary condition in attempting to comprehend the nature of social movements.



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APPENDIX A

Group Means for the Three Groups and for the Total Group
On the 18 Scales Employed in the Study

GROUP MEANS FOR THE THREE GROUPS AND FOR THE TOTAL GROUP ON THE 18 SCALES EMPLOYED IN THE STUDY

	Scale	Student Activists	Student Govern-ment	Control	Total Group
CSQ Scales					
1.	Satisfaction with Faculty	24.7	21.6	24.7	23.7
2.	Satisfaction with Major	23.8	23.8	24.7	24.1
3.	Satisfaction with Students	23.1	23.6	26.3	24.4
4.	Satisfaction with Administration	14.3	22.9	24.1	20.5
5.	Study Habits	25.6	22.3	25.9	24.6
6.	Extracurricular Involvement	14.9	27.5	19.0	20.5
7.	Family Independence	33.2	25.5	27.2	28.6
8.	Peer Independence	29.6	23.6	26.1	26.4
9.	Liberalism	36.9	26.8	28.5	30.7
10.	Social Conscience	33.4	27.3	28.7	29.7
11.	Cultural Sophistication	33.4	23.6	29.0	28.7
12.	Motivation for Grades	21.8	23.6	23.5	23.0
13.	Family Status	42.1	42.4	38.0	40.7
CUES Scales					
14.	Practicality	17.0	19.5	18.4	18.3
15.	Community	13.3	14.5	16.0	14.6
16.	Awareness	9.8	15.2	16.0	13.9
17.	Propriety	11.3	9.8	10.6	10.6
18.	Scholarship	7.7	11.8	12.9	10.8

APPENDIX B

Standard Deviations of the 18 Scales Employed in the Study for All Three Groups and for the Total Group

STANDARD DEVIATIONS OF THE 18 SCALES EMPLOYED IN THE STUDY FOR ALL THREE GROUPS AND FOR THE TOTAL GROUP

	Scale	Student Activists	Student Govern-ment	Control	Total Group
CSQ Scales					
1.	Satisfaction with Faculty	5.28	6.16	4.79	5.56
2.	Satisfaction with Major	8.07	9.05	8.97	8.60
3.	Satisfaction with Students	2.76	4.11	3.15	3.63
4.	Satisfaction with Administration	3.33	4.93	4.73	6.17
5.	Study Habits	5.06	4.53	3.77	4.72
6.	Extracurricular Involvement	3.58	2.96	4.98	6.54
7.	Family Independence	5.05	3.80	4.63	5.55
8.	Peer Independence	3.79	3.30	3.76	4.34
9.	Liberalism	3.45	3.48	4.88	5.94
10.	Social Conscience	3.97	4.18	5.13	5.11
11.	Cultural Sophistication	4.91	4.69	5.36	6.35
12.	Motivation for Grades	7.56	5.84	6.44	6.62
13.	Family Status	8.71	9.41	11.82	10.12
CUES Scales					
14.	Practicality	4.13	3.50	2.90	3.64
15.	Community	3.63	3.38	3.62	3.67
16.	Awareness	4.99	4.48	5.38	5.71
17.	Propriety	4.14	3.96	2.71	3.67
18.	Scholarship	4.60	4.52	5.78	5.42

APPENDIX C

A Comparison of the F and H Ratios Obtained for Each of the 18 Sets of Group Means

A COMPARISON OF THE F AND H RATIOS OBTAINED FOR EACH OF THE 18 SETS OF GROUP MEANS

	Scale	One-Way Analysis of Variance F-Ratio	Kruskal Wallis One-Way Analysis of Variance by Ranks H-Ratio
CSQ Scales			
1.	Satisfaction with Faculty	2.71	5.30
2.	Satisfaction with Major	0.09	0.83
3.	Satisfaction with Students	6.54*	13.53*
4.	Satisfaction with Administration	37.11*	37.70*
5.	Study Habits	4.92*	8.43*
6.	Extracurricular Involvement	66.29*	45.56*
7.	Family Independence	19.72*	27.00*
8.	Peer Independence	17.05*	25.42*
9.	Liberalism	45.97*	38.80*
10.	Social Conscience	12.65*	20.43*
11.	Cultural Sophistication	23.72*	29.83*
12.	Motivation for Grades	0.60	2.19
13.	Family Status	1.40	1.95
CUES Scales			
14.	Practicality	3.07	5.81
15.	Community	3.69**	7.11**
16.	Awareness	12.91*	18.43*
17.	Propriety	1.14	3.05
18.	Scholarship	7.53*	12.73*

*Significant at the .01 level. **Significant at the .05 level.

APPENDIX D

Individual Discriminant Scores

INDIVIDUAL DISCRIMINANT SCORES

Individual	Student Activist Leaders		Student Government Leaders		Non-Activists	
	1st Function	2nd Function	1st Function	2nd Function	1st Function	2nd Function
1	-9.5	-7.2	7.2	-3.4	0.7	8.0
2	-8.1	0.7	14.3	-6.9	2.4	-0.4
3	-8.2	-1.9	9.3	-5.9	-0.4	-4.1
4	-5.3	-10.6	12.8	-7.1	10.7	3.2
5	-1.6	-3.7	10.1	-11.0	3.5	1.8
6	-8.6	-6.6	13.7	-6.7	0.1	-0.0
7	-6.2	-4.8	12.8	-4.8	8.1	2.2
8	-7.9	-7.2	13.5	-8.0	4.8	2.5
9	-9.5	-4.3	4.4	-8.3	6.0	7.5
10	-6.0	-6.4	11.7	-7.7	-1.6	-2.2
11	-4.7	-4.4	12.1	-1.5	7.5	5.3
12	-6.9	-0.3	17.8	-0.5	11.1	-2.3
13	-9.6	-3.4	12.6	-9.6	-0.9	6.3
14	-6.6	-3.8	18.7	-2.5	5.9	4.8
15	3.4	-7.1	10.4	-6.6	9.2	-9.9
16	-9.4	-3.7	5.9	-9.2	8.9	-6.4
17	-10.5	-6.6	3.4	-10.0	7.9	-0.0
18	-11.1	-4.1	6.7	-7.1	2.2	3.9
19	-8.5	-2.9	8.1	-7.6	4.2	6.8
20	-5.6	-2.9	7.4	-4.3	4.3	1.1
21	-9.9	-6.2	9.4	-2.4	2.7	1.7
22	-9.2	-3.1	8.5	-3.6	5.3	5.8
23	-6.3	-1.0	7.3	-2.8	-0.6	-2.9
24	-12.8	-1.8	9.5	-6.7	8.9	1.6
25	-9.1	-4.1	9.4	-4.2	6.9	2.6
Mean	-7.5	-4.3	10.3	-5.9	4.7	1.5

APPENDIX E

Individual Discriminant Score Distances from Group Mean Discriminant Scores

INDIVIDUAL DISCRIMINANT SCORE DISTANCES FROM GROUP MEAN DISCRIMINANT SCORES

Individual	Student Activist Leaders			Student Government Leaders			Non-Activists		
	Distance From $\overline{X}_1$	Distance From $\overline{X}_2$	Distance From $\overline{X}_3$	Distance From $\overline{X}_1$	Distance From $\overline{X}_2$	Distance From $\overline{X}_3$	Distance From $\overline{X}_1$	Distance From $\overline{X}_2$	Distance From $\overline{X}_3$
1	3.5	19.9	16.7	14.7	4.0	5.5	14.8	16.9	7.6
2	5.1	19.5	12.8	22.0	4.2	12.8	10.7	9.6	3.0
3	2.4	18.9	13.3	16.9	0.9	8.7	7.1	10.8	7.6
4	6.6	16.2	15.6	20.6	2.8	11.8	19.7	9.2	6.2
5	6.0	12.1	8.1	18.8	5.0	13.6	12.6	10.3	1.2
6	2.5	18.9	15.5	21.4	3.5	12.1	8.7	11.8	4.9
7	1.4	16.6	12.6	20.3	2.8	10.3	16.9	8.4	3.4
8	3.0	18.3	15.3	21.3	3.8	12.9	14.0	10.1	1.1
9	2.0	19.9	15.4	12.6	6.3	9.8	17.9	14.1	6.1
10	2.6	16.3	13.3	19.5	2.2	11.5	6.3	12.4	7.3
11	2.8	15.0	11.1	19.8	4.8	8.0	17.8	11.6	4.7
12	4.1	18.1	11.7	25.6	9.3	13.2	18.7	3.8	7.4
13	2.3	20.1	15.1	20.8	4.3	13.6	12.4	16.6	7.4
14	1.0	17.0	12.5	26.3	9.1	14.6	16.2	11.6	3.6
15	11.2	7.0	8.7	18.0	0.7	9.9	16.7	4.1	12.3
16	2.0	19.8	15.0	14.3	5.4	10.7	16.5	1.5	8.9
17	3.8	20.8	17.2	12.3	8.0	11.5	16.0	6.4	3.5
18	3.6	21.4	16.8	14.4	3.8	8.8	12.7	12.7	3.4
19	1.7	19.0	13.9	15.9	2.7	9.7	16.1	14.1	5.4
20	2.3	16.1	11.2	14.9	3.3	6.4	12.9	9.3	0.6
21	3.1	20.2	16.5	17.0	3.6	6.1	11.8	10.8	2.0
22	2.0	19.7	14.6	16.0	3.0	6.3	16.3	12.8	4.4
23	3.4	17.3	11.3	14.9	4.3	5.0	7.1	11.3	6.9
24	5.9	23.5	17.8	17.1	1.1	9.4	17.5	7.7	4.2
25	1.6	19.5	14.9	16.9	2.0	7.3	16.0	9.2	2.5

$\overline{X}_1$ = Student Activist Centroid $\overline{X}_2$ = Student Government Centroid $\overline{X}_3$ = Non-Activists Centroid

APPENDIX F

Copies of Letters Sent to Control Group Members

MICHIGAN STATE UNIVERSITY East Lansing

Human Learning Research Institute

April 18, 1966

Dear _____:

Your cooperation is URGENTLY needed. For the past year we have been studying student perceptions and attitudes of Michigan State University.

On the basis of the following: sex, major, grade level, grade point, and level of verbal ability, your name has been selected for our study's control group.

In most instances you are the ONLY PERSON meeting these criteria, which places great significance upon your participation. Without your cooperation and assistance at this final phase of the study, most of its value will be lost.

Participation will require two hours of your time and will require you to respond to a multiple choice questionnaire.

Two testing sessions have been arranged during fall term registration. Please check on the enclosed card the time you would be willing to participate. If you are not returning to campus, we will arrange to mail the questionnaire to you.

Your assistance will be appreciated and we assure you that the results of the study will be made available to you.

Please do not forget to mail the enclosed card as soon as possible.

Looking forward to seeing you next month,

Sincerely,

George S. Paulus
Instructor

Arthur M. Vener
Professor

MICHIGAN STATE UNIVERSITY East Lansing

College of Education - Human Learning Research Institute

August 30, 1966

Dear _____:

Inasmuch as the overall success of our student perception and attitude study depends upon your cooperation, we find it necessary to write you this follow-up letter, once again requesting your assistance.

As we explained in the first letter, your name was one of the 25 selected from over 35,000 which matched our research criteria. The major problem is that in most cases we have no one to replace you if you should not be able to participate.

I certainly hope you will find it possible to become a participant in our study, either in person or by mail.

Please return the enclosed card as soon as possible. Our thanks if you have already done so.

Sincerely,

George S. Paulus
Instructor

GSP:jc
Enclosure