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After arriving at college with anticipations of the kinds of attitudes and behaviors they will favor as students, students sometimes transform their initial orientation into an actual student role and sometimes undergo a change and adopt a new set of orientations toward the student role. This study was directed toward determining the ways in which students acquire roles within student cultures. An effort was made to identify both the factors in the precollege environment that are associated with the initial orientation and the nature of interpersonal experiences in the college environment that confirm or change the initial orientation into an actual student role. Data were obtained in the summer of 1965 from 1822 entering students at the University of Massachusetts. An instrument called the Student Preference Schedule was used to measure orientations to the role of students. Such orientations were found to be: measurably diversified; related to aspects of family background; associated with a student's choice of a major and plans for graduate study; important, when combined with ability, in affecting academic performance; generally stable during the first 2 years of college; and measurably related to significant interpersonal encounters with faculty members. Extensive references and tables are included in the report. (JS)

Final Report

Project No. 5-0902
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CHANGING ROLE CONCEPTS OF COLLEGE STUDENTS

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Amherst, Massachusetts

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U. S. DEPARTMENT OF
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SUMMARY

The research reported here is an advance in the study of student cultures in colleges and universities. It has been directed toward determining the ways in which students acquire roles within student cultures. Students arrive at a college or university with anticipations of the kinds of attitudes and behaviors they will favor as students. Some students transform the initial student role orientation into an actual student role; others undergo a change, adopting a set of orientations toward the student role different from initial orientations. This research made an effort toward determining the factors in the pre-college environment that are associated with the initial orientation and toward identifying the nature of interpersonal experiences in the college environment that confirm or change the initial orientation into an actual student role.

Orientations to the role of student were measured by an instrument called the Student Preference Schedule. Respondents were asked to indicate their preference on a six-point scale from "strongly like" to "strongly dislike" for each of 192 activities and behaviors associated with college. The Student Preference Schedule provided measurement on eight orientations to the role of student through the factor analysis of ninety items. The method of analysis was a principal components technique, using tetrachoric correlations and achieving a final solution through varimax rotation. Factor scores for all respondents were computed from a single matrix based on data from 423 undergraduate students at the University of Massachusetts during the spring of 1965. The factor scores were computed through use of a program called COMFACT-II.

The research study obtained data in the summer of 1965 from 1822 entering students of the class of 1969 at the University of Massachusetts. These data provided measurements of the initial orientations of these students toward being students in a college. They also supplied information on the pre-college background of the students and their attitudes toward certain aspects of the in-college and post-college environment.

In order to arrive at some sense of the relationship between anticipate student role orientations and pre-college background, the research staff identified the highest scoring twenty-five percent and the lowest scoring twenty-five percent on each of the eight factors and examined the differences in the background characteristics of these extreme scorers. The Chi-square statistic was used to test the significance of observed differences.

The Vocational orientation represents a concern for acquiring skills and knowledge that will be directly applicable to future employment or for successfully completing a course of study in college so that one will be qualified for certain jobs requiring a college degree.

The sons of fathers holding occupations as professionals or managers were over-represented among the low scorers on the Vocational orientation. Thus, the concern for social mobility manifested itself more often in

terms of a Vocational orientation toward the role of student among male students of lower socioeconomic status. The Vocational orientation was also found to be concentrated among female students having a Catholic religious background and among male students planning to major in of the physical sciences. Both male and female high scorers on the Vocational orientation were more likely than low scorers to report that they had decided more than a year earlier on their major field of study in college and the high-scoring males were also more likely to express an interest in graduate study after college. The relationship of this orientation with socioeconomic status and with plans for graduate study suggests a concern for upward social mobility through entry into the professions.

The Instrumental Collegiate orientation is a particular kind of orientation toward the collegiate culture. The preferences shown in this factor run toward active participation in extracurricular activities as a leader, an organizer, or a worker.

Female students of Jewish religious background were over-represented among the high scorers on the Instrumental Collegiate dimension. For male students, an Instrumental Collegiate orientation was associated with an expressed intention to pursue graduate study after college. In personal encounters and interviews, one often finds these students to be quite bright and desiring to pursue graduate studies, but they are drawn to direct their energies toward organizing activities in the environment in which they find themselves at the moment.

The Intellectual orientation to the role of student is conceived as an interest in art and ideas outside the context of formal course instruction in a college.

Among entering freshmen students scoring high on the Intellectual factor, there were over-represented the sons of fathers who were professionals or managers, and males of Jewish religious background. Females scoring high on this factor included a disproportionate number of those reporting no religious background. Both males and females manifesting the Intellectual orientation were concentrated in the humanities and social sciences as major fields of study, and they also tended to express an interest in graduate study after college.

The Consummatory Collegiate orientation represents another orientation to the collegiate culture of a university campus. In this instance, the student seems to be a "consumer" of the collegiate environment produced by those with an Instrumental Collegiate orientation. The emphasis is on being rather than on doing.

In his research, no clear associations have emerged between the Consummatory Collegiate orientation and aspects of the pre-college background. Entering freshmen scoring high on this factor did, however, avoid the physical sciences as a major field of study, and they further reported that they did not intend graudate study after college. These negative relationships represent an orientation away from things calling

for a strong commitment to study--majoring in the physical sciences and planning on graduate school.

An orientation toward Social Development indicates a concern with developing the self through meeting people and helping people.

Females scoring high on Social Development tended to be the daughters of fathers who were employed as professionals or managers. There were differences in choice of major field between high scoring males and high scoring females on this factor. The women tended to favor education, nursing, and home economics; the men were over-represented in the biological sciences. If one assumes that some proportion of the entering freshmen majoring in biological sciences were thinking in terms of careers in the healing arts, then the helping aspect of this fact or seems to assume a major focus. Males and females scoring high on this factor were also distinguished on the basis of the men expressing an interest in graduate study and the women expressing a lack of interest in graduate study. In this regard, one might note that the healing and helping arts for males (e.g., medicine and dentistry) require professional training at the graduate level, while the healing and helping arts for women (e.g., nursing, teaching, and home economics) do not.

A Ritualistic orientation is characteristic of students who are somewhat more strongly oriented toward their homes than they are to the college or university. At the campus, they seem to prefer activity or inactivity that is solitary rather than social--for example, "playing solitaire" or "working on crossword puzzles." Neither the academic nor the collegiate environments excite them. They dislike "participating in serious discussions in class" and "going to parties that are wild." Their orientations to the future are apparently bound up in their relationships with their parents. They seem to be passing through the educational experience without any clearly defined personal goals.

Among the entering freshmen males of the University of Massachusetts who scored high on the Ritualistic factor, there was an over-representation of Catholic students and an under-representation of Jewish students. Females scoring high on the Ritualistic factor tended to be the daughters of fathers in relatively low status occupations. The ritualistically oriented students seemed to have little interest in graduate study after college.

The Academic orientation is one in which the student manifests on interest in knowledge acquired within the context of courses, examinations, and grades.

Among females scoring high on the Academic factor, there was an excess of girls of Protestant background. This factor also had a disproportionate number of girls expressing an intention to major in the physical sciences. Academically oriented males and females were more likely than others to report that they had made an early decision on their major field of study and also that they planned to pursue graduate study.

The eighth orientation is specific to the Fraternity and Sorority system of the American college. Virtually all items on this factor make reference to the Greek life. No clear relationships between pre-college environment and the fraternity-sorority orientation were established in this research.

Multiple discriminate analysis of the initial role orientations of a sample of 597 students showed that these orientations were related to academic success in college at the end of one year. Predicted grade point average was more strongly associated with academic success than were any of the role orientations, but the attitude with which a student approached study influenced the effects of ability. The Social Development, Vocational, Intellectual, Academic, and Ritualist orientations were high among students who did well academically or chose to leave college. The Fraternity-Sorority, Consummatory Collegiate, and Instrumental Collegiate orientations were related to borderline performance or dismissal from college. Further, over-achieving (doing better academically than expected) was positively associated with the Vocational, Social Development, Academic, and Ritualistic orientations and negatively associated with the Fraternity-Sorority, Intellectual, and Consummatory Collegiate orientations.

Samples of freshmen in the spring of 1966 and sophomores in the spring of 1967 responded to the Student Preference Schedule and to a Student Experience Inventory. The first of these research instruments made it possible to determine the extent to which orientations toward the role of student had changed. The second research instrument provided data on the interpersonal relationships in college that might have been related to changes.

Overall change in the role orientations was limited. The strongest was an increase in the Consummatory Collegiate orientation among males in the freshman year. The general trend was toward a decline in other orientations.

Some effort was made to determine the extent to which contact with faculty members influenced change in role orientations. Multiple discriminate analysis suggested that reported contact with a faculty member in face-to-face situations at least once a week was associated with an increase on the Intellectual and Vocational role orientations, while the absence of any significant faculty contact was associated increase on the Consummatory Collegiate dimension.

One may conclude from this study:

(1) That there is measurable diversity in the orientations with which entering freshmen approach the role of college student;

(2) That those orientations to the student role are related to aspects of the student's family background;

(3) That those orientations are associated with a student's choice of major field of study and plans for graduate study;

(4) That those orientations, in combination with ability, affect academic performance in college;

(5) That there is little overall change in the orientations during the first two years in college;

(6) That individual changes in orientations are measurably related to significant interpersonal encounters with members of a faculty.

Chapter 1. INTRODUCTION

In recent years, social scientists have given increasing attention to the common characteristics of "total institutions" - settings in which persons may spend all the hours of the day for considerable periods of time (Goffman, 1961, pp. 1-124) In this sense, prisons, mental hospitals, orphanages, leper colonies, monasteries, concentration camps, and universities fall into the category of "total institutions". An "inmate" population sleeps, eats, works and plays within the institution under the supervision of a staff. Custody of the inmates may be the prime consideration of some institutions; change in the attitudes or behaviors of the inmates may be a supplementary or alternative aim of other institutions.

The attitudes and behaviors of the inmate population may follow a pattern called a culture or a subculture or a contraculture. Any of a number of theories may be proposed to explain the origin of this culture. For example, the pattern may be interpreted as a reaction to institutional conditions or as a defense against the degradation, mortification, or depersonalization of the institutional experience (Wheeler, 1961). Variations in cultural patterns within and among institutions may be attributed to personal characteristics and experiences prior to institutionalization (Schrag, 1961; Cressey and Irwin, 1962) or the manifestation within the institution of latent social roles (Becker and Green, 1960).

Students of a university are the "inmates" of a "total institution". The institution maintains regulations for their custody but further carries on a program of education intended to produce change in the inmates. One question is whether the cultural pattern of these inmates is to be regarded as a reaction to institutional conditions, as the manifestation of latent social roles, or as the development of individuals along lines of personal concern.

It is commonplace to note that college students frequently behave in a manner other than that desired by the president, the deans, and the faculty. Students sometimes seem not to act in conformity with what are regarded as the well-understood goals, values, and functions of the college. Indeed, there seems to develop a student subculture--a set of values and norms in conflict with the culture of the college.

The notion of "subculture" is favored by some because they feel that, above the cluster of attitudes and behavior specific to the students at a college, there is a pattern of attitudes and behaviors common to the college as a whole. Sanford (1962a, p. 58), for example, expects to find "an overall college culture, in which faculty, administration, and students participate, and a number of subcultures." He anticipates that this common culture will include a philosophy of education, a set of standards for performance, and some general orientation to such aspects of life as religion, politics, art, and economics. He expects, further, that any student will assimilate at least part of this culture, even though some subculture may also have significance for the individual.

Robert Merton's essay on "Social Structure and Anomie" (1937) has been a starting point for several conceptions of delinquent subcultures and his scheme may be applicable to student subcultures as well. His basic assertion is that deviant behavior within a social structure occurs when there is a dissociation or discontinuity between socially approved and valued goals and socially acceptable means or norms for attaining those goals. Thus, if one conceives the primary goal of college education to be the learning of a body of knowledge and the means for attaining that goal to be a study of the subject matter and successful passing of examinations, then one may conceive deviant behaviors that will occur due to an inability to attain the goals through those legitimate means. There is the alternative of innovation, through which students may continue to accept the goals but seek to attain them by illegitimate means (e.g., cheating). Other students may adopt the course of ritualism, rejecting the goal of learning but going through the procedure of attending classes and taking examinations for a period of years. Others may adopt a policy of retreatism or rebellion, rejecting both the goals and the methods of college education, in some cases substituting a new set of goals and behaviors for the college years. When any such pattern becomes widespread among the students and persists through transmission from the upperclassmen to the freshmen, then one may say that a subculture has developed.

An analysis in terms of Merton's scheme will attribute an autonomous and conflicting student culture to the inability of a segment of the students to play the game according to the rules. Either they lack the ability to meet the demands of the faculty or the faculty is too stingy or too selective in rewarding effort.

Merton's typology may seem particularly appropriate to the faculty and administration of a college. Acknowledging that it is difficult to determine with methodological rigor whether there is a distinctive adolescent subculture, Albert Cohen (Gottlieb and Ramsey, 1964, pp. 31-32) gives a subjective evaluation common to many persons:

> A sufficient test for me that the cultures of young people are significantly different from my culture is that I don't understand much of what goes on amongst them, and much of what I see I am upset by. I don't understand because I simply don't know what rules they play by, where this or that 'fits in', although they obviously know.

An inability to understand the rules by which another plays the game can give rise to the opinion that the other's behavior is rebellious,

but this is not the only interpretation. His rules may have been independently formulated, without a wilful effort to set up a system of competing rules.

In delinquency research, there are those who criticize the theory of subcultures on the grounds that its proponents speak from the point of view of interest groups that favor the "larger cultural system". Those who call lower-class adolescent culture a subculture tend to be persons who are committed to middle-class adult culture. Such class-centered individuals assume that all must orient basically toward this larger culture. They fail to realize that a culture may arise and maintain itself independent of this set of values and norms associated with middle-class adults. The conflict of cultures is incidental--not the consequence of a reaction by one culture against the other.

This criticism may have relevance for the college situation. What has been called the culture of the college up to this point is, in a sense, the culture of the administration and the faculty. Members of these dominant interest groups tend to assume that all members of the "society" share these basic values. Any contrary system of values is regarded, then, as a subculture that has arisen out of a discontinuity between the commonly accepted goals of college and the legitimate means for attaining those goals.

In accord with this criticism of the theory of subcultures, a more profitable orientation to the study of student culture might be one that sees the student as an individual who: (1) comes to college with a set of goals, (2) encounters a set of goals and expectations held by the faculty, and (3) lives in a group of individuals who transmit to one another a set of goals and expectations that is the consequence of a historical tradition of such individuals living together.

In an exploratory study at the University of Massachusetts, 125 students were asked in interviews to respond to a question on the function of an ideal university drawn from the Cornell Study of Values (Goldsen et al., 1960). When confronted with six alternatives in that question, thirty-eight percent of the students identified the prime function of the university as providing "a basic general education and appreciation of ideas," while another thirty-eight percent said that the function of the ideal university was to "provide vocational training: develop skills and techniques directly applicable to your career." Equal numbers of students, then, responded with "general education" and "vocational education" as the prime function of the ideal university.

When asked their personal reasons for coming to college, however, sixty-two percent of the students answered in terms of vocational training, and only twenty-two percent spoke in terms of general education. Asked whether their reasons for being in college had changed, seventeen percent reported an increased concern with general education, but another ten percent said that they had an increase in vocational concern.

Personal concerns, then seemed to have been more vocational and less academic than the student's conceptions of the functions of an ideal university. For a substantial proportion of the students, the ideology of the ideal university was a set of ideas separate from the motives and attitudes governing the student's own choice in being in college. For some proportion of the college population, commitment to broad, general education and the appreciation of ideas was a superficial commitment not really relevant to personal goals.

This difference between attitudes on the function of an ideal university and attitudes on the significance of the university for the individual himself highlights an obvious but neglected point for research in the development of college students. There are attitudes that represent a person's understanding of the values of a social system, and there are attitudes that represent values closely related to his motives. Attitudes of the first sort may be called ideological--attitudes held in a superficial way, useful for maintaining a consensus among persons who identify themselves as a group. Attitudes of the second sort may be called motivational--attitudes closely related to the actual behaviors of the individual.

It may be that the ideology acquired in the college or university is not acquired in a strength that would overcome the ideology with which students approach the college or university. Further, it may be that the students "reinforce" one another's values and attitudes regarding education beyond the capacity of the faculty for producing change in the students. In their study of attitudes toward higher education at the University of New Hampshire, for example, Jervis and Congdon (1958) found no increasing awareness of or agreement with faculty values in the course of the years at college.

The extent of a student's experiences with other students may be considerable, far exceeding contact with the faculty. The frequency and duration of nonacademic experiences exceeds the frequency and duration of academic experiences at college. One estimate indicates that the American college student spends approximately 2,000 hours in classes, seminars, and laboratories during four years at college, and about 7,000 hours in sundry forms of extracurricular activity. (New York Times Magazine, March 8, 1964, p. 53)

Freedman (1956) concludes that the student culture is the "prime educational force in the college", arguing that "assimilation into the student society is the foremost concern of most new students". Riesman and Jencks (1962, p. 78) maintain that "in all but a handful of colleges, the student culture outweighs the efforts of the faculty to make direct contact with the students even when, as occassionally happens, these efforts are more than perfunctory". Sanford (1962b, p. 263), however, suggests that the impact of college on the values of a student is only a temporary phenomenon. He says that the values of the entering freshman are those of family and home community, and that the values of the faculty or of the student culture "are not internalized but merely

borrowed for the occasion". Nevertheless, Bushnell (1962, p. 510) maintains that we should accept as established the influence of student culture and move now to "a consideration of how best to conceptualize and understand its relationship to the functioning of the entire college".

For every student who spends four years at college, there are seven college classes that have significance for him: his own, the three preceding his own, and the three following his own (Hartshorne, 1943). The structures of college organizations tend to confront freshmen with sophomores in the socialization process, but Freedman (1956) suggests the junior class in college ought to be regarded as the "chief heirs and transmitters of the culture". His analysis indicates that the junior year in college is one of maximum solidarity. Many of the deviant members of the class have withdrawn from the college, and the social bonds among the others are strong. The energies of sophomores are concentrated on academic performance and social life. Seniors, like prisoners soon to be released (Wheeler, 1961, pp. 710-712), begin to orient themselves toward the culture of the larger society into which they will soon go. The juniors, then, in Freedman's view, are the models of behavior for freshmen.

Assuming the existence of a single set of faculty expectations regarding student development, Barton (1960) conceptualizes five kinds of influence by students on students. The first is a situation of no peer influence, where the change desired by the faculty is achieved by the end of a student's four years at a college. In the second situation, peers act as insulators, so that there is no change within the four years. Third, peers may act as accelerators, producing a change in the direction desired by the faculty in less than four years. Fourth, peers may subvert, bringing about a change in a direction other than that desired by the faculty. Finally, peers may have a multiplying effect, so that change in the direction desired by the faculty exceeds that which is expected.

Studies of the influence of students upon students have appeared from time to time over the years, and interest in this area seems to have intensified recently. Such research has involved elementary school, high school, and college environments. At the same time, other research has dealt with the influence of peers in other, nonacademic environments--notably juvenile gangs. Although such a field as the "sociology of adolescence" now classifies a number of studies from different areas of activity, an approach that unifies concepts from these different areas tends to be lacking. The research proposed here should have relevance not only for the effectiveness of education in an environment of peer influence but also make a contribution to the understanding of the role of the "socializing peer" in the process of socialization.

The need in research has been to devise a means for identifying the kinds of roles adopted by students in college, to determine what characteristics of the pre-college environment are associated with an initial

orientation to a particular role, and to discover how interpersonal relationships in college reinforce or change orientations to roles.

The objectives of this reasearch, then, have been: (a) to develop a method for identifying the orientations of students to the role of student; (b) to find associations between the anticipated student role orientation of the entering freshman and aspects of his pre-college environment: (c) to determine the extent to which there was change from the anticipated student role orientation to the actual student role orientation; and (d) to find associations between changes in the student role orientations and aspects of the interpersonal environment of the college.

Chapter 2. METHODS

The first task in this research was to develop a typology of orientations to the role of student. This was done through an examination of previous efforts to develop typologies.

One concern in colleges is the perceived conflict between faculty emphasis on academic learning and student interest in vocational training for a career. Research at the University of New Hampshire (Jarvis and Congdon, 1958) showed that there are grounds for such concern. There, the faculty did indeed, tend to stress intellectual growth and intellectual activity more than did the students, and the students considered vocational preparation, social growth, and acquiring the degree as important, more than did the faculty. Both students and faculty shared a concern for self-fulfillment, self-understanding, and life preparation as proper goals in a college education. The authors of that research concluded that "the culture which produced the students, and to which most of them will return, is overwhelmingly characterized by concerns of social, economic, and vocational expediency." They observed no increasing awareness of or agreement with faculty values during the students' time at college. The social background of the students was regarded in this case as the source of the culture shared by the students, and there seemed little assimilation into the culture represented by the faculty.

Trow (1960, pp. 105-123) identified four "dominant forms that student subcultures take on American campuses." The four types are based on two basic orientations: the level of identification with the college and the level of involvement with ideas. Where students are committed to the college and have an interest in ideas, the culture tends to be academic in its nature. Identification with the college without a commitment to ideas characterizes the collegiate culture. Students interested in ideas but uninterested in the college as such form a nonconformist, intellectual culture. The consumer-vocational culture occurs where a substantial proportion of students neither identify with the college nor feel committed to ideas.

Clark and Trow (1966) distinguished two varieties of Trow's vocational culture. Diploma vocationalism exists where successful completion of a number of years of study at a college is regarded as necessary to obtain a job. Skill vocationalism is found where students believe that some sort of learning of job-related skills and information must occur in order to find employment at a later date. Under skill vocationalism, study may be quite intense.

Wedge (1958) identified four types of student culture somewhat similar to those already mentioned, but added a fifth that may be of some importance. This is an aggregate of students who are achievers without strong goal commitments. They do rather well in their studies, but they have not clearly defined the goals of education for themselves. The author speculated that this might constitute the largest group of students.

Pace and Stern (1958) identified through factor analysis of data from a questionnaire five basic college environments: a humanistic, reflective, sentient culture that fits the usual image of the liberal arts college; a scientific, competitive culture with an academic emphasis on science and technology; a practical, status-oriented culture, characterized by a vocational orientation toward business and engineering, flavored with a strong social life; a human relations, group welfare culture common to the kind of small college that emphasizes warm relations between the school and the community, the faculty and the students; and a culture of rebelliousness, distinguished by noisy, inattentive, spontaneously acting students.

From these previous efforts in the study of student culture, this study derived an initial typology of seven student roles:

(1) Academic and scholarly, of either a humanistic or a scientific orientation, with concern for acquiring the formal knowledge of courses taken in the college.

(2) Intellectual but nonacademic, stressing art and ideas outside the context of formal course instruction; in one instance or more, following the nonconformist pattern that may be called "beat."

(3) Skill Vocationalism, emphasizing skills and knowledge from course instruction that will be directly applicable in future employment in science, technology, business, education, or social work.

(4) Diploma Vocationalism, seeking successful completion of a course of study in a college so that one may be qualified for certain jobs requiring a college degree.

(5) Collegiate and athletic, stressing enjoyment of the experience of being in college through social and athletic activities.

(6) Special growth and education, learning to get along with people; a justification, perhaps, for the short-run hedonism of the collegiate culture.

(7) Ritualistic, fulfilling personal, parental, or social expectations regarding educational activity in pursuit of diffuse goals; going to college because it's the thing to do--the ritual of education.

Having devised this typology, the research staff turned to developing an instrument for measuring the role orientations represented in this typology. It did this through use of a questionnaire that asked the responding student to indicate the level of his preference for each of a large number of behaviours open to a college student. The instrument was designed to extract, through factor analysis, clusters of behaviors that conform to the roles in the typology.

One method of assessing a student's orientation toward a student culture has been to confront him with global descriptions of alternative kinds of college environments, asking him to indicate which of these is most applicable to his college or is most preferred by him. (Gottlieb and Hodgkins, 1963) It may be, however, that a student's reaction to a phrase, a sentence, or a paragraph describing in general terms a particular kind of college environment may assess ideological attitudes only weakly related to what he himself does as a student.

An alternative method is to ask a student to indicate which of a number of behaviors he has actually performed as a student. Factor analysis of the responses of a number of students should reveal certain basic orientations to performance in the role of student. Warren (1966) has used such a method in his research. He developed a checklist of events, listing 198 experiences that a student might have at college. A student responded by indicating whether he had experienced an event "not at all," "once or twice," or "three or more times" during the two weeks preceding.

Yet another method is one that would have students respond in terms of their personal preference for a number of behaviors available to students in a college or university. This is the method that has been used in this study.

The first stage in the development of the Student Preference Schedule was the selection of a repertoire of behaviors. Undergraduate students in introductory courses in sociology and psychology were asked to list the kinds of things that they liked to do at college. They were instructed to include any form of activity or inactivity, listing as many as they could bring to mind and being as specific as possible. The researchers supplemented these listings with other behaviors extracted by examination from the undergraduate newspaper and the student activities calendar. Duplications were eliminated, and a set of 411 behaviors was obtained.

In the next stage, the number of behaviors was reduced by selecting those that seemed clearly related to any one of seven basic orientations to the role of student: academic, intellectual, skill vocational, diploma vocational, collegiate, social growth and education, and ritualistic. Three judges examined independently each of the items and classified each in one of the seven categories. Those items for which there was agreement among at least two of the three judges were retained for the Student Preference Schedule.

The first form of the instrument was tested with other classes in introductory sociology and introductory psychology. Each student was instructed to indicate how much he preferred each of the behaviors by use of a six-point scale running from "strongly like" to "strongly dislike." The students were also asked to write comments beside any items with which they experienced difficulty. From the pattern of responses and the comments provided by these students, the researchers modified the Student Preference Schedule. Some items were added, others dropped, and others altered.

The final form of the Student Preference Schedule, containing 192 items, was administered to 423 students who approximated a representative sample of the populations of undergraduate students at the University in terms of sex, class, and school within the University. Males accounted for 53.9 percent of the sample and 57.1 percent of the undergraduate population. Seniors were 18.2 percent of the sample and 17.0 percent of the population; juniors were 27.6 percent of the sample and 21.8 percent of the population; sophomores were 24.1 percent of the sample and 26.2 percent of the population; freshmen were 30.3 percent of the sample and 34.7 percent of the population. Students in the College of Arts and Sciences accounted for 61.2 percent of the sample and 57.4 percent of the population.

The limitations of the electronic data-processing equipment and computer programs available made it necessary to reduce the number of items used in the factor analysis of the Student Preference Schedule. Not more than one hundred variables could be used in a single analysis. It was decided to analyze half of the 192 items in each of two runs and then to select 100 items or less from those two analyses. The 96 odd-numbered variables were examined in the first analysis, and the 96 even-numbered items formed the second analysis.

The factor analysis used a Fortran program called EDIFACT on the Control Data Corporation 3600 computer at the University of Massachusetts. The factor analysis was based on a matrix of tetrachoric correlations, using a principal components method and varimax rotation.

In each of the two analyses, then, six of the first eight factors conformed to the kinds of dimensions expected. From the six relevant factors in each of these two analyses, the research staff took the eight highest loading items. This would represent 96 possible items from eight items in twelve factors, but duplication reduced the number of items to 90.

The 90 selected items were analyzed by the same method used in the original analysis of the odd-numbered and the even-numbered items. The first eight factors satisfied the research staff in representing the kinds of dimensions in which it had interest. Analysis beyond eight factors produced factors that were specific to one or two particular items rather than constituting a cluster of items.

Alternative methods of selecting items were tried. Rather than selecting items on the basis of high factor loadings on relevant factors, the research staff combined the 50 items having the highest communalities in the odd-numbered analysis and the 50 items having the highest communalities in the even-numbered analysis. These 100 items selected on the basis of communalities produced eight factors that were identified as:

(1) Intellectual,

(2) Instrumental Collegiate,

(3) Skill Vocational,

(4) Ritualistic,

(5) Social Development,

(6) Diploma Vocational,

(7) Consummatory Collegiate, and

(8) Academic

This alternative analysis produced eight relevant factors, actually distinguishing between skill vocationalism and diploma vocationalism as the other analysis did not do, but it was not fully satisfactory on other grounds. There was a greater number of items having high loadings on two or more factors. This might be anticipated, since the communalities that were the basis for item selection were an index of the strength of an item across several factors rather than within a single factor.

Another analysis was based on a selection of twelve items for each of eight factors, with the criteria of selection being (a) a high factor loading in the factor in the odd-numbered or the even-numbered analysis, (b) a high communality in the earlier analysis, and (c) the apparent relevance of the wording of the item to the factor. The analysis of the first 96 items so selected did produce a factor structure of the sort desired. The factors were identified as:

(1) Intellectual,

(2) Instrumental Collegiate,

(3) Skill Vocational

(4) Ritualistic,

(5) Social Development,

(6) Diploma Vocational,

(7) Consummatory Collegiate, and

(8) Non-intellectual Academic.

An effort was made to improve this selection by dropping several of the weaker items and adding others to increase the strength of certain factors having a small number of strong items. This analysis produced a slightly stronger factor structure of the same type.

The alternative methods of analysis, however, showed weaknesses beyond the first three factors, so that we ultimately returned to the 90 items that had been selected as the highest loading items on relevant factors in the first analysis. Appendix A lists these 90 items and all factor loadings greater than .20.

The content of those factors may be summarized in this way:

Factor 1: The highest scoring items on this factor tended to be those that had been predicted to be related to an orientation of skill vocationalism--'going to professional meetings on campus in my career field,' 'gaining practical and direct experience for my chosen occupation,' and 'talking to professionals about the skills necessary in my future career.' There were also some items that had been predicted to cluster on another factor as diploma voctionalism--for example, 'talking with professors about job opportunities,' and 'attending informal discussions on job opportunities.' This first factor, then, may be identified as a general Vocational role orientation.

Factor 2: The preferences shown in this factor run toward active participation in extracurricular activities as a leader, an organizer, or a worker. Performance and achievement in a collegiate area are distinctive in these items--'being on a committee that arranges college-wide events,' 'belonging to a group that promotes college spirit,' 'working on the college yearbook,' and 'holding office in student government.' The emphasis on performance and achievement leads to calling this an Instrumental Collegiate role orientation.

Factor 3: This factor seems clearly to capture what was intended as an Intellectual role orientation. The items refer to poetry, philosophy, art, literature, social issues, and scholarly essays. They refer to the world of ideas without any reference to the formal course structure of the academic institution. This supports the distinction made by Trow (1960) and others between the intellectual and the academic.

Factor 4: The items associated in this factor show an orientation toward both social activity and social inactivity. Several of the

highest scoring items refer to killing time, socializing, sitting with friends, and talking in the local college hangout. Others refer to loafing generally on campus. Other items mention drinking at fraternity parties, going to wild parties, and 'getting together with a bunch of kids and doing crazy things.' This is a collegiate factor, but it lacks the emphasis on performance and achievement found in the other. Here the energies of the students are dissipated in activity and inactivity that is experienced as intrinsically pleasurable. This factor has been labelled a Consummatory Collegiate role orientation.

Factor 5: This factor indicates a concern with developing the self through meeting people and helping people. The strongest items indicate preferences for 'meeting different kinds of people,' 'meeting people from other parts of the world,' and 'traveling and seeing different places.' Relatively strong on the factor are 'helping people with problems' and 'being a member of a service organization on campus.' This factor shows a role orientation toward Social Development.

Factor 6: The students whose preferences produce this factor are more strongly oriented toward their homes than they are to the university. At the campus, they seem to prefer activity or inactivity that is solitary rather than social--'playing solitaire' and 'working on crossword puzzles.' Neither the academic nor the collegiate environments excite them. They dislike 'participating in serious discussions in class' and 'going to parties that are wild.' They cross the days off the calendar as the days go by, and they go home on days when classes are not held. Their orientations to the future are apparently bound up in their relationships with their parents. They seem to be passing through the educational experience without any clearly defined personal goals. Their role orientation may be appropriately labelled Ritualistic.

Factor 7: Here are clustered together the preferences of students who say that they like 'studying,' 'putting in a full evening of serious studying,' 'getting work done on time,' 'being prepared for class,' and 'finishing assignments early so that I can do some independent study in the course.' Both the positive and the negative items on this factor are consistent with an Academic role orientation.

Factor 8: This factor is strong on a set of items that make specific reference to Fraternities and Sororities. Several of these items also had relatively strong loadings on the instrumental and consummatory collegiate factors. This factor reveals the participation of some students in the Greek system on campus.

Analysis by Pearsonian product moment correlations revealed no significant association between any two of the eight factors (see Table 2-1). The highest correlation coefficients were + .08, found between Vocational and Instrumental Collegiate, between Instrumental Collegiate and Social Development, and between Social Development and

Table 2-1

Intercorrelations of Eight Factors from 90 Items

of the Student Preference Schedule (N=423)

	Vocational	Instrumental Coll.	Intellectual	Consummatory Coll.	Social Development	Ritual	Academic	Fraternity Sorority
Vocational	1.00	0.08	-0.04	0.00	0.03	-0.01	0.06	0.05
Instrumental Coll.	0.08	1.00	-0.02	0.04	0.08	-0.00	0.02	0.06
Intellectual	-0.04	-0.02	1.00	0.00	-0.04	0.05	0.04	0.02
Consummatory Coll.	0.00	0.04	0.00	1.00	0.00	-0.03	-0.08	0.01
Social Development	0.03	0.08	-0.04	0.00	1.00	-0.03	0.08	0.00
Ritualist	-0.01	-0.00	0.05	-0.03	-0.03	1.00	0.01	0.05
Academic	0.06	0.02	0.04	-0.08	0.08	0.01	1.00	0.03
Fraternity-Sorority	0.05	0.06	0.02	0.01	0.00	0.05	0.03	1.00

Academic. There was a correlation of - .08 between Consummatory Collegiate and Academic.

The College Student Questionnaire developed by the Educational Testing Service include a question asking students to rank their preferences among four descriptions of college environments. The four described environments conform to the classification of student cultures developed by Clark and Trow (1966): Vocational, Academic, Collegiate, and Intellectual Nonconformist. With the permission of the Educational Testing Service, we included this question in our Student Background Schedule. This makes it possible to compare outcomes in the two ways of measuring student orientations to the college environment.

Correlations were computed between the factor scores of individuals in their responses to the Student Preference Schedule and the rankings from one to four that they made of preferences among the four student cultures based on the Trow typology (see Table 2-2). Correlations were not high, but in several instances they did reach a level of significance. The significant correlations are consistent with what would be expected, although one would not be justified in regarding the two methods of measurement as measurements of precisely the same thing.

In a sample of 423 students drawn from the four undergraduate classes, Trow's Collegiate culture shows significant association with three factors: Instrumental Collegiate (r=+.15); Consummatory Collegiate (r=+.13); and Fraternity-Sorority (r=+.10). The Academic culture in Trow's typology has no significant relationships with any of the factors from the Student Preference Schedule, but the strongest correlation is with the Academic factor (r=+.09). Trow's Vocational culture has its strongest association with the Academic factor (r=+.12), and a somewhat weaker relationship with the Vocational factor (r=+.09). There is a significant negative correlation between Trow's Intellectual Nonconformist culture and the Vocational factor (r=-.15). The Intellectual Nonconformist culture also has negative associations with the Instrumental Collegiate factor (r=-.13) and the Academic factor (r=-.12).

Warren (1966) found in the analysis of his checklist of events and experiences nine salient factors. Four of these were academic: one involving interested involvement with both faculty and students in discussions about courses, another representing intense difficulty with courses, another suggesting individual study, and a fourth indicating erratic attention to studies. Of these, the two factors dealing with discussions and individual study seem to conform most closely to our Academic factor. A factor dealing with organized group activities on campus appears to be similar to what we identify as an Instrumental Collegiate factor. Warren's factor showing interest in artistic and literary concerns is similar to our Intellectual factor. Our Ritualistic factor seems strongly related to one that Warren associates with "students uninterested in academic or intellectual activities and without clear vocational goals who aimlessly while away their time in college" (p. 25).

Table 2-2

Correlation of Factor Scores on

Eight Role Orientations with Rankings

of Four Student Cultures (N=423)

Vocational	.09	-.04	-.02	-.15
Instrumental Collegiate	-.00	.01	.15	-.13
Intellectual	-.10	.06	-.05	.08
Consummatory Collegiate	-.05	-.05	.13	.06
Social Development	-.05	.03	.06	.03
Ritualist	.01	.04	-.02	.03
Academic	.12	.09	.05	-.12
Fraternity-Sorority	.01	-.03	.10	-.08

Warren's other two salient factors have no clear counterparts in our factors, and Warren's analysis does not reveal a Social Development or Greek orientation.

Pemberton (1963) used a factor analytical technique for the empirical study of student value configurations, extracting nine significant factors.

Peterson (1968) used the typology of this study in developing his own typology of vocationalists, professionalists, collegiates, ritualists, academics, intellectuals, left-activists, and hippies.

Newcomb and Feldman (1968, pp. 231-236, figure 8A, appendix 8, pp. 502-503) compared the typology of this study with typologies of student cultures and student roles developed in other contexts. We have reworked and expanded that comparison in accord wtih our own perspective on our typology (see Figure 2-A).

Two other research instruments were developed for use in this study. One was the Student Background Schedule administered to entering freshmen of the class of 1969 at the University of Massachusetts. The other was the Student Experience Inventory completed by samples of students in the spring of each year of the study.

The Student Background Schedule made use of standard items on the social and economic aspects of the respondent's family and school environment prior to entering the University. Several items measuring attitudes were taken with the permission of the Educational Testing Service from the College Student Questionnaires.

Wallace (1964) made an excellent assessment of interpersonal relationships throughout a college. He presented 327 respondents with a full listing of 1051 students then enrolled at the college that he was studying, asking the respondents to read through the list and to indicate the extent of their contacts with each of the persons listed. Such a method is, of course, feasible only at a small college. At a university of several thousand students and several hundred faculty, a less adequate assessment of interpersonal environment must be accepted.

The Student Experience Inventory was designed to elicit information on the nature of interpersonal relationships in the University. It was expected that changes in role orientations would be related to the frequency, duration, and intensity of contacts with individuals representing particular orientations. The Inventory asked the respondent to list the names or initials of all thosepersons in the college community with whom he had usually spoken "at least once a week during the current semester in face-to-face conversations that are meaningful." The response sheet provided space for listing up to eighteen names. Having completed that listing, the respondent then indicated the sex of each person, the person's status as student, faculty member, other college employee, relative, or townsperson, the number of times each week that he usually met that person, the total number of hour spent each week in conversation,

Figure 2-A
Comparison on Various Typologies of Student Cultures
or Student Role Orientations

Schumer & Stanfield (1966)	Clark & Trow (1966)	Warren (1966)	Peterson (1968)	Keniston (1966)	Newcomb et. al (1967)	Pemberton (1963)
VOCATIONAL	Consumer Vocational	Vocational	Vocational-ists Profession-alists	Apprentice		Technical-Vocational
ACADEMIC	Academic	Academic	Academics	Profession-alist	Scholars	Academic Conformity
INTELLECTUAL	Intellectual-Nonconformist	Intellectual Autonomous Social Activist	Intellectuals Hippies Left-Activists	Disaffiliate Activist	Creative Individualists Wild Ones Political Activists	Academic-Theoretical Nonconformity
SOCIAL DEVELOPMENT						Social Service
RITUALIST		Uncommitted	Ritualists			
INSTRUMENTAL COLLEGIATE					Leaders	
CONSUMMATORY COLLEGIATE	Collegiate	Traditional	Collegiates	Big Man on Campus	Social Group	Social Group
FRATERNITY-SORORITY						
		Undirected Self-centered Conformist		Under-achiever Gentleman-in-waiting		

an estimate of the extent to which he valued the opinions of each person, the nature of each relationship on a scale from close and personal to hostile. finally, the respondent selected for each of the persons listed one of eight statements, corresponding to the eight factors of the Student Preference Schedule, as representing an individual's opinion of what is really important in college.

The original intention of the research study was to survey the entire population of entering freshmen of the class of 1969 at the time that they participated in the summer counseling program prior to their entry into the University of Massachusetts in the fall of 1965. Subsequent surveys would be done during the spring semesters of the freshman, sophomore, junior, and senior years, utilizing samples rather than the full population. The use of samples was desirable for two reasons. First, it would be difficult to reach students as a group after they had entered the University. Second, exposing students to the same survey questionnaires more than twice during their years in college might be expected to influence the way in which the students responded. This report covers the initial survey of the freshman class during the summer of 1965 and the subsequent surveys of samples of the class of 1969 in the spring of 1966 and the spring of 1967.

Data collection for the study began during the summer of 1965. The intent was to obtain data from all freshmen of the class of 1969 during the four-day summer counseling sessions held through the summer. Due to a delay in approval of the research contract, the research staff was not able to obtain data during the first three such counseling sessions. An effort was made to obtain data at registration in September for those freshmen who had been missed during the summer, but this effort was not fully successful. Consequently, complete data was obtained from 1822 freshmen, approximately two-thirds of the entering class of 1969.

During April and May of the freshman and sophomore years for the class of 1969, letters were sent to samples of that class, asking the students to come to the research staff's office building during an afternoon or an evening in order to answer two questionnaires. The letters explained that these questionnaires would be part of a research study in which the students had participated at the time that they entered college. The letters also told the students that only an hour's time would be needed and that one dollar and fifty cents would be paid to the students for completing the questionnaires.

For both the freshman and the sophomore years, the response rate was lower than one would have wished. In the first year, 475 letters were sent to students still registered in the university, and 349 usable questionnaires were completed--a 73.4 percent response. In the second year, 663 letters were sent to students in the university, and 389 students took the questionnaires--a 58.7 percent response rate. Failure to respond may be traced to the inconvenience of asking the student to come to the research staff. It may also be that the class of 1969 was suffering from "survey fatigue"; this research study was only one of

several directed toward these students. Although not fully random and fully representative samples of the class of 1969 at the University of Massachusetts, these respondents do constitute a study population adequate to assess the sensitivity of the research study's survey instruments for measuring role orientations and their correlates.

Chapter 3. INITIAL ROLE ORIENTATIONS

The study of initial role orientations was concerned with two questions. First, what aspects of the pre-college background or experience are associated with a particular role orientation? Second, what intentions in and after college are associated with an initial role orientation?

For the first question, the initial role orientation as determined by the Student Preference Schedule was the dependent variable, and the independent variables were a number of aspects of the social and economic background of the student. It was expected that the socio-economic status of the family, the educational experience of the parents, the college experience of older siblings, the plans of friends for higher education, and the cultural level of the family would be related to the role orientations in particular ways. The analysis of data revealed associations between role orientations and socioeconomic status, between role orientations and religious background. The educational level of the parents, the presence or absence of college experience among older siblings, and the aspirations of high school friends for college had no statistical relationship with the role orientations in this study.

For the second question, the role orientation became the independent variable, and the dependent variables were choice of major field in college, plans for graduate study after college, and the time at which such decisions had been made. These aspects of education in college were statistically associated with the orientations that entering freshmen had to the role of student.

These relationships are examined here for each of the eight role orientations. The analysis is presented through comparison of the twenty-five percent of the respondents having the highest scores on a role orientation with the twenty-five percent having the lowest scores on the same role orientation. Factor scores had been computed through use of a program called COMFACT-II. The statistical relationship has been tested by use of the Chi-square value as a test of significance. Throughout the analysis, the relationships for male students are examined apart from the relationships for female students.

The Vocational Role Orientation

Males and females did not differ significantly in their scores on the Vocational factor. The mean score for males was 49.8, while that for females was 50.2 ($z=-1.09$; p .10). Despite evidence of a difference between males and females on Vocationalism, further comparisons on this role orientation are done in terms of males and females. Although the mean scores are similar, differences between males and females may nevertheless emerge with respect to certain aspects of the role orientation.

Among male students, though not among female students, there was some relationship between an entering student's score on the Vocational

factor and his socioeconomic status. The relationship was inverse: male students of higher socioeconomic status were over-represented among low scorers on the Vocational factor (see Table 3-1).

This finding is consistent with the outcome of research by Gottlieb and Hodgkins (Gottlieb and Ramsey, 1964) with seniors at a Midwestern public university. They found that those of lower socioeconomic status showed a stronger preference for the vocational philosophy than did those of higher socioeconomic status.

Peterson (1967, p. 13) reports that the students endorsing the vocationalist statement on the College Student Questionnaires were consistently the lowest of all students on items dealing with socio-cultural background including parents' occupations.

The only significant statistical association between the Vocational factor and the student's religious background occurred with respect to female students who reported their background as Catholic. These Catholic females were over-represented among high scorers on the Vocational factor (see Table 3-2).

High scorers on the Vocational dimension are under-represented among the male students electing to major in physical sciences as entering freshmen (see Table 3-3).

Both male and female students scoring highly on the Vocational factor were more likely than low scorers to report that they had decided on their major field of study in college more than a year before entering the university (see Table 3-4). The vocationally oriented student has a clearer notion of the occupation toward which he is directed, and, consequently, such a student is likely to come to an early decision about the course of study most appropriate for that occupation.

High scores on the Vocational factor are associated with decisions for graduate study after college for entering male freshmen. 83.0 percent of 153 high scoring males reported a definite or probable yes with regard to graduate study, compared with 65.7 percent of 134 low scorers ($X^2 = 11.42$; d.f. = 1; $p < .001$).

The Instrumental Collegiate Factor

The mean score for females on the Instrumental Collegiate factor was significantly higher than that for males. The scores were 52.2 and 47.5 respectively ($z=-11.51$; $p < .001$).

There was an over-representation of Jewish females among the high scorers on the Instrumental Collegiate factor (see Table 3-5).

For male freshmen, high scores on the Instrumental Collegiate dimension were associated with an expressed intention for some form of graduate training. 81.5 percent of 146 male high scorers replied definitely yes or probably yes to a question with regard to graduate

Table 3-1

Vocational Orientation and Father's Occupational Position among Males

	Professionals & Managers	Other Occupations
High Scorers on Vocational	78	116
Low Scorers on Vocational	105	90

$X^2=7.26$
d.f.=1
$p<.01$

Table 3-2

Vocational Factor and
Religious Background among Females

	Catholic	Other
High Scorers on Vocational	110	98
Low Scorers on Vocational	84	125
Total		

$X^2=6.75$
d.f.=1
$p<.01$

Table 3-3

Choice of Major Field and Vocational Factor among Male Students

	High Scorers on Vocational	Low Scorers on Vocational
Major in Physical Science	12	28
Major in Other Field	138	98
Total		

$X^2=11.18$
d.f.=1
$p<.001$

Table 3-4

Choice of Major Field of Study
and the Vocational Factor

	Males		Females	
Decided on Major Field of Study	High Scorers	Low Scorers	High Scorers	Low Scorers
At least a year earlier	95	57	107	81
Within the preceding year	56	71	47	75
	$X^2=9.44$ d.f.=1 $p<.01$		$X^2=10.12$ d.f.=1 $p<.01$	

Table 3-5

Instrumental Collegiate Factor and
Religious Background among Females

	Catholic	Protestant	Jewish	Other
High Scorers on Instrumental Collegiate	97	81	24	8
Low Scorers on Instrumental Collegiate	101	87	12	9

X^2 (Jewish v. all others)=4.31
d.f.=1
$p<.05$

study, compared with 65.9 percent of the 138 male low scorers (X^2=8.92; d.f.=1; p< .01).

The Intellectual Role Orientation

Female students had a mean score of 52.3 on the Intellectual factor, while male students had a mean score of 47.8 (z=11.46; p<.001).

For entering male students, there was some association between the individual's score on the Intellectual factor and his socioeconomic status, but this relationship failed of statistical significance. The sons of professionals and managers were over-represented among high scorers on the Intellectual factor (see Table 3-6).

Jewish males were over-represented on the Intellectual factor (see Table 3-7). They represented 18.0 percent of the high scorers and 9.5 percent of the low scorers.

On the Intellectual factor, there was an over-representation among high scorers of females who reported their religious background as something other than Protestant, Catholic, or Jewish or who reported having no religious orientation in the background (see Table 3-8).

For both male and female students, those choosing to major in the humanities are over-represented among the high scorers on the Intellectual dimension. Those majoring in the humanities comprise 24 percent of the 134 high scoring males in contrast to the 8 percent among the 129 low scoring males (X^2=12.74; d.f.=1; p<.001). Among the female students, 38 percent of the 150 high scorers on the Intellectual and 17 percent of the 155 low scorers expressed an intention to major in the humanities (X^2=17.34; d.f.=1; p<.001).

There was also a tendency, among female students, for freshmen majoring in social sciences to be over-represented among high scorers and for freshmen in physical sciences and nursing to be over-represented among low scorers on the Intellectual dimension (see Table 3-9). Thus, 22 percent of the females scoring high on the Intellectual factor expressed an intention to major in social sciences in comparison with 10 percent of those among the low scorers. Further, 18 percent of the low scorers in contrast with 6 percent of the high scorers said that they would major in physical sciences, while 10 percent of the high scorers and 4 percent of the low scorers were going to major in nursing.

Both male and female students with high scores on the Intellectual factor were more likely than low scorers to express an interest in graduate study after college. The differences were 79.9 percent of 139 male high scorers compared with 68.4 percent of 130 male low scorers (X^2=7.76;d.f.=1; p<.01), while there were 62.9 percent of 151 female high scorers and 44.9 percent of 156 female low scorers reporting a definite or probable yes on a question about graduate study (X^2=10.04; d.f.=1; p<.01).

Table 3-6

Intellectual Factor and
Father's Occupational Position among Males

	Professional & Managers	Other Occupations
High Scorers on Intellectual	89	103
Low Scorers on Intellectual	72	124

$X^2=3.40$
d.f.=1
$p<.10$

Table 3.7

Intellectual Factor and
Religious Background among Males

	Catholic	Protestant	Jewish	Other
High Scorers on Intellectual	99	58	36	7
Low Scorers on Intellectual	99	69	19	12

X^2 (Jewish v. all others)=6.00
d.f.=1
$p<.02$

Table 3-8

Intellectual Factor and
Religious Background among Females

	Catholic	Protestant	Jewish	Other
High Scorers on Intellectual	97	82	17	12
Low Scorers on Intellectual	101	82	23	4

X^2 (Other v. all others)=4.24
d.f.=1
$p<.05$

Table 3-9

Choice of Major Field and the
Intellectual Factor among Females

	High Scorers	Low Scorers
Humanities	57	26
Social Sciences	33	15
Physical Sciences	9	28
Nursing	6	15
Other Fields	45	71

X^2 (Humanities v. all others)=17.34
d.f.=1
$p \leq .001$

X^2 (Social Sciences v. all others)=8.73
d.f.=1
$p < .01$

X^2 (Physical Sciences v. all others)=10.41
d.f.=1
$p < .01$

X^2 (Nursing v. all others)=3.83
d.f.=1
$p < .10$

The Consummatory Collegiate Role Orientation

On the Consummatory Collegiate role orientation, the difference between the mean score of 50.4 for males and 49.4 for females was small, but it did achieve statistical significance ($z=2.52$; $p<.05$).

For both male and female students, there was a tendency for persons majoring in the physical sciences to be over-represented among low scorers on the Consummatory Collegiate factor. This tendency reached statistical significance only for the male students. Physical science majors were 22 percent of the 141 low-scoring males and 12 percent of the 130 high-scoring males ($X^2=4.42$; d.f.=1; $p<.05$).

Low scorers on the Consummatory Collegiate factor are more likely than high scorers to express an interest in graduate study after college. This is the case for males, with 81.5 percent of 146 low scorers and 66.2 percent of 136 high scorers indicating definitely yes or probably yes in response to a question on graduate training ($X^2=8.63$; d.f.=1; $p<.01$). It is also true for females where the percentages are 59.4 for 158 low scorers and 46.3 percent for 160 high scorers ($X^2=5.60$; d.f.=1; $p<.02$).

The Social Development Role Orientation

Female students scored significantly higher than male students on the Social Development factor. The mean score for females was 53.2, while the mean score for males was 46.7 ($z=-19.59$; $p<001$).

The daughters of professionals and managers were over-represented among high scorers on the Social Development factor (see Table 3-10).

With regard to Social Development as an orientation to the role of student, males majoring in biological sciences and females majoring in education were over-represented among high scorers, while males majoring in engineering were over-represented among low scorers. That is, 19 percent of the 138 high scoring males in contrast to 8 percent of 132 the low scoring males said that they would major in one of the biological sciences ($X^2=6.30$; d.f.=1; $p<.02$), while 22 percent of the low scorers and 12 percent of the high scorers indicated an intention to study engineering ($X^2=4.45$; d.f.=1; $p<.05$). For female students, 19 percent of the 151 high scorers and 10 percent of the 154 low scorers were going to major in education ($X^2=4.88$; d.f.=1; $p<.05$). It is appropriate to suggest that many of the males majoring in the biological sciences were regarding themselves as pre-medical or pre-dental students, so that, for both males and females, the Social Development orientation was probably associated with vocational aspirations directed toward the service professions.

On the Social Development factor, it is the high scoring male and the low scoring female who is more likely to have some notion of pursuing graduate study after college. Thus, 78.9 percent of 142 high scoring males report an interest in graduate training, compared with 65.9 percent of 135 low scorers ($X^2 = 5.83$; d.f. = 1; $p<.02$). On the other hand, 33.1 percent of the high scoring females say that they are considering graduate

Table 3-10

Social Development Factor and Father's Occupational Position among Females

	Professionals & Managers	Other Occupations
High Scorers on Social Development	115	86
Low Scorers on Social Development	95	109

$X^2=4.46$
d.f.=1
$p<.05$

study, while 66.2 percent of female low scorers on Social Development express an interest in graduate training beyond college (X^2=34.12; d.f.= 1; p<.001; see also Table 3-11).

The Ritualist Factor

On Ritualism, female students scored higher with a mean score of 53.2 than did male students with a mean score of 46.7 (z=-19.51; p<.001).

The daughters of professionals and managers were over-represented among low scorers on the Ritualist factor (see Table 3-12). Peterson (1967, pp. 18-19) ascribes the ritualism of American college women to the "the uncertainty about their roles in society." He adds that the ritualistically oriented college girl "arrives at college with little more, let us say, than a vague belief that a liberal arts degree will help guarantee a right marriage." One might expect that this would be particularly true of upwardly-mobile girls from lower levels of socio-economic status.

On the Ritualist factor, there was an excess of Catholic males among the high scorers and an excess of Jewish males among the low scorers (see Table 3-13).

Students expressing an interest in majoring in the social sciences are over-represented among the low scorers on the Ritualist factor, particularly so for male students (see Table 3-14). Social science majors comprise 25 percent of the low scoring males in contrast to the 5 percent of the high scoring males. The comparable percentages for female students are 21 percent for 156 low scorers and 10 percent for 151 high scorers (X^2=6.62; d.f.=1; p<.02). There are also tendencies for males majoring in agriculture and physical science to be over-represented among high scorers on the Ritualist factor. The association for physical science majors may be attributable to a certain "problem-solving" element in the Ritualist factor (that is, items dealing with crossword puzzles and solitaire).

Low scores on the Ritualist factor are associated with expressed interest in graduate study. The difference between high scorers and low scorers is particularly sharp for males: 56.6 percent of 143 high scorers replied definitely yes or probably yes with regard to graduate study, while those responses were given by 83.8 percent of 148 low scorers (X^2=25.73; d.f.=1; p<.001; see Table 3-15). For female students, the percentages are 39.2 percent of 153 high scorers and 56.9 percent of 160 low scorers (X^2=9.77; d.f.=1; p<.01).

The Academic Factor

The mean score for females on the Academic factor was 50.7, and that for males was 49.3 (z=-4.19; p<001).

Protestant females were over-represented among high scorers on the Academic factor (see Table 3-16).

Table 3-11

Decision on Graduate Study and the
Social Development Factor among Females

	High Scorers	Low Scorers
Definitely yes	10	31
Probably yes	41	73
Have not thought enough about it to say	43	25
Probably no	53	24
Definitely no	7	4
	154	157

$X^2=36.22$
d.f.=4
$p<.001$

Table 3-12

Ritualist Factor and Father's
Occupational Position among Females

	Professional & Managers	Other Occupations
High Scorers on Ritualistic	92	114
Low Scorers on Ritualistic	115	90

$X^2=5.38$
d.f.=1
$p<.05$

Table 3-13

Ritualist Factor and
Religious Background among Males

	Catholic	Protestant	Jewish	Other
High Scorers on Ritualistic	105	76	13	6
Low Scorers on Ritualistic	86	63	36	15

X^2 (Catholic v. all others)=3.61
d.f.=1
$p<.10$

X^2 (Jewish v. all others)=12.30
d.f.=1
$p<.001$

Table 3-14

Choice of Major Field and the Ritualist Factor among Males

	High Scorers	Low Scorers
Social Sciences	6	36
Physical Sciences	28	16
Agriculture	14	6
Other Fields	89	87
	137	145

X^2 (Social Sciences v. All Others) = 23.24
d.f. = 1
$p<.001$

X^2 (Physical Sciences v. All Others) = 4.73
d.f. = 1
$p<.05$

X^2 (Agriculture v. All Others) = 3.95
d.f. = 1
$p<.05$

Table 3-15

Decision on Graduate Study and the Ritualist Factor in Males

	High Scorers	Low Scorers
Definitely yes	26	56
Probably yes	55	68
Have not thought enough about it to say	39	20
Probably no	20	4
Definitely no	3	0
	143	148

$X^2=32.06$
d.f. = 4
$p<.001$

Table 3-16

Academic Factor and Religious Background of Females

	Catholic	Protestant	Jewish	Other
High Scorers on Academic	95	87	22	5
Low Scorers on Academic	110	67	27	5

X^2 (Protestant v. All Others) = 4.11
d.f. = 1
$p<.05$

Among the female students, those planning to major in the physical sciences were over-represented among high scorers on the Academic factor, while those expressing an intention to major in the social sciences were over-represented among the low scorers (see Table 3-17).

Freshmen males with high scores on the Academic factor were more likely than the low scorers to report that they had decided on a major field of study more than a year prior to entering the university (see Table 3-18).

High scoring males on the Academic factor are more likely than low scorers to have expressed an interest in graduate study after college. The differences are 78.2 percent of 133 high scorers and 64.3 percent of 143 low scorers ($X^2 = 6.43$; d.f. =1; $p<.02$). There is some tendency for a similar association among females, with 60.5 percent of 157 high scorers and 50.0 percent of 144 low scorers interested in graduate training, but the relationship is not statistically significant.

The Fraternity-Sorority Factor

The males scored higher on the Fraternity-Sorority role orientation than did the females, with a mean score of 50.8 for males and 49.3 for females ($z=3.46$; p .001). This was consistent with the higher mean score that male students had on the Consummatory Collegiate factor.

Freshmen reporting that they would major in home economics were over-represented among the female high scorers on the Fraternity-Sorority factor: 11 percent of high scorers and 20 percent of low scorers ($X^2 = 4.43$; d.f.=1; $p<.05$).

Entering female students evidencing interest in sorority life were more likely than low scorers on the Fraternity-Sorority factor to have decided on a major field of study in college more than a year earlier (see Table 3-19).

Initial Role Orientations and Performance in College

Entering students were demonstrably different in the orientations with which they approached the role of student in college. These role orientations were related to aspects of the backgrounds of the students, and they were associated with attitudes toward study in college and beyond college. One may wonder whether these role orientations had an impact on the academic performance of students in their first year at college.

As part of this research, Savicki (1968) examined the academic experience of 597 members of the class of 1969 during their first year in the University. Comparisons were made among groups of students identified by the following characteristics:

Successful persisters who completed two semesters with an actual grade point average that was at least 2.0 and that was within ± 0.5 the predicted grade point average (70 males and 70 females randomly selected from all students meeting these criteria).

Table 3-17

Choice of Major Field and the
Academic Factor among Females

	High Scorers	Low Scorers
Physical Sciences	29	10
Social Sciences	15	36
Other Fields	110	96

X^2 (Physical Sciences v. All Others) = 8.98
d.f. = 1
$p<.01$

X^2 (Social Sciences v. All Others) = 12.63
d.f. = 1
$p<.001$

Table 3-18

Choice of Major Field of Study and
the Academic Factor among Males

Decision on Major Field	High Scorers	Low Scorers
More than a year earlier	74	60
During the past year	56	77

$X^2=4.60$
d.f. = 1
$p<.05$

Table 3-19

Choice of Major Field in College and
the Fraternity-Sorority Factor among Females

Decided on Major Field	High Scorers	Low Scorers
More than a year earlier	110	84
Within the past year	55	69

$X^2 = 4.62$
d.f. = 1
$p < .05$

Probation persisters who completed two semesters with an actual grade point average that was less than 2.0 and that was within ±0.5 of the predicted grade point average (70 males and 46 females).

Dropouts who withdrew at the end of the first or the second semester with an actual grade point average of at least 2.0 (10 males and 20 females).

Dismissals who were dismissed by the University at the end of the first or second semester because of academic deficiencies (52 males and 21 females).

Defaulters who withdrew during the first or second semester regardless of the actual grade point average (17 males and 16 females).

Over-achievers who completed two semesters with an actual grade point average greater than 0.5 above the predicted grade point average (70 males and 66 females).

Under-achievers who competed two semesters with an actual grade point average greater than 0.5 below the predicted grade point average (28 males and 41 females).

The predicted grade point averages of members of the class of 1969 did not correlate significantly with any of the eight anticipated role orientations (see Table 3-20).

When multiple discriminate analysis was done of Successful Persisters, Probation Persisters, Defaulters, Dropouts, and Dismissals, Savicki found that the predicted grade point average and the initial student role orientations produced a first function that accounted for 81.4 percent of the variance. On this function, predicted grade point average had an extraordinarily high correlation of .98, with the three strongest role orientations being Social Development (r=+.32), Academic (r=+.22), and Intellectual (r=+.21). The position of the Dismissals and the Probation Persisters with their lower academic records, in contrast with the higher academic records of the other three groups, indicates that this function is concerned with scholastic ability, as expressed in the predicted grade point average, and with scholastic attitude, as expressed in the Social Development, Academic, and Intellectual orientations. It is likely that favorable scholastic attitudes influenced performance prior to college, thereby contributing to the power of the predicted grade point average to account for performance in college.

Multiple discriminate analysis of these five groups of students, omitting predicted grade point average produced a first function that accounted for 54.7 percent of the variance (see Table 3-21). On this function, the strongest role orientations were Social Development (r=+.70, Vocational (r=+.41), Intellectual (r=+.38), Academic (r=+.38), and Ritualist (r=+.33). The three collegiate orientations had negative correlations on this function: Fraternity-Sorority (r=-.24), Consummatory Collegiate (r=-.22), and Instrumental Collegiate (r=-.16). Again, the ordering the five groups on the basis of the function centroids indicated

Table 3-20

Correlations of Predicted Grade Point Averages with Each of Eight Role Orientations

Vocational	0.01
Instrumental Collegiate	0.06
Intellectual	0.18
Consummatory Collegiate	-0.09
Social Development	0.22
Ritualist	0.11
Academic	0.15
Fraternity-Sorority	-0.07

Table 3-21

Multiple Discrimination Analysis of Males and Females
Defaulters, Successful Persisters, Dropouts, Probation Persisters, and Dismissals

	DF	SP	DR	PP	DIS	Univariate F's	Correlations I
SD	49.66	50.89	49.94	49.07	46.54	4.08**	.70
VOC	53.93	50.11	49.70	49.87	48.72	2.55*	.41
ACD	50.88	50.83	48.89	48.79	49.58	1.74	.38
INT	50.21	50.57	50.48	48.67	48.87	1.11	.38
RIT	51.12	50.65	49.23	49.44	49.09	0.86	.33
IC	47.43	49.61	46.92	50.45	49.08	1.48	-.16
CC	48.87	49.76	50.26	51.19	50.06	0.77	-.22
FS	50.35	49.83	49.80	50.49	51.63	0.50	-.24

Function Centroids

69.36	68.51	67.56	65.12	63.44

Multiple Range Results

.05	DF	SP	DR	PP	DIS
.01	DF	SP	DR	PP	DIS

Over a. Analysis: Wilk's lambda=0.88, df=32/1408, F= 1.53, P=.03

Function I: 54.69% of variance, X^2=26.45, df=11, P=.01

Univariate F's > 1.74 = P's < .14 for df= 4/387

* .05
** .01

that scholastic performance was the crucial aspect of the function: Defaulters, Successful Persisters, Dropouts, Probation Persisters, and Dismissals.

The differences between Defaulters who choose to leave in mid-semester and Dismissals who are forced to leave at the end of the semester are interesting. For male students, both Defaulters and Dismissals are low in ability (measured by predicted grade point average), but the Defaulters are distinctive in favoring orientations that would suggest a desire to do well in college: Social Development, Vocational, Academic, and Intellectual. Persons high in motivation and low in ability might be expected to experience frustration acutely, and the Defaulter's mid-semester departure from college may be interpreted as a response to frustration.

A multiple discrimate analysis of Over-achievers, Normal Achievers, and Under-achievers, in terms of Predicted Grade Point Average and Anticipated Student Role Orientations, produced a first function accounting for 66.2 percent of the variance and a second function accounting for 33.8 percent of the variance. On the first function, Predicted Grade Point Average had a correlation of .62 in the direction of under-achievement, with the strongest role orientations being Fraternity-Sorority (r=+.47) and Intellectual (r=+.38). Savicki concluded that there was more than one pattern of under-achievement but that all Under-achievers were similar in being "scholastically promising, vocationally uncertain, and parentally independent."

Examining role orientations alone for Under-achievers, Normal Achievers, and Over-Achievers, (see Table 3-22), Savicki obtained a single function accounting for 63.15 percent of the variance. Here, the correlations were in the direction of over-achievement, with strong positive correlations for Vocational (r=+.51), Social Development (r=+.43), Academic (r=+.41), and Ritualistic (r=+.31). The strongest negative correlation was for the Fraternity-Sorority orientation (r=-.64), with other negative correlations for Intellectual (r=-.26) and Consummatory Collegiate (r=-.20).

Finding the Intellectual orientation associated with under-achievement is consistent with the contrast that one would draw between the Intellectual and the Academic. Both orientations represent an interest in ideas, but the Academic orientation falls into the pattern of courses, examinations, and grades, while the Intellectual orientation tries to transcend that system. The intellectually oriented student might well be a person of high ability who failed to live up to promise--at least in terms of the standards set within the academic community.

Interestingly, and somewhat unexpectedly, the Ritualist orientation turns out to be positively associated with academic success--scoring high among Successful Persisters and Normal Achievers. One might anticipate that an individual fulfilling parental expectations and lacking clearly defined personal goals would do poorly in college. On the contrary, it appears that persons with this orientation may move through the college experience quite satisfactorily. At least so far as academic success is concerned, apathy is not incapacitating.

Table 3-22

Multiple Discriminate Analysis of Male and Female Over-achievers, Normal Achievers, and Under-achievers

	O	NA	U	Univariate F's	Correlations I
VOC	51.65	50.00	49.73	2.33	.51
SD	51.19	50.07	49.73	1.58	.43
ACD	51.55	49.91	50.53	2.59	.41
RIT	49.99	50.10	48.07	2.08	.31
IC	50.46	49.99	50.87	0.34	-.01
CC	49.73	50.41	50.53	0.36	-.20
INT	49.98	49.71	51.81	1.99	-.26
FS	48.71	50.13	52.03	3.52*	-.64

Function Centroids

24.78 22.13 20.16

Multiple Range Results

.05 0 NA U

.01 0 NA U

Overall Analysis: Wilk's lambda=.94, df=16/902, F=1.60, P=.06

Function I: 63.15% of variance, X^2=16.09,df=9, P=.06

Univariate F's>1.99 = P's<.14 for df=2/458

*.05

Chapter 4. CHANGES IN ROLE ORIENTATIONS

There are two major questions in this phase of the research. First, are there measurable changes in role orientations during the first two years of college? Second, if such changes occur, to what experiences in college are those changes related?

With respect to change,* the general finding was that there was little overall change in the role orientations. For the aggregate of students, the initial role orientations tended to become the actual role orientations. For some students, there were marked changes in role orientations, and the correlates of these changes may be investigated.

For freshmen who responded to the Student Preference Schedule for a second time at the end of their freshman year, there was a significant increase in the mean score for only one role orientation: Consummatory Collegiate. In that instance the mean score went from 49.4 to 50.8 ($z=3.08$; $p<.01$).** Most of the change occurred with the males, going from a score of 49.7 to one of 51.6 ($z=2.80$; $p<.05$). There was a tendency toward increase among the female students ($z=1.69$; $p<.10$). This increase in the Consummatory Collegiate role orientation at the University of Massachusetts may be seen as consistent with the comments of Riesman and Jencks (1962, p. 141) on the "romance-image" aspects of that university.

In their first year of university experience, the students showed a tendency for a decline in scores on the Academic role orientation ($z=1.77$; $p<.10$). The female students showed a significant drop in Ritualist ($z=2.42$; $p<.05$), while male students showed a tendency toward increase on that role orientation ($z=1.80$; $p<.10$).

The increase in the Consummatory Collegiate role orientation did not appear among the members of the class of 1969 tested in the spring of 1967 at the end of their sophomore year. The difference between the mean scores at entrance to the university and after two years of study failed to reach statistical significance ($z=0.86$; $p<.35$). It might be that high scorers on the Consummatory Collegiate factor were particularly

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*In analyzing change in attitudes between two times, one has a problem in obtaining change scores that will be corrected for regression toward the mean. This study used a modification of a procedure recommended by Tucker, Dawarin, and Messick (1966). The corrected change score was computed by taking the difference between the scores at the two times with the score for time 1 multiplied by a quantity representing the correlation of the scores at both times and the standard deviations at time 1 and time 2:

$$X_2 - \frac{R_{12}S_2}{S_1} X_1$$

**The z-statistic was computed with the formula:

$$z = \frac{\sqrt{N}\,(X_2 - X_1)}{\sqrt{S_1^2 + S_2^2 - 2R_{12}S_1S_2}}$$

susceptible to dismissal from the university for academic failure, so that the students who would have been high scorers at the end of the freshman year were not around to be retested at the end of the sophomore year. Savicki's study of students after the freshman year suggested that the fraternity-sorority and consummatory collegiate orientations were related to dismissal.

Among the students who took the Student Preference Schedule for a second time at the end of the sophomore year, there were tendencies toward a decline in the mean scores of several of the role orientations. There was an overall decline on the Intellectual factor ($z=-2.24$; $p<.05$), somewhat more pronounced among females ($z=-2.49$; $p<.05$) than among males ($z=-1.78$; $p<.10$). There were declines, too, on Social Development ($z=-1.93$; $p<.10$), Ritualist ($z=-1.87$; $p<.10$), and Instrumental Collegiate ($z=-1.66$; p .10) factors, with significant differences on these three role orientations registered for female students ($z=-2.74$; $p<.01$; $z=-2.16$; $p<.05$; $z=-2.49$; $p<.05$).

There was a significant inverse relationship between change on the Instrumental Collegiate factor and change on the Ritualist factor during the first two years of college. This was more markedly so for males ($r=-.40$, $n=156$) than for females ($r=-.21$, $n=199$). This suggests the sharpening of the individual's sense of the personal significance of education through involvement in the planning and organizing of activities within the collegiate culture.

For males, but not for females, there was a direct relationship between change on the Intellectual factor and change on the Social Development factor (for males, $r=+.23$, $n=156$; for females, $4=+.09$, $n=199$). This might be interpreted as a "humanizing" impact of college experience.

A change on the Vocational factor was directly related to a change on the Instrumental Collegiate factor for males ($r=+18$, $n=156$), but there was an inverse relationship between changes in these two factors for females ($r=-.18$, $n=199$). On the other hand, females showed a direct relationship between change on the Vocational factor and change on the Intellectual factor ($r=+17$, $n=199$; for males, $r=-.02$, $n=156$). In accord with these correlations, females showed an inverse relationship between change on the Intellectual factor and change on the Instrumental Collegiate factor ($r=-.20$; $n=199$; for males, $r=.01$, $n=156$).

There was, then, some measurable change in the role orientations, and the question now is what aspects in the interpersonal environment might be related to such changes. This report will focus on the effect that the faculty may have in producing change.

In the spring semester of the freshman year (see Table 4-1), 48.8 percent of the males students and 45.8 of the female students reported at least one faculty member with whom their weekly conversations were of some significance. There were 21.6 percent of the males and 18.1 percent of the females who said that there were two or more such faculty contacts.

Table 4-1

Percentage of Students Reporting at Least One Meaningful Contact in Status, by Year and Sex

At least one meaningful contact a week with...	Percentage of Students Reporting 1966 Male	1966 Female	1967 Male	1967 Female
Students	98.6	100.0	97.4	100.0
Student Counselors	53.6	61.3	50.6	54.3
Faculty	48.8	45.8	40.4	44.7
Other College Employees	21.8	25.2	22.4	26.6
Relatives	17.6	24.5	14.1	22.6
Townspeople	9.6	11.6	7.7	10.0
	n=125	n=155	n=156	n=199

A year later, 40.4 percent of the males and 44.7 percent of the females listed at least one significant contact with the faculty weekly. Now, 19.2 percent of the males and 13.1 percent of the females reported two or more faculty members as persons with whom they had meaningful conversations weekly.

The transiton from the freshman to the sophomore year, then, seemed to diminish rather than increase the numbers of the students in personal communication with the faculty.

For each of the persons listed on the Student Experience Inventory, the respondent provided a rating of the nature of the relationship on a seven-point scale, running from close and personal through casual to hostile. The aggregate of scores by all respondents provides a basis for computing the mean socres for persons in particular statuses (see Table 4-2). For both males and females, in both the freshman and sophomore years, the closest and most personal relationships tended to be with those relatives with whom they had contact at least once a week. The next most favorable relationships tended to be with townspeople unaffiliated with the University. This finding is, in some measure, surprising, but it may reflect relatively rare primary relations with the more common secondary relations that characterize "town-gown" contacts unreported by the students. Next in intensity of relationship were contacts with other students. Contacts with student counselors were less favorable. The least close and least personal relationships reported were those with faculty and with other college employees. The faculty were most distant in the freshman year, and the college staff most distant in the sophomore year.

Study of the relationships between faculty contact and changes in role orientations was done through multiple discriminate analysis, utilizing a program developed by Veldman (1967).

The analysis comparing contact with at least one faculty member and as distinguished from no contact with faculty members during the freshman year yielded a marginally significant discriminate function ($F=1.821$; $p = .0727$; see Table 4-3). The change scores providing the largest positive contribution to the function are on the Intellectual role orientation. This seems to indicate that, during the freshman year the faculty contacts have a positive association with increases in student preferences for intellectual behavior. The negative correlations suggest that faculty contact has negative associations with increases in preferences or hedonistic collegiate behavior and academic oriented behaviors.

In analyzing for sex differences, it was found that males yielded a highly significant function ($F = 2.765$; $p = .008$; see Table 4-4, while for females the discriminative analysis did not yield significance ($F = .968$; $p = .5355$; see Table 4-5). This indicates that faculty contact had relatively strong negative associations with increases in academic and collegiate orientations. While increases in preferences for intellectual activities is weakly associated with faculty contact, increases

Table 4-2

Closeness of Relationships to Incumbent of Certain Statuses

	Mean Score on Closeness of Relationship by Year and Sex			
	Freshman Year		Sophomore Year	
	Male	Female	Male	Female
Relatives	1.41	1.50	1.46	1.35
Townspeople	2.00	2.86	2.06	2.14
Students	2.99	2.71	2.98	2.69
Counselors	3.35	2.87	3.25	2.79
College Staff	3.36	3.23	3.49	3.65
Faculty	3.70	3.46	3.39	3.57

Table 4-3

Multiple Discriminate Analysis on
Faculty Contact
and Corrected Change Scores of Role Orientations
for Freshman Males and Females

	MEAN				
	CONTACT (N=148)	NO CONTACT (N=132)	F df=1/278	P	CORREL.
INT	10.7361	9.3584	4.0609	.0421	.5313
VOC	22.1731	21.3801	.8425	.6377	.2434
RIT	18.1853	17.7109	.4055	.5320	.1690
FS	31.3890	30.7563	.3729	.5492	.1621
SD	21.0321	20.9658	.0056	.9388	.0190
IC	13.6798	14.3424	.7136	.5963	-.2240
ACD	20.0980	22.1742	3.1545	.0731	-.4690
CC	21.5687	23.4422	4.8508	.0267	-.5799

Function centroids

2.9711 -.0721

Overall Analysis: Wilks Lambda = .959
F ratio = 1.821; df=8/271; p=.0727

Table 4-4

Multiple Discriminate Analysis on
Faculty Contact
and Corrected Change Scores of Role Orientations
for Freshman Males

	MEAN				
	CONTACT (N=64)	NO CONTACT (N=61)	F	p	CORREL.
INT	11.4664	9.9538	1.6179	.2030	.2847
RIT	17.9830	17.2054	.5314	.5257	.1639
FS	28.5601	27.8165	.2587	.6181	.1145
VOC	22.7783	22.3903	.0702	.7876	-.0597
SD	21.4979	23.2055	1.7819	.1811	-.2986
CC	20.6747	23.3807	5.1287	.0238	-.4999
IC	10.0581	12.5510	5.2845	.0218	-.5072
ACD	11.5472	14.7039	7.6193	.0067	-.6035

Function centroids.

-17.4544 -22.8304

Overall Analysis: Wilks Lambda = .840

F ratio = 2.765; df=8/116; p=.0080

Table 4-5

Multiple Discriminate Analysis on
Faculty Contacts
and Corrected Change Scores of Role Orientations
for Freshmen Females

MEANS

	CONTACT (N=71)	NO CONTACT (N=84)	F df=1/153	p
INT	9.9266	8.8824	1.3067	.2535
RIT	18.3856	18.0736	.0900	.7623
FS	33.5435	33.2295	.0540	.8115
VOC	21.6499	20.6131	1.0402	.3102
SD	20.8252	19.0959	2.0919	.1463
CC	22.4685	23.3775	.5742	.5437
IC	17.0087	15.5236	2.3474	.1235
ACD	28.1983	27.2286	.8062	.6259

Overall Analysis: Wilks Lambda = .95

F = .968; df = 8/146; p = .5355

in preferences for academic behaviors and increases in organizational and hedonistice collegiate behaviors are strongly associated with no faculty contact.

In comparing the means and univariate Fs for freshman males and females, some interesting sex differences emerge that might help to explain why the effect of faculty contact on changing role orientations is primarily restricted to males. First of all, for males, increases in the Academic and Collegiate orientations, and to some extent on Social Development, are clearly associated with no faculty contact. For females, on the other hand, increases in Instrumental Collegiate and Social Development orientations tend to be associated with faculty contact. Thus it appears that males seek the support primarily of the peer group, while females seek the support of faculty, for engaging in organizational and social development activities.

The overall results suggest that freshman women in adjusting to college are not as influenced by the peer-oriented collegiate subcultures as males are, and they tend more to seek the support of faculty for engaging in such activities.

In summary the effect of faculty contact in the freshman year on changes in role orientations seems modest. Although faculty contact is associated with increases in the intellectual orientation, the primary effect for increases in academic and collegiate orientaions is associated with avoidence of faculty contact.

For the end of the sophomore year, the faculty contact yields a highly significant discriminate function (F= 4.791; p = .0001; see Table 4-6). The change scores providing the largest positive contributions to the function are Vocational and Intellectual. Consummatory Collegiate, Ritualist, and Fraternity-Sorority orientations are negatively associated with faculty contact.

In analyzing separately for males and females, the analyses yielded highly significant functions (males - F = 2.405; p = .018; females - F = 2.809; p = .006; see Tables 4-7 and 4-8). The results indicate that, for both sophomore males and sophomore females, increases in the Intellectual and Vocational orientations were strongly associated with faculty contact.

In comparing the effect of faculty contact in the sophomore year with the effect of faculty contact in freshman year (looking at means, univariate Fs and correlations), one finds that, for both males and females, increases in the Vocational and Intellectual orientations are more strongly and significantly associated with faculty contact in the sophomore year.

This suggests that faculty contact in the sophomore year has a more definite and more distinct effect on increases in role orientations than in the freshman year.

Table 4-6

Multiple Discriminate Analysis on
Faculty Contact
and Corrected Change Scores of Role Orientations
for Sophomore Males and Females

	MEAN				
	CONTACT (N=152)	NO CONTACT (N=203)	F df=1/353	p	CORREL.
VOC	27.8604	24.5384	16.2568	.0002	.6644
INT	13.5558	11.3673	8.0506	.0050	.4729
ACD	31.6066	31.5381	.0076	.92792	.0147
SD	23.9773	24.2221	.1082	.7416	-.0554
IC	21.0304	21.6743	.3747	.5481	-.1031
FS	34.8389	36.2920	2.1778	.1369	-.2480
RIT	24.3447	25.8898	2.2981	.1263	-.2547
CC	25.5415	27.5784	4.1803	.0391	-.3426
Function centroid					
	5.7841	1.1707			

Overall Analysis: Wilks Lambda = .900

F ratio = 4.791; df = 8/346; p = .0001

Table 4-7

Multiple Discriminate Analysis on
Faculty Contact
and Corrected Change Scores of Role Orientations
for Sophomore Males

	MEAN				
	CONTACT (N=63)	NO CONTACT (N=93)	F 1/154	p	CORREL.
INT	17.6927	14.4536	7.8154	.0060	.6460
VOC	26.8988	24.1496	4.5327	.0327	.4970
IC	29.9686	28.2643	2.5801	.1062	.3773
SD	26.2339	26.0490	.0327	.8511	.0428
ACD	28.7597	29.1549	.1180	.7317	-.0813
FS	37.3580	38.2476	.3382	.5688	-.1376
CC	32.1613	33.3453	.9166	.6583	-.2261
RIT	32.5516	34.1386	2.1962	.1364	-.3485

Function centroids

13.7022 8.7574

Overall Analysis: Wilks Lambda = .884

F ratio = 2.405; df = 8/147; p = .0180

Table 4-8

Multiple Discriminate Analysis on
Faculty Contact
and Corrected Change Scores of Role Orientations
for Sophomore Females

	MEAN				
	CONTACT (N=89)	NO CONTACT (N = 110)	F df=1/197	p	CORREL.
VOC	28.5411	24.8670	11.8298	.0011	.7318
INT	10.6273	8.7580	4.8299	.0273	.4757
ACD	33.6219	33.5529	.0049	.9426	.0153
SD	22.3799	22.6844	.0969	.7543	-.0682
RIT	18.5353	18.9258	.2222	.6433	-.1032
FS	33.0558	34.6386	1.6326	.2000	-.2788
IC	14.7033	16.1027	1.6665	.1952	-.2816
CC	20.8556	22.7028	2.9569	.0832	-.3739

Function centroids

-4.0397 -8.7833

Overall Analysis: Wilks Lambda = .894

F ratio = 2.809; df=8/190; p=.0060

The principal question here, then, has been what the nature of the relationship is between reported face-to-face contacts with faculty members and changes in the role orientations. The attempt to answer this question has been rather gross, since the analysis involves comparison of those who report at least one contact with a faculty member with those who report no contacts with faculty members. This analysis, then, does not condider variations in the number of faculty members contacted, the frequency of such contacts, and the duration of such contacts. Nevertheless, the finding of some significant results suggests that there is indeed a relationship, and refined methods of analysis may sharpen as understanding of that relationship.

For many students, the freshman year might be classified a general adjustment period adjusting to the new experience of college life and all that it entails. This involves being scheduled into large introductory classes, often perceived as impersonal and even degrading. The opportunity for the faculty to effect changes in role orientations at this time seems minimal. By the end of the sophomore year, many students have made the adjustment to college life or have dropped out. At this time, class size tends to become smaller and there is also greater opportunity for taking electives. In other words, by the end of the sophomore year, students are less wrapped up in their problems of adjustment and, therefore, more likely to seek out the support of faculty. This appears especially true for engaging in the vocational and intellectual activities that the faculty are more likely to endorse.

Chapter 5. CONCLUSIONS

This research has attempted to demonstrate relationships between the pre-college environment and the anticipated role orientations of incoming freshmen. While the results are not startling, they do suggest future avenues of investigation and analysis. Several of the role orientations (Vocational, Instrumental Collegiate, Intellectual, Social Development, and Academic) show an interest on the part of the students in graduate study after college. These role orientations, however, show differences in terms of the social backgrounds and the major fields of study of these students. It is likely that graduate study has different meanings in terms of the goals and aspirations of the students. It would seem that the pre-college environment of the student influences the definition of his life goals and aspirations, and that this definition influences his definition of what it will mean to be a college student.

Although males scoring high on the Vocational orientation and males scoring high on the Intellectual orientation both express an interest in graduate study after college, the significance of such graduate study would seem to be different. This is suggested by the relationships that these orientations have with socioeconomic status and with major fields of study in college. The vocationally oriented student tends to have come from a family of lower socioeconomic status and to select a scientific or technological field of study that involves the manipulation of things. For him, graduate school represents a mechanism for entry into a professional occupation of higher socioeconomic status. The intellectually oriented student tends to come from a background of higher socioeconomic status and to move toward the humanities or the social sciences. He expresses less concern for occupational mobility and chooses a field of study involving the manipulation of people or of ideas.

It appears that the attitudes with which students approach the role of student have an effect on their academic performance. Ability is, of course, the major determinant of academic success, but the effect of ability is apparently influenced by attitudes about being a student. It would be appropriate to consider that the measure of ability reported here, the predicted grade point average, is itself probably influenced by such attitudes. The predicted grade point average is determined in some large measure on academic performance during the pre-college years. It is likely that attitudes toward being a student influenced earlier performance and therefore affected the predicted grade point average. The impact of role orientations, then, may be even greater than indicated by the data here.

In accord with many other studies of change in attitudes (see Newcomb and Feldman, 1968, for a thorouth review), there has emerged little overall change in the initial role orientations of the students. Attitudes about the role of student fluctuate little across a freshman and sophomore class.

Among the students, however, there are some individual changes in role orientations, and the experiences associated with such changes can be

studied. Analysis of the impact of interpersonal contacts with faculty is reported here. There is evidence of a modest amount of effect by college professors in increasing intellectually-oriented and vocationally-oriented attitudes. Analyses of other aspects of the interpersonal environment are yet to be done with the data of this research.

With respect to the Student Preference Schedule, the research staff has two regrets. The first is that it did not make an effort to distinguish the different aspects of the Intellectual orientation as they are perceived by others. The second is that the Ritualist orientation did not emerge precisely as the kind of orientation that had been anticipated.

Other social scientists have suggested that there are three elements in the Intellectual orientation. The first is a concern for ideas outside the structure of formal education. Pemberton (1963) called this an academic-theoretical orientation, and it seems related to the notion of "creative individualists" proposed by Newcomb and his associates (1967). The second element is that of nonconformity. The words "Bohemian" or "Beat" or "Hippie" represent particular manifestations of this element. This element may have certain anti-intellectual or at least anti-rationalist aspects to it (for example, in the experiential emphasis of the psychedelic movement). The third element is one of social or political activism, an adherence to the view that the point is not to understand the world but to change it. In seeking to elicit a single intellectual factor, we introduced a large number of items relevant to the first element (e.g., "Attending poetry readings and analyses," "Reading philosophical relevant to the third element (e.g., "Attending open forums on contemporary issues," "Reading novels that involve criticism of contemporary society," and "Attending plays that voice social protest"--although each of these suggest a spectator rather than a participant in social action), and virtually no items relevant to the second element (the only one suggestive of nonconformity is rather tame--"Exploring new artistic experiences").

In devising the Ritualist orientation, the research staff had seen it as the orientation of students who lacked a clear sense of direction, who passed through the college experience with no strong personal commitment to what it means to be a student. The Ritualists were perceived "drifters" who would probably do rather poorly as students because of a lack of motivation. It appears, however, that the "Ritualist" can do rather well as a student. It is not "drift" but "dependency" that seems to characterize him. He is rather strongly tied to home and parents, and those ties are apparently strong enough to supply him with sufficient motivation and direction to perform adequately in college. Perhaps one should not regret this outcome; perhaps one should take heart that dependent individuals can function competently.

The major conclusion of this study would be that the students of the university are not in agreement with each other about what they want out of the university. Some students want to run the obstacle course of courses, examinations, and grades with success sufficient to achieve a quality point average high enough to be evidence of an education. Others are quite definite in their demand that the university provide the technical

skills and specialized knowledge necessary to be found acceptable for a particular occupation. Some are content to collect the diploma with whatever cumulative average or whatever knowledge they can manage to acquire in the process of passing from high school to a comfortable job. Still others care nothing for these, as long as they can explore new ideas and new experiences. There are those who want to amass an impressive list of extra-curricular activities. Some want to find the right balance between study and fun--or between fun and study. Others want to do the kinds of things that will make them "real" persons.

The diversity of orientations among students suggests the strength of an university in offering a diversity of environments to satisfy those orientations. The researchers in this study have been asked often what orientation is most common among the students at the University of Massachusetts. The researchers have responded that their study has not been designed to determine the model orientation or the typical student. Knowing "what most of our students are like" might lead people to conclude that the university's environment should be changed to accommodate itself to the orientation of the majority of students--or to alter that orientation in order to bring it into accord with the prevailing structure of the university. The better course of action might be to recognize the diversity of interests and to seek to establish an environment that meets or satisfies that diversity.

APPENDIX

Ninety Items of the Student Preference Schedule

The table on the following pages lists the ninety variables on the Student Preference Schedule that were used in assigning factor scores for eight role orientations to respondents. The factor loadings for each of the eight factors are included. For clarity of interpretation, only those factor loadings greater than +.20 or -.20 have been listed. Factor 6, Ritualism, was reflected in the analysis (its negative loadings were consistent with positive loadings on other factors), and so the sign has been reversed for all items on Ritualism in order to improve interpretation by the reader.

The abbreviations at the top of the columns have these meanings:

VOC - Vocational
IC - Instrumental Collegiate
INT - Intellectual
CC - Consummatory Collegiate
SD - Social Development
RIT - Ritualism
ACD - Academic
FS - Fraternity-Sorority

		VOC	IC	INT	CC	SD	RIT	ACD	FS
1	Being prepared for class.	27				34		48	
2	Leisurely walking around between classes.				43	24			
3	Discussing ideas with students in my major field of study.	60				25			
4	Being a member of a service organization on campus		57			31			
5	Writing a scholarly essay that requires much study and thought.	20		56				24	
6	Working on a committee concerned with improving the social life on campus.		65			24			
7	Being on a committee that arranges college-wide events.		84						
8	Helping people with problems.					44			
9	Participating in campus organizations.		68			32			
10	Traveling and seeing different places.				21	59			
11	Every so often just observing and listening to people.			44		55			
12	Striving for membership in an academic honor society.		29					45	
13	Taking courses that will help maximize income in my future occupation.	51		-31					
14	Participating in serious discussions in class.	26		31			-40	26	
15	Crossing days off the calendar as they go by.						52		
16	Attending plays that voice social protest.			66		25			
17	Improving a technique or skill that will benefit me in my career field.	69				30			
18	Sitting outside on campus.		23		44	51			

		VOC	IC	INT	CC	SD	RIT	ACD	FS
19	Going to a party and discussing art and literature.			74					
20	Talking with my friends about job opportunities.	66					24		
21	Attending forums on contemporary social issues.			72		21			
22	Exploring new artistic experiences.			66		29			
23	Talking to professionals about the skills necessary in my future career.	76				24			21
24	Participating in the activities of a club related to my future career.	67	22						
25	Pursuing my academic interests in depth.	49		37				43	
26	Talking in the local college hang-out about social life on campus.		30		68				22
27	Reading sensational magazines such as True Confessions, Pageant, and Saga.				45	-29	23		
28	Loafing around campus.	-22			72				
29	Meeting different kinds of people.	21		32		72			
30	Going to fraternity or sorority parties.		33		49		-21		54
31	Reading philosophical novels.			76					
32	Working on displays for special weekends on campus.		74				22		
33	Discussing with my parents the value of a college diploma in later life.	40	23				52	24	
34	Killing time in a college hang-out.				82				
35	Meeting people from other parts of the world.	30		42		62			
36	Listening to authorities discuss problems in my career field.	80		28					

		VOC	IC	INT	CC	SD	RIT	ACD	FS
37	Studying.	33		32				61	
38	Attending football rallies		52		36				
39	Taking an active part in sorority or fraternity life.		44		23				78
40	Discussing with friends the easiest combination of courses that fulfill requirements for the degree.			-20	47			-28	
41	Drinking at a fraternity party.				56				44
42	Socializing with people in the local college hang-out.		23		74	29			
43	Working on the editorial staff of the college newspaper.		54	51					-32
44	Studying to keep my cumulative average just high enough for graduation.				34			-40	
45	Holding office in student government.		72						
46	Going to parties that are wild.				56		-24		24
47	Cutting classes.				42			-43	
48	Spending lots of time watching television.				35		22	-25	
49	Taking courses that are directly applicable to my future occupation.	71							
50	Attending poetry readings and analyses.			82					
51	Belonging to a sorority or fraternity.		51		23				74
52	Working on the college yearbook.		74	25					
53	Talking with friendly professors.	35		26		43			
54	Playing solitaire.				21		40		

		VOC	IC	INT	CC	SD	RIT	ACD	FS
55	Sitting with friends near the jukebox in the local college hang-out.		21		72				23
56	Reading periodicals that are primarily concerned with practical aspects on problems in my career field.	71							
57	Attending lectures on controversial subjects.			64					
58	Belonging to a group that promotes college spirit.		75				23		22
59	Studying the history of ideas.			75					
60	Relieving tensions on campus through "spontaneous student demonstrations."			21	35	-26		-21	
61	Gaining practical and direct experience for my chosen occupation.	79				27			
62	Getting together with a bunch of kids and doing crazy things.				53				
63	Participating in traditional events on campus.		64		24	26	23		
64	Working on cross-word puzzles.		22				36		
65	Studying, but not at the expense of social activities.				33			-22	
66	Going to professional meetings on campus in my career field.	81							
67	Talking with professors about job opportunities.	79	20						
68	Reading books relevant to my future occupation.	76		21					
69	Talking to a professor in his office about his scholarly activities.	26	24	52					
70	Organizing activities on campus.		79	21					
71	Planning for graduate school.	42					-21	30	
72	Putting in a full evening of serious studying.	31		28				68	

		VOC	IC	INT	CC	SD	RIT	ACD	FS
73	Talking in a lounge on campus about social events.	20	52		60				22
74	Working on problems in courses that prepare me for my career	75						27	
75	Reading poetry in a student hang-out near the campus.			70					
76	Going home on weekends.						51		
77	Doing things where I can meet people.	21	33	24		59			
78	Attending informal discussions on job opportunities.	68							
79	Discussing the future with my parents.	45					55	24	
80	Planning social events for big weekends on campus.		81		24				25
81	Reading academic periodicals.	29		47				27	-25
82	Writing poems.			73					
83	Loafing and doing nothing.				59		25		
84	Getting work done on time.	36				38		49	
85	Finishing assignments early so that I can do some independent study in the course.			44				46	
86	Collecting leaves and flowers and classifying them.			30			38		
87	Being active in interfraternity or intersorority competitions.		56		23				64
88	Working on the news staff of the college newspaper.		64	43				-23	
89	Reading textbooks that present facts and principles that will be useful in my profession.	66							
90	Reading novels that involve criticism of contemporary society.			67					

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