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THE ADAPTATION TO COLLEGE OF HIGH RISK AND  
STANDARD RISK STUDENTS AS A FUNCTION OF SOCIAL  
COMPARISON OPPORTUNITIES.

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THE ADAPTATION TO COLLEGE OF HIGH RISK AND STANDARD RISK STUDENTS  
AS A FUNCTION OF SOCIAL COMPARISON OPPORTUNITIES

BY

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of the requirements for the degree of Doctor of  
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## CHAPTER I

### INTRODUCTION

In American society today a college education is no longer perceived as a luxury reserved for the intellectual or socio-economic elite, but as a necessity which should be available to all. Traditional methods of student selection have relied primarily upon past performance in high school as the main indicator of future success in college. However, for many minority group and lower class students it is the high school that has failed the students by not giving them the opportunity to achieve their full potential, rather than the students who have failed the high school. Recognition of this situation has led to the initiation of "high risk" programs in colleges in many areas of the country. These programs make a special effort to enroll disadvantaged students whose relative lack of preparation for college places them at a disadvantage in competition with other students in the college. These students are admitted with high school averages lower than those ordinarily required, so that in traditional terms there is a greater risk that they will not complete their college education. Their relative lack of preparation may be due to factors such as: inadequate training provided by their high school; difficulties in the home which interfered with studying; concern with economic problems. The purpose of the high risk program is to offer such students a chance to overcome these past difficulties and to succeed academically. Many colleges have

in this way shown their acceptance of the responsibility of providing the opportunity of a college education to large segments of the population which have in the past been excluded from such an education.

It was the purpose of this research to examine the adaptation to college of students in one such high risk program. Freshmen and sophomore "high risk" students, most of whom were black or Puerto Rican, were compared at the beginning and end of a semester with freshmen and sophomores from the general college population ("standard risk" students). The implications of social comparison theory for this process of adaptation were explored for both groups of students.

Entrance into college is a new and ambiguous situation for all students. As Feldman and Newcomb (1969) pointed out:

"In general terms, the freshman in college is a novice in an unfamiliar social organization, and is therefore confronted with the values, norms, and role structures of a new social system and various subsystems. Such an experience usually involves de-socialization . . . as well as socialization . . . Therefore regardless of the degree to which the new college environment matches what the entering freshman expected, he faces a variety of expected and unexpected academic, intellectual, and social changes." (p.89)

A student's reaction to this new and ambiguous situation will depend upon his interpretation of the situation and, in particular, of his place within it. Social comparison theory, as formulated by Festinger (1954), relates to how this interpretation is arrived at. The theory assumes that a drive to evaluate one's opinions and abilities exists in the human organism. One's behavior in any given situation is affected by one's opinions about that situation, and by the evaluation of one's own abilities. The appropriateness of the resultant behavior will depend upon the correctness of one's opinions about the situation, and the degree of accuracy with which one evaluates one's abilities.

There are, according to the theory, two bases for the evaluation

of one's opinions and abilities: objective, nonsocial means and social comparisons. The objective comparison, which entails direct reference to the physical world, is usually the preferred one. However, in the many instances when such an objective nonsocial basis for evaluation is not readily available, the theory asserts that one will evaluate one's opinions and abilities by comparison with the opinions and abilities of others. When confronted with a situation where neither kind of comparison is immediately available there is great difficulty in arriving at an evaluation.

One such important instance is the entering students' assessments of their own academic ability. At the beginning of their first term freshmen have virtually no objective means of evaluating their ability to perform in the college environment. To some extent the standard risk students could rely on their own high school performance as an objective evaluation of their abilities, or on the performance in college of older friends. However, evidence from a number of studies has indicated that these are not sufficient for the purpose of accurate self-evaluation. A study of Princeton students' expectations of their own performance found that entering students were generally unrealistic in their predictions of the level of their own performance. Eighty-six percent expected to be in the top half of their class (Pervin, 1966). Similar overestimations made by entering freshmen at M.I.T. and Dartmouth were reported by Feldman and Newcomb (1969). These unrealistic expectations would seem to be the result of the initial unavailability of opportunities for objective comparisons within the context of the new situation. Moreover, Davis (1966) found that high school graduates with a given level of scholastic aptitude received lower grades in a more selective college than those with the same scholastic aptitude

received in less selective colleges. Thus, in a selective college such as the one being studied here, many students in the standard risk group who had become accustomed to high grades in high school would find that their expectations for such high grades in college would not be met.

High risk freshmen would be even less able to rely upon their high school performance for an accurate assessment of their ability to perform in college because of the disparity between the comparison population in their high schools and the new, very different, comparison population in college.

Therefore we would predict that the initial expectations of freshmen about their scholastic performance in college would be less realistic than their later ones. At the beginning of what is for them the first semester (Time 1) they would not have experienced any objective evaluations in college. Their expectations would be relatively unrealistic in relation to their performance, as measured by their first term grade-point-average. Over the course of the first semester they would have been assessed on their course work in a number of ways. This would enable them to modify their expectations to a more realistic level by a time near the end of the term before final grades have been assigned (Time 2).

Sophomores, on the other hand, would have had many more opportunities for self-evaluation in comparison with objective assessments. Their expectations would therefore be relatively more realistic than those of freshmen.

It is possible that relative differences in realism of expectations between freshmen and sophomores could be due to the selective dropping out of those freshmen who were highly unrealistic. However, Crandall (1969) followed the same subjects for four quarters and found

that expectancy estimates did indeed become more realistic with more experience in college.

Thus, the first hypothesis is based upon the assumption made by social comparison theory that accurate evaluation of one's abilities depends upon the availability of objective criteria. Students will not be able to realistically evaluate their own performance in college until they have experienced objective evaluations.

Hypothesis Ia: The grade expectations of freshmen at Time 1 will be less realistic (relative to their actual performance) than their expectations at Time 2.

Those students who have been in school longer will have had more of these objective evaluations, and will be more accurate in their self-evaluations.

Hypothesis Ib: The grade expectations of freshmen will be less realistic than the expectations of sophomores at both Time 1 and Time 2.

The importance of realistic self-evaluations lies in the implications of such realism for the students' academic behavior. A student who expects much higher grades than he subsequently receives may not have accurately evaluated the amount of work necessary to achieve the expected grade. These high expectations could lead him to underestimate the effort required of him. In order to work toward improving his academic standing he must be aware that it needs improvement. In other words, the student's ability to cope with the academic demands of the college will depend to some extent on his accurately evaluating these demands in relation to his own abilities.

Although all students tend to have inaccurate expectations when they enter college, the seriousness of this inaccuracy may vary with

the degree to which their high school has oriented them toward college, and the degree to which their experiences have been compatible with the college experience in terms of standards of evaluation and value orientation. The greater the discrepancy between their old (high school) and new (college) situation, the harder it will be for them to attain a realistic self-evaluation. Jacob (1957) found that for some students the values of the college were so foreign that they could not realistically assess their academic performance. Though failing badly in some of their subjects, they were quite unworried and sure that everything would come out all right.

The existence of systematic differences between students in middle class and lower class schools has been documented by many investigators. Sexton (1961) analyzed the relationship between the social and economic status of the student body and the quality of education provided in the public schools of a northern urban community. Her data demonstrated conclusively that curricula, educational standards, quality of teaching, educational facilities and materials, and the academic achievement of the children were directly related to the socio-economic status of the majority of children attending a particular school.

Wilson (1959) studied the effect of residential and school segregation of social classes in San Francisco on the aspirations of high school boys. He found that the kind of high school attended affected their aspirations toward college regardless of their social class. Working class students in a middle class school were much more likely to aspire to a college education than students in a working class school. In addition, high I.Q. students from either social class were less likely to want to go to college if they were in a working class school, and low

I.Q. students from either social class were more likely to want to go to college if they attended a middle class school. A similar point about the difference between the schools in white collar and poorer neighborhoods is made by Michael (1966).

Thus, it is not social class per se which determines a high school student's attitude toward college. Rather it is the interaction between his social class and the atmosphere of the high school which he attends that affects his aspirations and expectations.

Upper class and middle class students usually attend middle class schools, and for them the college experience is relatively compatible and continuous with their high school experience (LeVine, 1966). On the other hand, working class and lower class students usually come from disadvantaged and sub-standard schools, and find the college situation discontinuous with and discrepant from their high school experience (Egerton, 1968). They would be less likely than students from middle class backgrounds and schools to have been academically prepared for, or psychologically oriented toward college.

This indicates that students from sub-standard schools, such as students in a high risk program, will have a more difficult time adjusting to their situation in college. Feldman and Newcomb (1969) report Ellis' finding that

". . . during the early months of their freshman year students from lower status backgrounds had more difficulty than others in adjusting successfully in the social arena and also had more difficulty in realistically evaluating their future academic performance." (p. 279)

A study of encounters of black and white freshmen in a public university, where the black students were part of a special program for disadvantaged students, found that generally all students did more poorly than they thought they would, but that this discrepancy was

"slightly greater" for the black students (Hedegrad and Brown, 1969).

The objective comparisons on which disadvantaged, high risk students have based their academic self-evaluations would thus be relatively incompatible with the comparisons on which their self-evaluations in college would have to be made. Therefore, their high school experience would be even less likely than that of the middle class students to serve as a realistic guideline for their self-expectations. The college environment would be a highly ambiguous one for them, and their initial expectations would be less realistic than those of middle class students. It is thus likely that they would need to have more information than middle class students before they could develop realistic self-expectations.

Hypothesis Ic: The grade expectations of high risk students, at Time 1 and Time 2, will be less realistic than the expectations of standard risk students.

The process as described above is one of developing increasing realism in grade expectations over time in college, with standard risk students relatively more realistic than high risk students. By their sophomore year standard risk students should have experienced a sufficient number of objective assessments so that their self-evaluations would be realistic and stable. They would be unlikely and unable to change these expectations considerably because they would have reached a high degree of realism. Given the nature of the discrepancy between the high school and college experiences of the high risk students one would expect that their self-evaluations would not be fully stabilized by their sophomore year.

Hypothesis Id: There will be little change in the grade expectations of standard risk sophomores between Time 1 and Time 2; high risk sophomores will be less realistic at Time 1 than at Time 2.

Figure 1 presents these hypotheses in graphic form. The purpose of the figure is to summarize the hypothesized relationships with regard to the decrease in the discrepancy between expectation and performance over time in college. The slope of the curve is obviously hypothetical, as is the distance between the two lines. The curve illustrates the prediction of a levelling off at a high level of realism (low discrepancy) by the sophomore year for standard risk but not for high risk students.

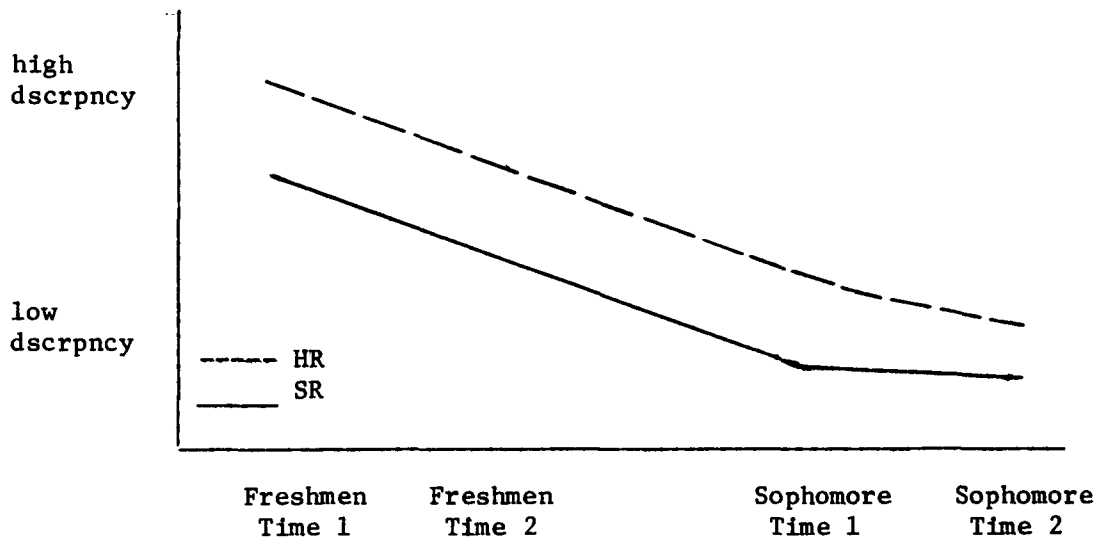


FIGURE 1. -- Hypothesized change in realism of expectations, or discrepancy between expectation and performance, over time in college

Our focus until now has been on the relationship between objective comparisons and the development of realistic self-evaluations. However, expectations about performance may be affected not only by objective criteria, but also by social comparison processes; since social comparison theory asserts that in the absence of objective guidelines as to the

appropriate evaluation of the situation one resorts to comparisons with other persons.

This proposition was tested by Latané, Eckman and Joy (1966). Their subjects participated in an experiment which included a moderate electric shock presented as one kind of 'distraction' to performance on the experimental task. Since there were no objective criteria for evaluating the shock, the subjects' reactions to the shock experience were influenced by social comparison processes. Those who shared the experience with another subject used the other for comparison purposes; they accurately observed the other's reaction, and they used this observation to arrive at their own evaluation of the situation.

Social comparison could be particularly operative during the first semester in college, when the objective bases for evaluation may not be sufficiently numerous or clear-cut to operate effectively by themselves. By interacting with other students, or observing their performance in school, freshmen could become more aware of the distribution of abilities in this new comparison population, and therefore better able to evaluate their own abilities.

The extent to which social comparison can be involved is dependent upon the availability of within-college social comparison opportunities. Singer (1966) has introduced the notion that full evaluation generally requires not just a comparative judgement with one individual but some idea of the distribution of the abilities in the relevant group.

An indication that students do indeed operate so as to maximize information was found in the research of Coelho, Hamburg and Murphey (1963). They reported that freshmen were typically indiscriminate in their choice of friends, spreading a wide net to bring in as many friends as possible.

One of the functions served by these friendships was to aid in orientation to the new situation by sharing information.

It should be evident from this that there must be some degree of contact between the individual and other students within the college for this orientation to the new situation and to the new comparison population to occur. Students obviously differ in the extent to which they come into contact with and are exposed to other students in situations which offer the opportunity for social comparison.

Therefore, in the first semester when such comparisons could facilitate the development of more realistic expectations, students with limited contact with others and therefore few social comparison opportunities would be at a disadvantage. By the second year an objective, nonsocial basis for evaluation is more readily available in the form of grades. There would not be the same need to evaluate their abilities by comparison with others, and, therefore, among sophomores there would be little relationship between social comparison opportunities and realism of expectations.

Hypothesis 1e: There will be a positive relationship for freshmen between "social comparison opportunities" and realism of grade expectations.

A possible extension of social comparison theory is that social comparison processes may have an effect not only on the evaluations of abilities but also on the actual performance level of the students.

Relatively better performance in college has been found to be associated with more realistic expectations (Smith and Winterbottom, 1970). The grades that their sample of probation students reported expecting during their freshman year were higher than the grades expected by the matched non-probation students. The actual grades of the

probation students were, of course, significantly lower than the grades of the non-probation students. We have already predicted an association between realism and social comparison opportunities, and the Smith and Winterbottom results found an association between realism and performance. Thus the relationship between social comparison and performance could be mediated by the hypothesized relationship between social comparison opportunities and realism of expectations.

In addition, social comparison may also lead to changes in study and work habits which could facilitate adjustment to the differences between the demands made of high school students and those made of college students. The validation of the Brown-Holtzman Survey of Study Habits and Attitudes (1956) has shown that certain study habits and attitudes are associated with good performance in college. Changes in these study habits could help to improve performance, and comparison with others could lead to change in study habits.

This leads to the prediction that students with more comparison opportunities within the college would perform better than those with fewer opportunities.

Hypothesis IIa: There will be a positive relationship between social comparison opportunities and level of performance.

Clearly, in the light of our previous exposition of the disadvantaged high school experiences of the high risk students, the role of social comparison with regard to study habits and attitudes would be a crucial one for them.

The broad significance of social comparison opportunities for the high risk students who are mainly minority group members is emphasized by the following references. Pettigrew (1968) reported on a number of

studies, including the Coleman Report, that have found a significant relationship between achievement test scores and the social class climate of the school's student body; and particularly so for black children.

"Schools with a middle class milieu furnish higher comparison levels of achievement and aspiration, and these higher levels will be especially influential for disadvantaged Negro youngsters whose referents might well have lower levels." (p.74)

An association between better academic performance and fewer feelings of exclusion from extra-curricular activities was found for black students at integrated colleges (Clark and Plotkin, 1963).

Thus, for the high risk students there are these additional factors which increase the need for social comparison opportunities within this new milieu. This should strengthen the relationship between the availability of social comparison opportunities and the level of performance for these students.

Hypothesis IIb:     The positive relationship between social comparison opportunities and level of performance will be stronger for high risk students than for standard risk students.

A student's adaptation to college involves not only the evaluation of his academic abilities but also the evaluation of his opinions about his relationship to the college, and to a college education.

Phillips (1966) argued that lack of satisfactory involvement in the social life of the campus probably means that there is less contact with potential sources of support, and therefore less satisfaction with the college situation. This argument suggests that students who report more social comparison opportunities, and, therefore, have more potential sources of support within the college would be more satisfied with the college than those who give little or no indication of within-college social comparison opportunities. The question of whether within-

college social opportunities lead to satisfaction with the college or vice versa cannot be answered by this research. The prediction being made is that these two variables have a particular relationship.

Hypothesis III: There will be a positive relationship between social comparison opportunities and satisfaction with college.

A number of investigators (Clark and Trow, 1966; Gottlieb and Hodgkins, 1963) have identified student subcultures within the college community which differ in their value orientations toward the range of issues and experiences confronted in college. The two most significant subcultures are:

- 1) The academic subculture which stresses the value of a basic general education and of the appreciation of ideas. It identifies with intellectual concerns and with the pursuit of knowledge per se.
- 2) The vocational subculture which emphasizes the instrumental function of education. The purpose of education is to enable the student to get a good job. It resists intellectual demands beyond what is required to pass the course.

Numerous investigators have found class differences in subculture orientation both in high school and in college. Davie (1953) studied a stratified sample of sixteen and seventeen year olds, and found that families on all levels, both black and white, stressed the economic benefits of education; but upper class families also stressed the psychological benefits. Kahl (1953) described how his sample of working class, white boys looked upon college solely as a step to a job. They had no interest in intellectual understanding for its own sake, or in the intrinsic pleasure of learning. A related finding was that among seventeen and eighteen year olds, whites preferred jobs stressing interesting experiences, while blacks preferred jobs stressing security (Singer and Stefflre, 1956; See also Lott and Lott, 1963).

Gottlieb and Hodgkins (1963) found that lower class college students were mainly vocational in orientation, and middle class students primarily academic. The black disadvantaged students studied by Hedegard and Brown (1969) tended to see vocational preparation as their primary goal in college. Thus we would expect high risk students to be more vocational in orientation than standard risk students.

One can assume that the value orientation that the liberal arts college as an institution presents to the students is an academic orientation. Clark and Trow (1966) suggest that student involvement encourages identification with the college, and thus supports the academic subculture. They further advocate getting students together so that those from disadvantaged background with narrow vocational interests can be stimulated and supported toward a commitment and involvement with ideas and learning.

The shift in subculture orientation that occurs among students during their stay in college has been found to be greatest toward the academic subculture (Goldsen, et. al., 1960; Gottlieb and Hodgkins, 1963; Hedegard and Brown, 1969). We would, therefore, expect students who were oriented toward the college, and who had opportunities for within-college social comparisons to change in the direction of this academic orientation. The exception would be those students who already adhere to this value orientation, and who have no need to change toward it.

Hypothesis IVa:      There will be a positive relationship between social comparison opportunities and change from a vocational to an academic subculture orientation.

Social comparison theory also states that the stronger the attraction to the group the stronger the pressure to uniformity. This was supported by the results of Dittes and Kelley (1956) that indicated that

conformity to a group's norms is influenced partly by the extent to which one feels accepted by the other members of the group. (See also Newcomb, et. al., 1967.) Measures of satisfaction with the college and of perceived acceptance by others will be used as indicators of attraction to the college. This suggests that there will be an association between satisfaction with the college and change toward the value orientation presented as the norm for the college- namely the academic orientation.

Hypothesis IVb:      There will be a positive relationship between satisfaction with college at Time 2 and change toward an academic orientation.

## CHAPTER II

### METHOD

The study was conducted during the fall 1969 semester at a four year college which is part of the City University of New York. The City University system does not charge tuition, and, at the time of the study, required as the main standard for admission that the student have a high school average in the mid 80s or better. This is equivalent to a high B average and is a high academic standard; which meant that only the better students were admitted to the college. Students generally come from high schools within the city, and live at home while attending college. Within the university there are several high risk programs designed to encourage the enrollment of students from poverty neighborhoods who would ordinarily not have been admitted to the colleges because of low averages or insufficient academic course work. For these students minimum high school averages in the low 70s, equivalent to a low C average, were required. The goal of these programs is to help such students attain their full potential for a college education through remedial courses, special sections of regular courses, counseling and financial assistance.

### PROCEDURE

The design of the study combined the cross-sectional and longitudinal methods in order to provide comparisons from the beginning

of the first semester in the freshman year to the end of the first semester in the sophomore year. Freshman and sophomore students were studied at the beginning and end of the fall semester.

Inferences drawn from the cross-sectional comparisons between freshman and sophomore groups must be qualified by the possibility that any obtained differences between freshmen and sophomores are due to initial differences between these particular groups of students rather than to change that occurred over time in college. In an attempt to maximize the information obtained, longitudinal comparisons between each group's responses at the beginning and end of the semester were also made. It is interesting to note that Feldman and Newcomb's (1969) summary of studies employing one or the other of these methods reveals that changes inferred from cross-sectional differences are often about the same as those shown in longitudinal designs.

A questionnaire (see Appendix A) was administered in regular class sessions of the college, and filled out in class both at the beginning of the semester (Time 1) and at a time near the end before final grades were assigned (Time 2). Instructors were approached prior to the beginning of the semester and asked to cooperate by giving up necessary class time. Most of them agreed to do so. In a few cases it was only possible to hand out the questionnaires to be filled out at home, and this was done in order to increase the size of the sample. A total of twenty-six classes in the departments of English, History, Speech, Psychology and Romance Languages were used. Included among these were some of the special sections of regular courses set up for high risk students.

The specific classes used were determined by whether or not the instructor agreed to the use of class time. Any selectivity in the final

sample. therefore, was a function of selectivity at the instructor rather than at the student level. Students in all of the classes were very cooperative. There were two instances of refusals to fill out the questionnaire, and five persons who refused to give their names. Although most of the students filled out the questionnaire in their classes at both time periods, sixty-nine of the Time 2 questionnaires were filled out at home.

Since most of the students were reached in basic courses such as English, History and Speech, which were required of all students regardless of their major, it seemed safe to assume that the sample would not be unrepresentative of the student population in this respect.

The questionnaires were distributed by graduate students who gave the following introduction:

Time 1: My name is . . . We are conducting a survey of college students' reactions to various aspects of college life. We would very much appreciate your cooperation in answering this survey. Many other classes in the school will be answering the survey and we would like their answers to be as spontaneous as yours, so please do not discuss this with students in other classes. It is important that you answer each question, otherwise the computer gets all fouled up. If you have any questions at any time, raise your hand and I'll come over to you.

Time 2: My name is . . . As you know, we are conducting a survey of college students' reactions to their college at different times during the term. We would very much appreciate your cooperation in answering this survey. Please be sure that you answer every question.

Time 1 questionnaires were obtained between September 18 and October 20, 1969. Time 2 questionnaires were obtained between December 19, 1969 and January 19, 1970. In all cases at least three months elapsed between the first and second time that the questionnaire

was filled out.

SUBJECTS

The final sample consisted of all freshman and sophomore high risk and standard risk students for whom questionnaires were obtained at both time periods. The total number of such students was one hundred and seventy. The breakdown of this total is given in Table 1.

TABLE 1

THE DISTRIBUTION OF THE SAMPLE BY YEAR AND RISK LEVEL

Risk Level	Year in college	
	Freshmen	Sophomores
High Risk	63	32
Standard Risk	37	38

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Of the students enrolled in the high risk program of the college we reached fifty-four percent of the first year students and forty-five percent of the second year students at both time periods.<sup>1</sup> An additional eighteen percent of the first year students and fifteen percent of the second year students filled out the questionnaire only one time. The rest of the students in the program were missed either because they were in classes where the instructor's permission was not obtained, or because they were absent when the questionnaires were filled out.

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<sup>1</sup>Because of the special needs of these students in terms of remedial courses and such, many of these second year students had not completed the number of credits necessary to be considered a sophomore in the academic sense. However, they were sophomores in a sense more directly of concern to this study. Namely, it was their second year of full time attendance at the college.

## INSTRUMENT

The Questionnaire consisted of three parts. (See Appendix A.)

Grade expectations for the semester were obtained in response to the question "What do you expect your average for this term to be?" with twelve grade levels indicated and one to be circled. (Part I, Question 5, p. 89)

There were five questions designed to measure the degree of their "academic" orientation to a college education (Part III, Questions 1-5, p. 94). The questions were based upon the description of the academic and vocational subcultures given in Gottlieb and Hodgkins (1963). The subjects were asked to indicate on an eleven point scale the degree of their agreement or disagreement with statements such as "College should provide the kind of education that prepares you for getting a good job" (Question 1). The statements were phrased both positively and negatively in terms of academic orientation, and scored so that a high score indicated agreement with the academic orientation. Scores on all five questions were summed to provide a total academic orientation score.

The degree of satisfaction with the college experience was measured by Questions 6-10 (p. 95). Questions 6, 7, 9, and 10 were slightly modified versions of questions used by Pervin in his research (1966). Question 8 was previously used in the Goldsen, et. al. research (1960). These were also answered on an eleven point scale, and the answers to all five were summed to provide a total satisfaction score.

Information on the social comparison opportunities available to the students was elicited through questions formulated specifically for this study. These questions were in the form of self reports of: their participation in extra-curricular activities (Activity, Question 11, p. 95); the extra hours they expected to spend on campus (Campus Hours, Question

12, p. 96); and their knowledge of and friendship with other students in the college (Question 15, p. 96, Friend For Activity and 16, p. 97, Friend). The purpose of Question 15, which listed twelve activities and asked who he would do them with, was to give the student the option of how many different friends he would mention, and whether or not these would be college or non-college friends. These four questions were used individually as separate indicators of social comparison opportunities. Detailed information on the scoring of these questions can be found in Appendix B.

No assumptions were made as to the actual degree of involvement of the student with the activity or friend named by him; or even whether any involvement existed at all. The fact of awareness of the existence of college-related activities or individuals was assumed to reflect some opportunity for social comparison. Students who cannot even name any college students are hardly likely to have the opportunity to use other students for the purpose of social comparison. On the other hand, students who can name a number of fellow students, or who report participation in extra-curricular activities, are more likely to be in college situations which afford the opportunity for comparison with others.

One additional test was included although it was not directly related to any of the hypotheses (Part II, pp.91-93).

The motivational variable of test anxiety which specifically involves anxiety about intellectual and academic evaluation is particularly relevant to the college situation. Feld and Lewis (1969) have reported that second grade black pupils are much higher in test anxiety, on the average, than were white children. Smith (1969) reported a

similar finding by Epps comparing black and white high school students. The Test Anxiety Questionnaire, which is a standard measure of test anxiety, was thus included as part of the Questionnaire in order to test the extension of these findings to college students. It also seemed important to include the test as a check that differences between high risk and standard risk students on this variable were not leading to differences between them on other variables.

The shortened form which was used has been shown to correlate .85 and above with the whole form (Smith, 1965). Subjects were asked to respond to questions such as "After you have taken a group intelligence test, how confident do you feel that you have done your best?" by marking any point on the line which indicates the strength of their feeling on that question. Each question is scored from 1 to 5. The total score is the sum of the scores to questions 4 through 15, with a high score indicating a high degree of test anxiety.

## CHAPTER III

### RESULTS

#### Demographic characteristics of the sample

Biographical information on the subjects was obtained during the course of the research. Comparisons for this and other data were made among four groups: high risk freshmen, standard risk freshmen, high risk sophomores and standard risk sophomores.

There were 130 females and 40 males in the sample, but this preponderance of females reflected the sex distribution in the population of the college as a whole. This three-to-one breakdown existed in all four groups separately, and a Chi-square test indicated no significant difference between the groups.

The large majority of the subjects were single. Although there was a tendency for more of the high risk subjects to be married, divorced or widowed, the total numbers were very small (17 out of 170), and a Chi-square test for differences in marital status among the groups was nonsignificant.

The age distribution within the sample is presented in Table 2 in terms of the percentages within each subject group. It is obvious from the table that the age range of the high risk groups was quite different from that of the standard risk groups.

TABLE 2

PERCENTAGE DISTRIBUTION OF AGE WITHIN EACH SUBJECT GROUP

Subject Group	N	Age Categories						
		(1) 17 or under	(2) 18-19	(3) 20-21	(4) 22-23	(5) 24-25	(6) 26-27	(7) 28 or over
Freshmen		%	%	%	%	%	%	%
High risk	63	3	71	8	5	6	5	2
Standard risk	37	19	81	-	-	-	-	-
Sophomores								
High risk	32	-	56	25	3	-	3	13
Standard risk	38	3	84	10	3	-	-	-

Table 3 summarizes the tests of significance of the difference between the mean ages of the groups. The means in this table are in terms of the age category codes indicated in Table 2. Thus a mean age of 2.60 for high risk freshmen indicates that the mean age of that group was between 19-20. Standard risk freshmen had a mean age of 1.81 which would be between 17-18. The difference between high risk and standard risk means is about two years for both freshmen and sophomores.

TABLE 3

t-TESTS FOR THE DIFFERENCES IN MEAN AGE BETWEEN RISK LEVELS

Subject Group	N	$\bar{X}$	SD	t <sup>a</sup>	p <sup>b</sup>
Freshmen					
High risk	63	2.60	1.291	4.58	<.01
Standard risk	37	1.81	0.391		
Sophomores					
High risk	32	3.06	1.694	3.01	<.01
Standard risk	38	2.13	0.467		

<sup>a</sup>Corrected for heterogeneity of variance

<sup>b</sup>Two tailed

It was clear that the mean age of the high risk groups was greater than the mean age of the standard risk groups, and that the probability is high that this was a nonchance difference. This finding reflects the nature of the special program under which the high risk students were recruited, and the fact that this was a new program designed partly to attract students who had not been able to go directly from high school to college.

Ordinarily one would expect to find age differences between freshman and sophomore groups. The results of t-tests performed on the age categories to test this expectation are found in Table 4. There were, in fact, significant differences in age between standard risk freshmen and sophomores, with the mean age of sophomores higher than that of freshmen. Within the high risk group, however, the difference between the freshmen and sophomores was not significant, although the direction of the means indicated a tendency for the sophomores to be older. The freshmen in this group were older than is usual for first-year students and this erased the difference between the years.

TABLE 4

t-TESTS FOR DIFFERENCE IN MEAN AGE BETWEEN FRESHMEN AND SOPHOMORES

Subject Group	N	$\bar{X}$	SD	t	p <sup>a</sup>
High risk Freshmen	63	2.60	1.291	1.35	ns
Sophomores	32	3.06	1.694		
Standard risk Freshmen	37	1.81	0.391	3.21	<.01
Sophomores	38	2.13	0.467		

---

<sup>a</sup>Two tailed

TABLE 5

CHI SQUARE TEST FOR TYPE OF HIGH SCHOOL ATTENDED

Subject Group	Type of High School		$\chi^2$	df	p
	Title I	Non Title I			
High risk	29	15	29.07 <sup>a</sup>	1	<.001
Standard risk	9	56			

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<sup>a</sup>With Yates correction for continuity

Hypothesis 1c predicted differences in realism of expectation between the two risk levels based upon the assumption that high risk students would have attended lower class and sub-standard high schools, whereas standard risk students would have attended middle class schools. Table 5 indicates the type of high schools attended for those students for whom this information was available. Disadvantaged schools were identified as such by their official designation as Title I schools. These are public schools which are eligible for federal assistance by virtue of the presence of low income children in the school. In New York City such schools are considered the poorer schools in the educational sense.

Although there was some overlap between the groups, the Chi-square test strongly supported the assumption that, on the whole, the two groups of students have had very different high school experiences. This was not a built-in difference between groups, since the requirements of the high risk program specify only that the students live in a poverty neighborhood, and make no mention of the type of high school attended. Although the two are related, individuals can and do attend high schools outside of their neighborhoods at times.

In summary, the risk level groups differed only in the areas of age and high school which were to be expected by the nature of the composition of the groups.

As a check for the possibility of systematic bias on these background characteristics in the group of subjects who filled out the questionnaire both times, comparisons were made between these subjects and the 86 students who filled out the questionnaire only once. There were no significant differences between the subject and nonsubject groups in either male-female distribution; marital status; age or type of high school. The same age and high school differences between the high risk and standard risk groups were also found in the nonsubject group.

The significant difference in age between the risk level groups was a function of the particular character of this high risk program in its first years. Students entering this program in later years have been very close in age to the other freshmen in the college. Thus, the difference in age is not an inherent difference between high risk and standard risk students. Therefore, covariance analyses were performed on the dependent variables to control for the effect of age.<sup>1</sup>

#### Academic Performance

As would be expected by the nature of the student populations, there were significant differences between the high risk and standard risk groups in college grade point average for the semester of the study. The grade point average is based on a 0-4 scale with 4.00 equal to an A average, 3.00 equal to a B, 2.00 to a C, and 1.00 equal to a D average.

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<sup>1</sup>Despite the age differences between the groups the covariance assumption of homogeneous within class regressions was met by the data.

TABLE 6

ANALYSIS OF COVARIANCE OF GRADE POINT AVERAGES

Source	df	MS	F	p
Year	1	0.02	<1	ns
Risk level	1	19.54	38.09	<.0001
Year X Risk	1	0.25	<1	ns
Error	165	0.51		

---

Subject Group	$\bar{X}^a$	SD	Range
High risk			
Freshmen	1.97	0.743	0.00-3.50
Sophomores	1.85	0.888	0.00-3.33
Standard risk			
Freshmen	2.55	0.594	1.20-3.63
Sophomores	2.56	0.667	0.60-3.63

---

<sup>a</sup>Observed means

Table 6 clearly shows that the mean grade point average of the standard risk students was higher than that of the high risk students, and that within each group there was virtually no difference between the freshmen and the sophomores.

Comparisons were again made with those students who had filled out the questionnaire once. Only for the standard risk freshman group was there a significant difference between the means, with the subject group having a higher mean grade point average than the nonsubject group (2.54 as compared to 2.10). Most important, there were no significant differences among the high risk groups.

There were no significant differences in test anxiety between the high risk and standard risk subjects, so that this was not a distinguishing factor which might have explained other differences between them. The specific results for test anxiety are presented in Appendix C.

### Tests of the Hypotheses

#### Realism of grade expectations

Degree of realism was operationally defined as the difference between the expected average and the actual grade point average received. The latter was converted to the same twelve point scale as was used for the expectation score, and an absolute Difference score between expectation and grade point average obtained for each time period. The larger the Difference score, the greater the discrepancy between expected and actual average and the less the degree of realism.

The results of analyses of covariance performed on the Time 1 and Time 2 Difference scores, with age as the covariate, are presented in Table 7.

Hypothesis Ic was strongly supported. There were highly significant differences between the risk level groups at both times. The means presented in the table indicate that the high risk students had larger Difference scores and were, therefore, less realistic than the standard risk students at both times. For high risk students the average discrepancy between their expected and obtained grade point average at the beginning of the semester was three points. This meant, for example, expecting a B+ and receiving a C+ average. The average discrepancy for standard risk students was 1.71, which meant, for example, that students

TABLE 7

ANALYSES OF COVARIANCE OF TIME 1 AND TIME 2 DIFFERENCE SCORES

Source	df	MS	Time 1		MS	Time 2	
			F	p		F	p
Year (A)	1	2.854	<1	ns	0.006	<1	ns
Risk (B)	1	64.110	18.02	<.0001	19.718	7.94	<.005
A X B	1	1.171	<1	ns	0.298	<1	ns
Error	165	3.557			2.483		

---

Subject Group	Time 1		Time 2	
	$\bar{X}^a$	SD	$\bar{X}^a$	SD
High risk				
Freshmen	3.00	1.926	2.00	1.741
Sophomores	3.06	2.395	2.03	1.840
Standard risk				
Freshmen	1.92	1.498	1.19	1.023
Sophomores	1.66	1.665	1.39	1.461

---

<sup>a</sup>Observed means

who expected a B+ received grades between B and B-.

Within each risk level, however, the freshman and sophomore groups were very close to each other in level of realism at both Time 1 and Time 2. These results did not support Hypothesis Ib.

As a means of testing the underlying assumption that the risk level differences in realism were due to differences in their high school experiences, comparisons were made among those students within each risk level who had attended different types of high schools (see Table 5). There were no significant differences in mean realism between high risk students who had attended Title I schools and those who had attended non-Title I schools; and similarly no difference between the standard risk

students in these two types of schools. However, the interpretation of these results must be qualified since it is very likely that many of the high risk students who had attended non-Title I schools were in a course of studies leading to a general diploma designed for students not expecting to go on to college. Unfortunately this information was not available for most of the students, but the likelihood is that even those high risk students who were in non-Title I schools had high school experiences which were not equivalent to those of the standard risk students in these schools. Nevertheless these results point to the obvious conclusion that psychological preparation for college depends on other factors in addition to high school experiences. They also relate to the previous assertion that it is the interaction between the student's social class and the atmosphere of the high school which he attends that affects his expectations.

For the subject groups as a whole there was a highly significant, negative correlation between Difference scores and grade point average ( $r = -.78$ ,  $p < .005$ ). Large Difference scores at Time 1 were associated with better performance. This suggested the possibility that the risk level differences in realism were a function of the risk level differences in grade point average, since grade point average was an element in the realism score. However, covariance analyses performed on the Difference scores, with grade point average as the covariate, indicated that even with grades held constant the risk level differences in realism were still significant (Table 8).

TABLE 8

ANALYSES OF COVARIANCE OF DIFFERENCE SCORES  
WITH GRADE POINT AVERAGE AS THE COVARIATE

Source	df	MS	F	p
Time 1 Scores				
Risk level	1	4.189	7.67	<.01
Error	166	0.546		
Time 2 Scores				
Risk level	1	6.181	4.27	<.05
Error	165	1.449		

---

A Repeated Measurements Analysis of Variance (Table 9) was performed as the first step toward testing Hypotheses Ia and Id.<sup>1</sup> These predicted that all freshmen and high risk sophomores would become more realistic over the course of the semester, and that standard risk sophomores would change very little in realism.

The analysis indicated a significant difference between the Time 1 and Time 2 Difference scores; with the mean at Time 1 being 2.43 and the Time 2 mean 1.68. The direction was clearly toward less discrepancy between expected and obtained average at Time 2 than at Time 1.

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<sup>1</sup>The age control was dropped for this analysis because the covariance analyses of the Difference scores indicated that age did not affect the results in any significant way.

TABLE 9

REPEATED MEASUREMENTS ANALYSIS OF VARIANCE OF DIFFERENCE SCORES

Source	df	MS	F	p
<b>Between Subjects</b>				
Year (A)	1	0.004	<1	ns
Risk level (B)	1	73.925	30.39	<.001
A X B	1	0.039	<1	ns
Subj w gps	163	2.432		
<b>Within subjects</b>				
Time (C)	1	44.972	12.44	<.001
A X C	1	1.129	<1	ns
B X C	1	5.910	1.63	ns
A X B X C	1	1.122	<1	ns
C x subj w gps	163	3.615		

---

In order to test the more specific predictions of the hypotheses in terms of change over time for the individual groups, F ratios for individual comparisons (Winer, 1962; p. 378) were computed and are presented in Table 10. The results strongly supported both Hypothesis Ia and Id. The mean Difference scores of both high risk and standard risk freshmen at Time 2 were significantly different from their mean Difference scores at Time 1, and as indicated by the means in Table 7 the direction of change was clearly toward becoming more realistic.

As predicted, the standard risk sophomores did not change significantly suggesting that they had reached an asymptotic level of realism by this time in their college career. In contrast, the high risk sophomores had clearly not reached this asymptotic level, and were

TABLE 10

F RATIOS FOR INDIVIDUAL COMPARISONS OF  
TIME 1 AND TIME 2 DIFFERENCE SCORES

Subject Group	df	F	p
Freshmen			
High risk	1, 163	11.56	<.005
Standard risk	1, 163	5.66	<.05
Sophomores			
High risk	1, 163	11.54	<.005
Standard risk	1, 163	0.64	ns

---

surprisingly not more realistic than the high risk freshmen. Unfortunately we do not know whether this lack of a difference reflects lack of improvement on the part of the sophomores or whether they started at a more unrealistic level than the current freshmen and have actually improved.

To add to our understanding of the implications of unrealistic estimates, the groups were compared in terms of the direction of the discrepancy between their expected and obtained grades. As Table 11 shows, the groups that were most unrealistic, the high risk groups, were mainly overestimators; while the most realistic groups, the standard risk, contained more underestimators. In all groups there was an increase in the number of underestimators from Time 1 to Time 2.

Table 12 presents the results of t-tests performed to compare the mean realism of the underestimators and overestimators.<sup>1</sup> As

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<sup>1</sup>Analyses of variance could not be performed because of the wide variation of the cell Ns.

TABLE 11

FREQUENCY OF OVERESTIMATION AND UNDERESTIMATION OF GRADES

Subject Group	Time 1		Time 2	
	Over- estimates	Under- estimates	Over- estimates	Under- estimates
High risk				
Freshmen	54	3	48	8
Sophomores	22	6	16	9
Standard risk				
Freshmen	23	8	11	15
Sophomores	17	12	12	14
Total <sup>a</sup>	116	29	87	46

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<sup>a</sup>Does not include those with 0 Difference scores

indicated in the table there was a significant difference for the total sample at both Time 1 and Time 2, with the mean Difference score of the overestimators greater than that of the underestimators. That this difference was not just due to the contrast between the high risk and standard risk groups was indicated by the significant difference between the Time 1 over and underestimators in the standard risk group alone. At Time 2 however, the significant difference between the total sample means was a function mainly of the high risk group. The standard risk group was by then very realistic and the difference between their means was very small, although in the same direction of higher mean Difference scores for overestimators.

This finding of an association between underestimation and realism in grade expectations fits in with the previous research in which the

TABLE 12

t-TEST COMPARISONS OF MEAN DIFFERENCE SCORES OF  
OVERESTIMATORS AND UNDERESTIMATORS

Subject Group	N	$\bar{X}$	SD	t <sup>a</sup>	p <sup>b</sup>
Time 1					
<u>Total sample</u>					
Overestimators	116	3.27	1.826	8.64	<.001
Underestimators	29	1.45	0.674		
<u>High risk</u>					
Overestimators	76	3.66	1.810	12.80	<.001
Underestimators	9	1.00	0.000		
<u>Standard risk</u>					
Overestimators	40	2.52	1.612	2.90	<.01
Underestimators	20	1.65	0.726		
Time 2					
<u>Total sample</u>					
Overestimators	87	2.45	1.700	3.86	<.001
Underestimators	46	1.64	0.733		
<u>High risk</u>					
Overestimators	64	2.59	1.774	4.04	<.001
Underestimators	17	1.47	0.696		
<u>Standard risk</u>					
Overestimators	23	2.04	1.429	0.97	ns
Underestimators	29	1.72	0.751		

<sup>a</sup>Corrected for heterogeneity of variance

<sup>b</sup>Two tailed

unrealism found there was mainly overestimation ( e.g. Pervin, 1966). This led to a comparison of the relative incidence of over and under-estimation in the subject groups. Table 13 presents the results of the

TABLE 13

SUMMARY OF PARTITIONED  $\chi^2$  OF FREQUENCY OF OVER AND UNDER ESTIMATION

Source	df	Time 1		Time 2	
		$\chi^2$	p	$\chi^2$	p
High risk Freshmen X Sophomores	1	5.18	<.05	4.91	<.05
Standard risk Freshmen X Sophomores	1	1.64	ns	0.08	ns
High risk X Standard risk	1	1.36	ns	16.93	<.01
Total	3	8.18	<.05	21.92	<.01

partitioned Chi square test performed on the frequencies of Table 11 (Castellan, 1965; p. 337). The results indicated that at Time 1 the only significant difference among the groups was between high risk freshmen and sophomores, with the freshmen having significantly more overestimators than the sophomores. By Time 2 more of the standard risk students had become underestimators so that at that point there was also a very strong difference between the high risk and standard risk groups, with high risk having significantly more overestimators.

In this respect, differences were found between freshmen and sophomores, although only in the high risk group. In addition, while 17.5% of the high risk freshmen and 40.5% of the standard risk freshmen had Difference scores of 0 or 1, 37.5% of the high risk and 57.9% of the standard risk sophomores were realistic to that degree at the beginning of the term. A test for the significance of the difference between these proportions was performed. For the comparison of high risk

freshmen and sophomores the  $z$  was 2.17,  $p < .02$  one tailed; and between standard risk freshmen and sophomores the  $z$  was 1.50,  $p < .07$  one tailed. Thus, although the freshmen and sophomore groups had similar mean Difference scores, there were qualitative differences between them in terms of the kind of unrealism expressed by them, and in terms of the number of people who were highly realistic.

#### Social Comparison Opportunities

Before examining the relationship between social comparison opportunities and realism of grade expectations, grade point average, and other variables, let us compare the subject groups on the relative incidence among them of such opportunities. As indicated previously four questions were available as measures, and each was asked at both time periods. Table 14 presents the intercorrelations between these questions at Time 1. (The pattern at Time 2 was very similar to this.)

The correlation between the two friend questions was significant for all except the standard risk freshmen. This strong intercorrelation indicated that despite the hypothetical quality of the Friend For Activity question it was similar to the other more straightforward one. With this exception, the correlations between the questions were generally small and nonsignificant. For no other pair of questions was there a significant correlation in more than one group, and in no other pair was the overall correlation significant.

The lack of consistent and strong intercorrelations between these questions indicated that these were not equivalent measures, and suggested that each had a different meaning for the students. In terms of the concept of social comparison opportunities it is possible to order these questions on a continuum reflecting the variety of people with

TABLE 14

INTERCORRELATIONS BETWEEN SOCIAL COMPARISON OPPORTUNITY  
QUESTIONS AT TIME 1

Social Comparison Opportunity Questions	High risk		Standard risk		Total Sample
	Freshmen	Sophomores	Freshmen	Sophomores	
CAMPUS HOURS X ACTIVITY	.17	.02	.48 <sup>b</sup>	.04	.14
CAMPUS HOURS X FRIEND FOR ACTIVITY	.02	-.07	-.05	-.08	.02
CAMPUS HOURS X FRIEND	.26 <sup>a</sup>	.14	-.28	.11	.13
ACTIVITY X FRIEND FOR ACTIVITY	.13	.18	.11	.05	.10
ACTIVITY X FRIEND	.05	.36 <sup>a</sup>	-.01	.06	.08
FRIEND FOR ACTIVITY X FRIEND	.38 <sup>b</sup>	.56 <sup>b</sup>	.14	.37 <sup>a</sup>	.30 <sup>b</sup>

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<sup>a</sup><sub>p</sub> <.05

<sup>b</sup><sub>p</sub> <.01

whom it is possible to compare oneself. At one end of this continuum would be the question of Campus Hours which, since it could encompass many different possibilities for how the time on campus is spent (i.e. in the library, cafeteria, lounge, or in specific activities), does not in any way limit the kind of people with whom social comparisons can be made. Participation in extra-curricular activities reflects the opportunity for social comparison with a more limited variety of people in the sense that all those who participate in that activity pre-

sumably have some shared interests and goals. In addition they would probably only be engaged in behavior relevant to that activity.

TABLE 15

MEAN SOCIAL COMPARISON OPPORTUNITY SCORES FOR EACH SUBJECT GROUP<sup>a</sup>

Social Comparison Opportunity Question	High risk		Standard risk		Diffs btwn gps	p
	Fresh men	Sopho mores	Fresh men	Sopho mores		
CAMPUS HOURS Time 1	10.92	11.06	7.74	5.40	RISK	<.006
CAMPUS HOURS Time 2	10.02	10.77	6.80	6.85	RISK	<.016
ACTIVITY Time 1	0.37	0.50	0.43	1.26	YEAR RISK YR X RISK	<.002 <.032 <.029
ACTIVITY Time 2	0.62	0.71	0.95	1.45	RISK	<.064
FRIEND FOR ACTIVITY Time 1	3.22	3.32	2.36	3.26		
FRIEND FOR ACTIVITY Time 2	3.20	3.72	2.74	3.82	YEAR	<.043
FRIEND Time 1	1.38	1.89	1.17	1.63	YEAR	<.033
FRIEND Time 2	1.98	1.79	1.50	1.67		

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<sup>a</sup>Means presented in this and all later tables are adjusted means.

At the other end of the continuum the Friend question, which asks for the names of their best friends, represents a very limited range of social comparison opportunities in terms of the number of people and their presumed similarity to the student. The Friend For Activity question would reflect a less limited range because it gave them

the option to name people with whom they might not be very close but with whom, for example, they might wish to be on a sports team. Thus, this question can reflect a broader range of possible social comparisons than can the Friend question.

The mean scores obtained for each question are presented in Table 15 together with indications of where there were significant differences between the groups. Age was found to be negatively correlated with these social comparison opportunity questions, and therefore the means presented were adjusted by a covariance analysis to control for the effect of the age differences between the groups.<sup>1</sup>

Risk level differences

Table 16 presents the means for the significant main effects for risk level. At the beginning and end of the semester the high risk group

TABLE 16

MEAN SOCIAL COMPARISON OPPORTUNITY SCORES  
FOR SIGNIFICANT RISK LEVEL EFFECTS

Social Comparison Opportunity Question	Risk level	
	High risk	Standard risk
CAMPUS HOURS Time 1	10.58	6.98
CAMPUS HOURS Time 2	10.08	7.15
ACTIVITY Time 1	0.39	0.89
ACTIVITY Time 2	0.59	1.28

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expected to spend more time on campus outside of class than did the

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<sup>1</sup>Summary tables for these analyses can be found in Appendix E.

standard risk group. However, at both time periods the high risk group reported participating in significantly fewer extra-curricular activities than did the standard risk group. Taken together these results suggest that time on campus may serve different functions for these groups. The high risk students who come from poverty neighborhoods and whose home conditions are probably not conducive to study would be more likely to spend time in school for the purpose of studying than would the standard risk students, who, on the whole, come from better economic backgrounds. In addition, the high risk students were encouraged to limit their participation in extra-curricular activities in order to concentrate on their academic work.

There were no differences between the risk levels in number of friends mentioned. This was an encouraging finding in terms of its indication that the high risk student was not an isolate within the college. Unfortunately, there was no information as to the nature of the friendships maintained; whether their friends were all from within the high risk program or whether there was assimilation into the mainstream of college students. With regard to this issue it should be noted that 46.6% of the high risk freshmen and 14.3% of the high risk sophomores who were involved in activities belonged to the black and Puerto Rican club on campus, while another 46.6% of the high risk freshmen and 50% of the high risk sophomores belonged to more general clubs. This year difference could have been an indication of some measure of increased integration within the school over that time.

#### Year differences

There were no differences between freshmen and sophomores in the

number of hours expected to be spent on campus. Table 17 presents the means of the significant main effects for Year. Freshmen reported participating in significantly fewer activities at Time 1 than sophomores, but the significant Year X Risk interaction (Table 15) indicated that

TABLE 17  
MEAN SOCIAL COMPARISON OPPORTUNITY SCORES  
FOR SIGNIFICANT YEAR EFFECTS

Social Comparison Opportunity Question	Year in College	
	Freshmen	Sophomores
ACTIVITY Time 1	0.42	0.86
FRIEND FOR ACTIVITY Time 2	3.05	3.70
FRIEND Time 1	1.32	1.72

---

the difference between the years was much stronger for the standard risk than for the high risk groups. The high risk sophomores were closer to the freshmen groups in mean activity level than to the standard risk sophomores. This alignment was similar to the one found with regard to change in realism.

In terms of the number of friends mentioned in response to the Friend for Activity question there were significant year differences in change over the semester with sophomores increasing more than freshmen ( $F= 2.86$ ,  $df= 1, 164$ ,  $p < .093$ ). As a result there was a significant difference between the years at Time 2 with sophomores naming more friends than freshmen.

Sophomores at Time 1 named more best friends in the college than did freshmen. Over the course of the semester there were significant differences in change, with freshmen increasing more than sophomores ( $F= 2.95, df= 1, 164, p <.008$ ); so that by Time 2 the difference between the years was not significant.

These differences between years were ones to be expected. Sophomores have obviously had more opportunities than freshmen to participate in activities and to make friends in college, and these results indicated that they indeed had done so. On the other hand the fact that there were freshmen at the beginning of the term who were familiar with activities and other students indicated that social comparison opportunities occur very early in the student's college experience.

#### Realism of grade expectations and Social Comparison Opportunities

To test for the hypothesized positive relationship between social comparison opportunities and realism of expectations subjects were divided into high and low groups on the social comparison opportunity questions. This was done for each question individually by a median split of the combined scores of all subjects at both times.<sup>1</sup> Three way analyses of covariance, with social comparison level as the third factor and age as the covariate, were then performed on the Difference

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<sup>1</sup>For details on cutoff points and the Ns for each level see Appendix D.

TABLE 18

MEAN TIME 1 DIFFERENCE SCORES FOR EACH LEVEL OF CAMPUS HOURS AT TIME 1

Campus Hours

Time level 1	$\bar{X}$	df	F	p
Low	2.68	1, 159	4.76	<.031
High	1.92			

scores.<sup>1</sup> The results relating to their Time 1 Difference scores will be presented first.

There was a significant main effect for Campus Hours at Time 1. As indicated by Table 18, those who expected to spend more time on campus had smaller Difference scores, thus indicating a positive relationship between Campus Hours and realism of expectations for all groups, although Hypothesis 1e had predicted this association only for freshmen.

TABLE 19

MEAN TIME 1 DIFFERENCE SCORES FOR INTERACTION OF YEAR X ACTIVITY (TIME 1)

Activity Time 1 level	Year in College		df	F	p
	Freshmen	Sophomores			
Low	2.69	2.31	1, 161	3.13	<.079
High	1.79	2.37			

The Year X Activity interaction (Table 19) was a reflection of a

<sup>1</sup>Full summaries of these analyses can be found in Appendix F.

TABLE 20

MEAN TIME 1 DIFFERENCE SCORES FOR INTERACTION  
OF RISK X ACTIVITY (TIME 2)

Activity Time 2 level	Risk level		df	F	p
	High risk	Standard risk			
Low	3.46	1.59	1, 160	3.56	<.061
High	2.45	1.76			

---

positive relationship between activity level and realism among the combined freshmen group, and no relationship among the combined sophomore group. This finding supported Hypothesis 1e in that freshmen, but not sophomores, who reported a relatively high level of participation in activities made more realistic estimates of their grades.

Activity level at Time 2 interacted with risk level so that, as indicated by Table 20, the positive relationship between activity level and realism applied only to the high risk groups. A relatively high activity level at the end of the semester was associated with smaller discrepancies between their expected grades at the beginning of the semester and the actual grades awarded at the end of the semester. For the standard risk group there was a slight negative relationship with those who were active at Time 2 tending to have had larger discrepancies at Time 1 between their expected and actual grades.

Inspection of the means of the freshmen and sophomores in each risk group, as presented in Table 21, clarified the nature of the relationships. The individual means made apparent that there was more consistency in the results than was suggested by the results in Tables 18 and 19. For high risk sophomores there was a positive relationship between Time 1 realism and activity level at both times, while for

TABLE 21

MEAN TIME 1 DIFFERENCE SCORES FOR ACTIVITY LEVELS  
OF EACH SUBJECT GROUP

	High risk		Standard risk	
	Freshmen	Sophomores	Freshmen	Sophomores
Activity Time 1 level				
Low	3.38 <sup>a</sup>	3.33	2.00	1.29
High	2.20	2.90	1.39	1.85
Activity Time 2 level				
Low	3.46	3.45	1.80	1.38
High	2.43	2.47	1.78	1.75

---

<sup>a</sup>As noted in the text below, differences between the levels were significant for high risk freshmen but not for standard risk freshmen.

standard risk sophomores there was a negative relationship at both times.

The hypothesis had predicted differences between social comparison opportunity levels for freshmen only. Planned comparison F statistics comparing the Difference scores of the low-high activity levels of the standard risk freshmen were not significant at either time. They were, however, significant at both times for the high risk freshmen. The F for activity level at Time 1 was 5.13 and for activity level at Time 2 it was 4.58, both significant at the .05 level.

The significant interaction of Year X Friend For Activity level at Time 2 somewhat supported Hypothesis 1e since there was a positive relationship for freshmen. Those freshmen who named more friends at the end of the semester were also those who tended to have been more realistic in their expectations at the beginning of the semester (Table 22).

TABLE 22

MEAN TIME 1 DIFFERENCE SCORES FOR INTERACTION  
OF YEAR X FRIEND FOR ACTIVITY (TIME 2)

Friend For Activity Time 2 level	Year in College		df	F	p
	Freshmen	Sophomores			
Low	2.42	1.90	1, 151	4.45	<.037
High	2.17	2.78			

---

In terms of the continuum on which the social comparison opportunity questions were ordered, these results seem to indicate that the broader the opportunity for social comparison the more relevant the comparison for realism in expectations. Thus, hours expected to be spent on campus were relevant for all groups.

Participation in activities was related to all groups although not in the same way. The positive relationship between activity level and Time 1 realism was strongest for the high risk students, applying at both time periods; although for the sophomores the Time 1 activity levels were less different. For standard risk freshmen this positive relationship applied only to their activity level at Time 1. This suggests that these social comparison opportunities are important for standard risk freshmen only at the beginning of the term, while for the high risk students they continue to be important at the end of the term. This importance for high risk students is highlighted by the fact that the Difference scores of the high activity risk level groups were closer to each other than the Difference scores of the low activity high risk and standard risk groups.

The positive relationship had been expected for freshmen students since it was assumed that social comparisons would influence their ex-

pectations because of the relative unavailability of objective comparisons. Sophomores were expected to base their expectations on a sufficient number of objective comparisons to make the effect of social comparison minimal. The finding that high risk sophomores were similar to high risk freshmen in this regard made sense in relation to the finding that they were, on the average, as unrealistic as the high risk freshmen. This would suggest that at the level of unrealism which they manifested at Time 1, social comparisons are influential regardless of prior number of objective comparisons experienced.

The negative relationship between the Time 1 realism of the standard risk sophomores and their Activity and Friend For Activity levels suggested that interaction with others in activities served a very different function for this group than it did for the others. The nature of this different function will become clearer as we examine the results of the other dependent variables.

The Friend question, which involved the narrowest range of social comparison opportunities, was unrelated to realism; which may indicate that best friends may be too similar to each other to serve as comparisons in this area, and that a wider range of people may be necessary for comparisons for this particular aspect.

There were only slight differences in Time 2 realism between the high and low social comparison opportunity groups, and these were in the same direction as the Time 1 differences. This was probably in large part a function of the high degree of realism in all groups at Time 2. It also lent support to the contention that by the end of the term objective comparisons were available and were dominant in their effect on expectations, and therefore social comparisons were no longer relevant. Their grade expectations at Time 1 were a representation, in

a sense, of their intentions for that term; perhaps reflecting how hard they expected to have to work, in addition to their evaluation of their own abilities. Their realism at that point was related to the opportunities available to them for comparison with the intentions and abilities of others within the college. Their expectations at Time 2 should represent their evaluation of what they have actually done during the semester. Thus, realism at that time would be a result of accurately assessing one's ability on the basis of the objective evaluations received up to that point in the term. A high degree of unrealism at Time 2 would probably be a reflection of inability to use the information whether it came from objective or social comparisons. Therefore, Time 2 realism or unrealism would not be related to social comparison opportunities.

The difference between the standard risk freshmen and sophomores in the relationship between activity and realism suggests a tentative explanation for the previous finding of no difference in average realism between them. For standard risk sophomores the relationship was one of high activity-low realism. Therefore, when 65.8% of this group was high in activity at some time during the semester this meant that there were many sophomores with relatively low realism scores. This would lower the mean realism score of this group, and result in their level of realism not being higher than that of the freshmen.

#### Academic performance and Social Comparison Opportunities

Analyses of covariance with age as the covariate were performed to compare high-low social comparison opportunity breakdowns on grade point average.<sup>1</sup> The hypothesized relationship was that high social

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<sup>1</sup>Summary tables of these analyses can be found in Appendix G.

TABLE 23

MEAN GRADE POINT AVERAGE SCORES FOR EACH LEVEL OF CAMPUS HOURS (TIME 1)

Campus Hours Time 1 level	$\bar{X}$	df	F	p
Low	2.12	1, 159	4.79	<.031
High	2.38			

comparison opportunity level would be associated with high grade point average (Hypothesis IIa), and that this relationship would be stronger for high risk students than for standard risk students (Hypothesis IIb).

Part a of the hypothesis was supported for only one question - Campus Hours at Time 1. For all groups there was the tendency for those low in Campus Hours to be low in grade point average, and for those high in Campus Hours to be high in grade point average (Table 23).

For the Activity levels at both time periods there were significant Risk level X Activity interactions (Table 24). The means indicated that

TABLE 24

MEAN GRADE POINT AVERAGE SCORES FOR THE RISK X ACTIVITY INTERACTIONS

Activity Time 1 level	Risk level		df	F	p
	High risk	Standard risk			
Low	1.76	2.74	1, 161	4.59	<.034
High	2.05	2.51			
Time 2 level					
Low	1.74	2.72	1, 160	3.96	<.049
High	2.04	2.52			

on this question the positive relationship between grades and social comparison opportunities was found only for the high risk students, and that there was a negative relationship for standard risk students.

However, the means of the freshmen and sophomores within the risk groups (Table 25) revealed that for standard risk freshmen there was virtually no relationship between grade point average and activity level, and that the negative relationship was due to the standard risk sophomore group. The results for these sophomores paralleled those obtained with the realism scores, although they were not as strong as those for realism. These results, together with the fact that this group was also the group with the highest mean activity level (see Table 15), suggest that the high activity, standard risk sophomores in this sample were the type of college students who become over involved with extra-curricular activities and do poorly in their academic studies.

TABLE 25

MEAN GRADE POINT AVERAGE SCORES OF EACH ACTIVITY LEVEL  
FOR ALL SUBJECT GROUPS

Activity	Subject Group			
	High risk		Standard risk	
	Freshmen	Sophomores	Freshmen	Sophomores
Time 1 level				
Low	1.87	1.64	2.63	2.85
High	2.13	1.98	2.60	2.42
Time 2 level				
Low	1.83	1.66	2.68	2.76
High	2.09	1.98	2.56	2.49

TABLE 26

MEAN GRADE POINT AVERAGE SCORES FOR THE THIRD ORDER  
INTERACTION OF YEAR X RISK X FRIEND FOR ACTIVITY<sup>a</sup>

Friend for Activity Time 2 level	Subject Group			
	High risk		Standard risk	
	Freshmen	Sophomores	Freshmen	Sophomores
Low	1.82	1.89	2.73	2.63
High	2.15	1.64	2.43	2.56

---

<sup>a</sup>F= 3.01, df= 1, 151, p <.085

On the Friend For Activity question there was a significant third order interaction for the Time 2 levels, which the means in Table 26 show was the result of the difference between the positive relationship in the high risk freshmen group and the negative relationship within the other groups. For the standard risk groups this represented a consistent relationship with a greater number of friends listed at either time associated with lower grades. For the high risk sophomores there was a change over time in the relationship. Those students from this group who increased in number of friends listed over the course of the term tended to have lower mean grade point average scores than those who did not change levels (1.69 as compared with 2.01). Their inclusion in the Time 2 high level lowered the mean score of this group and raised the mean score of the low level.

The results for the Friend question at the Time 2 level were similar to those for the Activity question with a significant Risk level X Friend interaction. Here again the relationship was a positive one for the high risk groups, and a negative one for the standard risk; with the latter mainly due to the sophomore group (Table 27).

TABLE 27

MEAN GRADE POINT AVERAGE SCORES FOR THE INTERACTION OF RISK X FRIEND (TIME 2)<sup>a</sup>

Friend Time 2 level	Subject Group					
	High risk	Standard risk	High risk		Standard risk	
			Fresh men	Sopho mores	Fresh men	Sopho mores
Low	1.71	2.75	1.71	1.72	2.69	2.81
High	1.98	2.50	2.06	1.90	2.52	2.47

---

<sup>a</sup>F= 5.14, df= 1, 154, p <.025

Thus, across three of the four questions - Campus Hours, Activity, and Friend - social comparison opportunities were associated with higher performance among high risk students. It should also be noted that the risk level differences in grade point average were most pronounced in the low social comparison opportunity groups, whereas the mean grade point averages of the high groups were closer together. This highlighted the nature of the relationship between grade point average and social comparison for high risk students.

On these three questions there was a great deal of consistency between the Time 1 and Time 2 interrelationships indicating that the particular association for each of the groups between the two variables was an ongoing one.

Thus Part a of the hypothesis was supported by only one question - Campus Hours. There was a general positive association between academic performance and social comparison opportunities on the question that reflected the opportunity for the broadest kinds of social comparisons. Part b of the hypothesis was supported for the high risk students along the whole continuum of generality of possible social comparisons from

Campus Hours to Friend. No causal statement could be made as to whether social comparison opportunities led to better academic performance or vice versa. However, it was clear that there was a connection between the two for high risk students which did not exist for standard risk students. Certainly, in view of the close correspondence between high school and college for standard risk students, which was suggested by their high degree of realism, the relative absence of a need for comparison with others in terms of study and work habits was understandable. They did not need social comparisons to adjust to the academic level because of the latter's apparent continuity with their high school experience. Since the discontinuity was sharp for the high risk students, social comparison could play a role.

#### Satisfaction

Scores on the satisfaction variable itself were examined before its relationship with the other variables was noted. Table 28 presents the results of the analysis of covariance performed on the Time 1 total satisfaction scores. The direction of the differences at Time 1 were for freshmen to be more satisfied than sophomores, and high risk students to be more satisfied than standard risk students. As was indicated by the significant interaction, however, the picture was not that clear. Inspection of the means presented in the table revealed that all of these differences were due to the large discrepancy between the mean satisfaction score of the high risk freshmen and the mean satisfaction scores of the other three groups. Clearly, at the beginning of the semester the high risk freshmen, relative to the other groups, were highly satisfied with their college experience up to that point, or with just being in college.

TABLE 28

ANALYSIS OF COVARIANCE OF TIME 1 SATISFACTION SCORES  
AND MEAN SCORES OF EACH SUBJECT GROUP

Source	df	MS	F	p
Year	1	351.676	5.14	<.025
Risk level	1	269.680	3.94	<.049
Year X Risk	1	272.820	3.99	<.047
Error	165	68.373		

---

	High risk		Standard risk	
	Freshmen	Sophomores	Freshmen	Sophomores
Mean Scores	41.03	36.11	36.04	36.36

---

Over the course of the semester all of the groups decreased in satisfaction. The results of a multiple covariate analysis performed on the Time 2 satisfaction scores, with age and Time 1 scores as the covariates, are presented in Table 29.

TABLE 29

ANALYSIS OF COVARIANCE OF TIME 2 SATISFACTION SCORES  
WITH AGE AND TIME 1 SCORES AS THE COVARIATES

Source	df	MS	F	p
Year	1	73.871	1.54	ns
Risk level	1	309.785	6.45	<.013
Year X Risk	1	42.066	<1	ns
Error	164	48.008		

---

	High risk	Standard risk
Mean Scores	35.47	32.64

---

TABLE 30

MEAN GAIN SCORES INDICATING CHANGE IN MEAN SATISFACTION  
BETWEEN TIME 1 AND TIME 2

Mean Scores	High risk	Standard risk	High risk		Standard risk	
			Freshmen	Sophomores	Freshmen	Sophomores
	-3.10	-3.56	-6.02	-0.19	-4.90	-2.23

---

The gain scores presented in Table 30 indicated that the standard risk groups had decreased in satisfaction more than the high risk groups, so that at the end of the semester there was a significant difference in satisfaction between the risk levels. The gain scores for the individual groups indicated, however, that in both groups there was a greater decrease among the freshmen than among the sophomores. This suggests that freshmen enter college with great expectations, are disillusioned to some extent, but in later years stabilize at a moderate level of satisfaction.

Satisfaction and Social Comparison Opportunities

The relationship between satisfaction and social comparison opportunities was hypothesized to be a positive one (Hypothesis III). Three way analyses of covariance were performed on the satisfaction scores, and summaries of these analyses can be found in Appendix H.

At Time 1 there was a positive relationship between satisfaction and Campus Hours for all groups combined. It was not significant at the .10 level, probably because of the very high satisfaction level of the high risk freshmen. The mean of the low group was 36.31 and of the high group 38.56.

For the Time 2 levels of Campus Hours there was a significant Risk X Campus Hours interaction (Table 31).

TABLE 31

MEAN TIME 1 SATISFACTION SCORES FOR INTERACTION  
OF RISK X CAMPUS HOURS (TIME 2)

Campus Hours Time 2 level	Risk level		df	F	p
	High risk	Standard risk			
Low	36.06	36.48	1, 152	2.89	<.091
High	40.41	36.04			

Only for high risk students was there an association in the predicted direction between their initial satisfaction scores and the amount of time they expected to spend on campus in the next term.

On the Activity question there were significant third order inter-

TABLE 32

MEAN TIME 1 SATISFACTION SCORES FOR  
TIME 1 AND TIME 2 ACTIVITY LEVELS

Activity	Subject Group			
	High risk		Standard risk	
	Freshmen	Sophomores	Freshmen	Sophomores
Time 1 level				
Low	41.27	34.29	35.42	37.15
High	40.42	39.56	37.52	35.78

F= 2.95, df= 1, 161, p <.088

Time 2 level

Low	42.30	35.72	34.58	38.54
High	39.00	37.21	37.85	34.90

F= 4.62, df= 1, 160, p <.034

actions for both Time 1 and Time 2 levels (Table 32). The high risk sophomores and the standard risk freshmen were similar to each other with low activity associated with lower mean satisfaction. The high risk freshmen and standard risk sophomores were clearly different. At Time 1 the high risk freshmen were so satisfied with their college situation that there was no relationship between their activity level and their satisfaction. By contrast the relationship between their activity at Time 2 and their Time 1 satisfaction scores was a negative one. Those who were less satisfied at Time 1 were more likely to be active at Time 2 than those who were more satisfied at Time 1. However, comparison of the Time 1 and Time 2 mean satisfaction scores indicated that those high risk freshmen who were high in Activity tended to decrease less in satisfaction than those who were low in Activity (Table 33). Taken together

TABLE 33

MEAN CHANGE SCORES IN SATISFACTION FROM TIME 1 TO TIME 2  
FOR ACTIVITY LEVELS OF HIGH RISK FRESHMEN  
AND STANDARD RISK SOPHOMORES

Activity	High risk Freshmen	Standard risk Sophomores
Time 1 level		
Low	-3.91	-3.24
High	-2.31	-2.70
Time 2 level		
Low	-4.89	-4.71
High	-1.14	-0.64

---

these results imply that those students who were relatively low in satisfaction at Time 1 tended to be high in Activity level at Time 2, and to

have changed less in satisfaction over the course of the semester. Since the initial level of satisfaction within this group was conspicuously higher than that of the other groups, suggesting unrealistic expectations from the college experience, these results imply that those high risk freshmen who were more realistic in these expectations, as reflected in somewhat lower satisfaction scores, adjusted better to their situation and experienced less disillusionment than the other high risk freshmen.

For standard risk sophomores there was a negative relationship between activity and satisfaction, similar to that found with realism and grade point average. Those who were not active were more satisfied than those who were. This strengthened our previous assertion that participation in activities had a different meaning for this group. However, those who were low in activity decreased in satisfaction over the course of the term more than those who were high in activity (Table 33).

There was a similar third order interaction for the Time 1 Friend level (Table 34). There was also a significant main effect for Friend (Low mean= 36.02; High mean= 38.91), but the individual group means emphasize that this was mainly a function of the strong positive rela-

TABLE 34

MEAN TIME 1 SATISFACTION SCORES FOR LEVELS OF FRIEND (TIME 1)<sup>a</sup>

Friend Time 1 level	High risk		Standard risk	
	Freshmen	Sophomores	Freshmen	Sophomores
Low	41.25	31.56	34.81	36.48
High	41.58	39.00	38.49	36.58

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<sup>a</sup>F= 4.01, df= 1, 158, p <.047

relationship between satisfaction and Friend within the high risk sophomore and standard risk freshman groups. For the high risk freshmen and standard risk sophomores there was no difference in satisfaction between the levels.

There was no consistent relationships between levels of Friend For Activity and satisfaction.

In an attempt to clarify the meaning of these results, Pearson Product-Moment Correlations were computed between the actual social comparison opportunity scores and the answers to the individual satisfaction questions. The results of these correlations revealed important differences between the groups. The strongest correlations for the high risk sophomore and standard risk freshman groups were with the questions that dealt with how comfortable or how out of place they felt in the college. For example, the correlation between the question "How comfortable do you feel with most of the students at your college?" and Friend level at Time 1 was .39 for standard risk freshmen and .37 for high risk sophomores, both significant at the .05 level. The students in these groups who were high in social comparison opportunities had apparently found sources of support through these opportunities, and were more satisfied than those who had fewer such opportunities.

On the other hand, the trend in the standard risk sophomore group was for a strong negative association between social comparison opportunities, and particularly Activity, and satisfaction with the academic aspects of the college. Those who were more active were more likely to be dissatisfied with the academic aspect of the school, and to feel that what they were doing at college was a waste of time. The correlation between the question "In terms of your own goals, how satisfied are you with the academic aspect of your college?" and Activity level at Time 1

was  $-.48$ ,  $p < .01$ . The correlation between Activity level at Time 1 and the question "How often do you feel that what you are doing at college is a waste of time?" was  $-.35$ ,  $p < .05$ .

Another reflection of the previously mentioned instance of more decrease in satisfaction among those standard risk sophomores who were low in Activity was the fact that at Time 2 there was a positive correlation between Activity and the question dealing with how comfortable they felt with the other students ( $r = .24$ ). Apparently over the course of the semester this aspect began to assume importance in relation to their degree of satisfaction with the academic area.

The association for high risk freshmen between any of the satisfaction and social comparison opportunity questions was very weak or nonexistent.

The developmental sequence seemed to be that high risk freshmen entered euphorically, and were brought down to earth by the reality of the situation. The standard risk freshmen and the high risk sophomores were concerned with their acceptance into the college community, while the standard risk sophomores were more concerned with the academic aspect of the college and their attitude toward it.

There were no significant differences between the groups on the analyses performed on the Time 2 total satisfaction scores, although the trends were similar to the ones found with the Time 1 scores. This would seem to suggest that the causal direction was for satisfaction to lead to social comparison opportunities rather than vice versa; or that satisfaction at the end of the semester was unrelated to these kind of factors. However, there was also the finding that within the three groups which exhibited the most change, namely the high risk freshmen and the standard risk groups, it was the low social comparison opportu-

nity groups which decreased the most in satisfaction. This suggests that social comparisons occurring during the semester do have an effect upon satisfaction with college.

College subculture orientation

Previous reserach documented above had found social class differences in orientation toward the goal of a college education. Similar differences were expected between the high risk and standard risk students. The obtained mean scores for each group as presented in Table 35 indicated that standard risk students were indeed higher in academic orientation than the high risk students, although not significantly so (see Table 36). The relatively high initial scores of the high risk freshmen might have been part of the initial euphoria of entering college, which was also reflected in their very high initial satisfaction scores.

TABLE 35

OBSERVED MEAN ACADEMIC ORIENTATION SCORES

Subject Group	Time 1		Time 2	
	$\bar{X}$	SD	$\bar{X}$	SD
High risk				
Freshmen	36.33	6.080	34.30	6.741
Sophomores	33.00	8.478	34.34	4.949
Standard risk				
Freshmen	37.11	7.752	37.92	6.597
Sophomores	37.37	6.848	38.18	6.943

---

The lower score of the high risk sophomore group was due to their

lower mean scores on four of the five statements, but they were most different from the other groups on one statement. At Time 1 52.4% of the high risk freshmen, and 58.7% of the standard risk groups strongly disagreed with the statement "The notion that college should provide a basic general education and appreciation of ideas is a luxury that we cannot afford". By contrast, 53.1% of the high risk sophomores were ambivalent in their reaction to this statement, neither agreeing nor disagreeing with it.

The statement which elicited the most agreement with the vocational orientation was that "College should provide the kind of education that prepares you for getting a good job". Even students who were otherwise high in academic orientation tended to indicate strong agreement with this statement. The means for high risk students were higher than those of standard risk students, but all of the means were on the agreement end of the scale.

This finding was not comparable to the previous research which asked students to rank the different goals of an education in order of importance to them. Thus it cannot be inferred that these students were more vocational in orientation than those in other schools. However, the findings do suggest that the orientations held by students are not pure ones. Different goals may coexist together, and asking them to choose one over the other may be asking for an artificial distinction. Clearly, in this sample all of the students felt that one of the main functions of a college education was to enable them to get a good job.

An analysis of covariance was performed on the total academic orientation scores (Table 36), and the results indicated that the observed differences in academic orientation at Time 1 between the risk

TABLE 36

ANALYSIS OF COVARIANCE OF TIME 1 ACADEMIC ORIENTATION SCORES

Source	df	MS	F	p
Year	1	49.555	<1	ns
Risk level	1	116.902	2.31	ns
Year X Risk	1	122.688	2.42	ns
Error	165	50.582		

---

levels was a function of the age differences between them.

Age was negatively correlated with academic orientation, so that the adjustment for age served to raise the mean scores of the older, high risk groups, and lower the mean scores of the younger standard risk groups. Although this adjustment changed the significance level, it did not alter the means by very much.

A multiple covariance analysis of the Time 2 academic orientation scores, with age and Time 1 scores as covariates, indicated that there were significant differences in change over time with a resultant significant risk level difference in academic orientation at Time 2 (Table 37).

TABLE 37

MULTIPLE COVARIANCE ANALYSIS OF TIME 2 ACADEMIC ORIENTATION SCORES WITH AGE AND TIME 1 SCORES AS THE COVARIATES

Source	df	MS	F	p
Year	1	68.106	2.28	ns
Risk level	1	304.676	10.22	<.002
Year X Risk	1	21.758	<1	ns
Error	164	29.820		

---

TABLE 38

MEAN GAIN SCORES BETWEEN TIME 1 AND TIME 2 ACADEMIC ORIENTATION

	High risk	Standard risk	High risk		Standard risk	
			Freshmen	Sophomores	Freshmen	Sophomores
Mean Scores	-0.15	+0.61	-2.42	+2.12	+0.84	+0.39

---

The gain scores presented in Table 38 show that, although on the whole the risk level differences in change were that the high risk decreased and the standard risk increased in academic orientation, the difference was basically between the high risk freshmen and the other groups.

For standard risk students there were mainly positive correlations between their academic orientation and their grade point average. For standard risk freshmen the strongest correlation was in terms of agreement with the statement "Students should do more reading than just the amount necessary to pass the course" ( $r = .39, p < .05$ ). The strongest correlation in the sophomore group was with the statement "Knowledge for its own sake is what college students should be interested in" ( $r = .39, p < .05$ ). Very interestingly, for this group there was a strong correlation between grade point average and agreement with a statement which does not represent an academic orientation - "Participation in school activities outside of classwork does not add anything to the education you receive." ( $r = .35, p < .05$ ). Those who agreed that extra-curricular participation was not important were higher in grade point average. Of the 8 students in this group who agreed with this statement, 7 did not participate in activities. Of the 27 who disagreed with this statement, 21 were participating in activities. With regard to the

statement most reflective of the vocational orientation there were weaker but negative correlations for the standard risk students. Those who agreed more strongly with the statement "College should provide the kind of education that prepares you for getting a good job" tended to have lower grades than those who were weaker in their agreement with it ( $r = -.30, p < .10$ ). In other words those with a more vocational orientation tended to have lower grades.

For high risk students the latter statement was the one with the most consistent relationship to their grades. Those high risk students who were more in agreement with this statement were likely to have received higher grades than those less in agreement with it. In general the correlations between the individual academic orientation questions and grade point averages were relatively weak for the high risk groups. They were mainly of the character of higher grades associated with lower academic orientation. It would seem that those with a more vocational orientation were more practical and realistic in their approach to a college education, and this may be the more functional approach for these students. This would also suggest that these somewhat philosophical questions were not very relevant for the high risk students. They may have accepted the message communicated by the media that the way to earn more money and get a good job is to stay in school.

#### Social Comparison Opportunities and change to an academic orientation

Hypothesis IVa predicted that students who were relatively high in social comparison opportunities would be more likely to change toward the academic orientation than would students low in such opportunities. The hypothesis was tested by multiple covariate, three way analyses of the Time 2 academic orientation scores, with age and Time 1

scores as covariates.<sup>1</sup> Summaries of these analyses can be found in Appendix I.

For the Campus Hours question there was a significant risk level X Time 1 level interaction which indicated that the hypothesis was supported for standard risk students, while the opposite relationship obtained for the high risk students (Table 39). Standard risk students who expected to spend more time on campus were more likely to increase in academic orientation than those who did not. High risk students who expected to spend more time on campus were more likely to decrease in academic orientation.

TABLE 39

MEAN ACADEMIC ORIENTATION CHANGE SCORES FOR  
INTERACTION OF RISK X CAMPUS HOURS (TIME 1)

Campus Hours Time 1 level	Risk level		df	F	p
	High risk	Standard risk			
Low	+2.03	-0.26	1, 158	3.44	<.066
High	-1.59	+1.36			

---

The hypothesis was not supported by the Activity question (Table 40). Although there were significant differences in change between the Time 1 activity levels, the direction of change was opposite to the predicted one. Those who were high in activity were more likely to decrease in academic orientation, and those who were low in activity were more likely to increase.

The means of the individual groups were included in the table to

---

<sup>1</sup>Change scores were computed by subtracting the Time 2 mean adjusted for age and Time 1 from the Time 1 mean adjusted for age. A + score indicates an increase in academic orientation over time. A - score indicates a decrease over time.

TABLE 40

MEAN ACADEMIC ORIENTATION CHANGE SCORES FOR TIME 1 ACTIVITY LEVELS<sup>a</sup>

Activity Time 1 level	Total group	Subject Group			
		High risk		Standard risk	
		Freshmen	Sophomores	Freshmen	Sophomores
Low	+1.17	-2.06	+2.23	+1.32	+3.18
High	-1.21	-3.71	+1.69	-0.90	-1.87

---

<sup>a</sup>F= 10.06, df= 1, 160, p <.002

facilitate a clarification of this finding. The means of the high risk groups were quite different from each other with both freshmen levels decreasing and both sophomore levels increasing. The tendency, as in the Campus Hours question, was for those low in activity to increase more or decrease less. The relationship for the standard risk sophomores fit in with the previous finding for the high activity group of dissatisfaction with the academic aspects of the college and low grade point average.

On the Friend For Activity question there was a significant third order interaction with the Time 1 levels (Table 41). As indicated by the means in the table, the results for both standard risk groups sup-

TABLE 41

ACADEMIC ORIENTATION CHANGE SCORE MEANS FOR  
TIME 1 FRIEND FOR ACTIVITY LEVELS<sup>a</sup>

Friend For Activity Time 1 level	High risk		Standard risk	
	Freshmen	Sophomores	Freshmen	Sophomores
Low	-4.46	+4.77	-0.03	-0.79
High	-0.77	-0.92	+3.30	+1.21

---

<sup>a</sup>F= 4.97, df= 1, 153, p <.028

ported the hypothesis. Those high in friends for activity increased in academic orientation while the low group decreased. The results for the high risk freshmen indirectly supported the hypothesis since the high group decreased very little in comparison to the low group. The high risk sophomore group was clearly different, with the low group increasing in academic orientation.

The differences between the Time 2 levels of Friend (Table 42) were in the hypothesized direction with those high in friends increasing in academic orientation and those low in friends changing very little ( $F= 2.90, df= 1, 153, p < .091$ ). The significant third order interaction matched the pattern found with Friend For Activity ( $F= 4.14, df= 1, 153, p < .044$ ). The standard risk high groups increased in academic orientation, the high risk freshmen who were high in friends did not decrease, and the high risk sophomores who were low in friends were the ones who increased.

For this hypothesis we found a different alignment of groups. The standard risk freshmen and sophomores were alike across all four questions. On three of the four questions - Campus Hours, Friend For Activity, Friend - there was a relationship for the sophomores in the

TABLE 42

MEAN ACADEMIC ORIENTATION CHANGE SCORES FOR TIME 2 FRIEND LEVELS

Friend Time 2 level	Total group	Subject Group			
		High risk		Standard risk	
		Freshmen	Sophomores	Freshmen	Sophomores
Low	-0.33	-6.28	+4.89	-0.09	+0.16
High	+0.85	+0.05	+0.09	+2.28	+0.97

---

hypothesized direction. The strong negative relationship for the sophomores between Activity and positive change fit in with all the other findings for this question and this group. The high risk freshmen were different from the other groups in that they consistently decreased in academic orientation. They were, however, somewhat similar to the standard risk groups in that the groups high in Friend For Activity and Friend remained relatively high in orientation. The high risk sophomores increased overall in academic orientation, and those low in social comparison opportunities increased the most across all of the questions. Thus change in academic orientation was related to the social comparison opportunities of the standard risk students across all of the questions with their different degrees of generality. This also suggests that this dependent variable was more relevant to the standard risk than to the high risk students.

The fact that the most clear-cut pattern was for the two questions directly related to friendships strongly supported the definition of these subcultures as student subcultures. Clearly it was the influence of friends which was the strongest factor associated with change in academic orientation. The friends of the standard risk groups appeared to be communicating an academic orientation so that those with more friends increased in this orientation; while the friends of the high risk sophomores were apparently not communicating a strong academic orientation and therefore those with more friends did not increase in this orientation.

#### Satisfaction and change toward an academic orientation

Hypothesis IVb predicted that there would be a positive relationship between satisfaction with college at Time 2 and change toward an

academic orientation. In order to test this hypothesis, change scores were obtained by subtracting the Time 1 orientation score from the Time 2 score. The correlations between the satisfaction scores and these change scores are presented in Table 43. A positive correlation meant that those high in satisfaction were likely to have changed toward a more academic orientation. A negative correlation meant that those high in satisfaction were likely to have decreased in academic orientation. None of these correlations were significant and the hypothesis was not supported.

Another indication of the absence of a relationship between satisfaction and change toward an academic orientation could be seen in the fact that each of these variables was associated with social comparison opportunities in a different manner. The hypothesis was based upon the assumption that feeling accepted by others would lead to change toward the norm. However, we have already seen that feeling accepted was not a major factor in the satisfaction of the standard risk sophomores and the high risk freshmen. We have also seen that the academic orientation did not appear to be the norm for the high risk students. Thus the

TABLE 43

PRODUCT MOMENT CORRELATION COEFFICIENTS BETWEEN TIME 2  
SATISFACTION AND ACADEMIC ORIENTATION CHANGE SCORES

Subject Group	N	r
High risk		
Freshmen	63	-.18
Sophomores	32	.07
Standard risk		
Freshmen	37	.17
Sophomores	38	.02
Total Sample	170	-.07

---

assumptions upon which the hypothesis was based were not borne out by the data.

Summary of results

High risk students were less realistic in their grade expectations than standard risk students. They became more realistic by the end of the term, but were still less realistic than the standard risk students. The change in realism which occurred was a significant one for all freshmen and for the high risk sophomores. These were all predicted results. (Figure 2 presents this summary in graph form.)

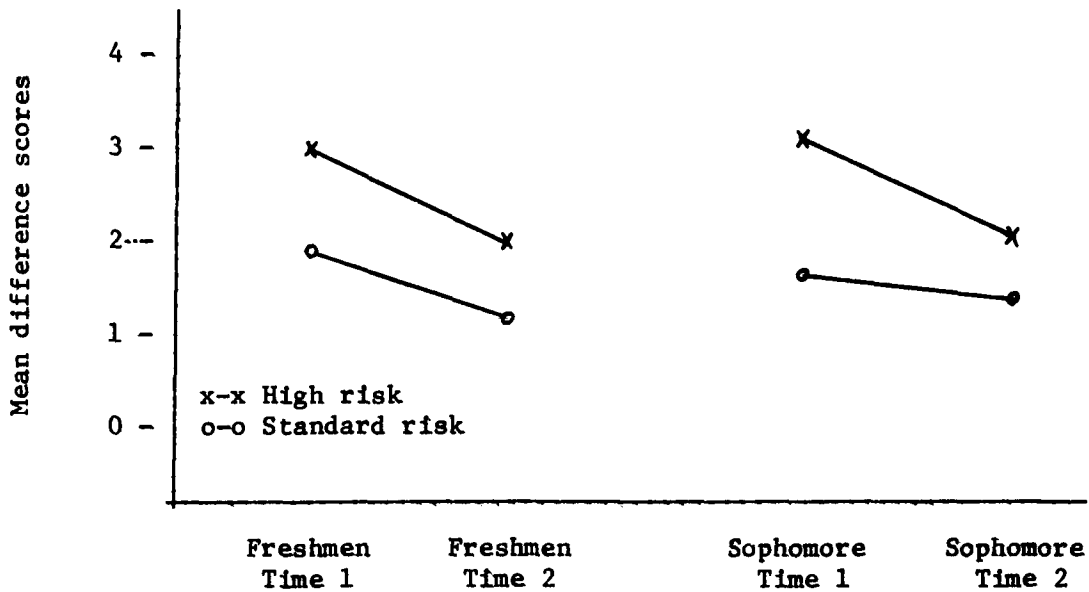


FIGURE 2. -- Change in realism of expectations plotted in sequence

Contrary to the hypothesis freshmen and sophomores were, on the average, equally realistic or unrealistic. However, there were differences between them in that more of the sophomores were underestimators and more of them were highly realistic.

The data for standard risk students suggest the possibility that the shape of the curve for these students is not an initial decrease in

unrealism levelling off to a straight line. At the beginning of each term there might be relative uncertainty in expectations because the student encounters new instructors with unknown standards of evaluation. This could then be reflected in slight fluctuations in realism within a narrow band from the beginning to the end of each new term.

Social comparison opportunities were found to be related to realism in the hypothesized direction for those students whose degree of realism had not yet stabilized, namely both high risk groups and the standard risk freshmen. Those students with more social comparison opportunities tended to be more realistic than those with fewer such opportunities. Hypothesis 1e was supported by these results because, although it specified only freshmen, the rationale for the need for social comparisons was found to apply to the high risk sophomores as well.

The overall positive relationship between academic performance and social comparison opportunities (Hypothesis IIa) was confirmed only for the most general kind of social comparison opportunities. This positive relationship, however, was found for high risk students along the whole range of these opportunities. Thus Hypothesis IIb was confirmed.

Satisfaction with the college was positively related to social comparison opportunities (Hypothesis III) in different ways. For high risk sophomores and standard risk freshmen there was a straightforward association of low satisfaction with low social comparison opportunities and high satisfaction with high opportunity level. The association for high risk freshmen and standard risk sophomores was a more indirect one, with those low in social comparison opportunities decreasing more in

satisfaction than those high in such opportunities.

Hypothesis IVa which predicted that more social comparison opportunities would be associated with greater increase in academic orientation was supported for the standard risk students. Indirectly it applied to the high risk freshmen in the sense that on the friendship questions those high in friends did not decrease in academic orientation while the low groups did. The hypothesis was not supported for the high risk sophomores.

The predicted association between satisfaction and change to an academic orientation (Hypothesis IVb) was not obtained, and the hypothesis was not supported.

As indicated by this summary there were distinctive patterns across the dependent variables for each group. An attempt was therefore made to summarize these patterns.

#### High risk freshmen

Social comparison opportunities for this group were clearly and positively related to realism and academic performance. Their initial level of satisfaction and acceptance of the academic orientation were so high that social comparison opportunities could only be associated with less decrease in their average scores over time rather than with a higher mean level. The high level of satisfaction at Time 2 of those low in social comparison opportunities might have been related to their unrealistic grade expectations since they had not yet received their grades, and so were not yet disappointed by them.

This initial unqualified acceptance of the college probably reflected the optimism and happiness with which these students were en-

tering the college. These were students who, for most of their high school years, were not anticipating a chance to go to college. Some of them had already been out of high school for a number of years. Thus this unexpected chance appeared to have been very positively accepted by them.

#### High risk sophomores

The high risk sophomores appeared to be a marginal group - similar to the high risk freshmen in some respects and similar to the standard risk freshmen in others. They were apparently in transition in terms of their adaptation to the college, and it would seem that this transition did not proceed uniformly in all areas. With regard to the academic aspects they resembled the high risk freshmen, with social comparison opportunities positively related to realism and academic performance. Like the standard risk freshmen, there was a strong positive relationship between their social comparison opportunities and their satisfaction; and this satisfaction was based upon a sense of acceptance within the college. Their satisfaction level was apparently realistic enough so that little change in it occurred. The fact that social comparison opportunities were not associated with an increase in academic orientation would seem to indicate that their contacts did not communicate such an orientation.

These high risk students, who had been in the school for a year, were more discriminating in their positive evaluation of the college. It would seem that they were no longer reacting in terms of the special chance offered to them, but rather in terms of the nature of their experience in the school. In other words, just being in college was no longer enough, as it appeared to be initially for with the high risk fresh-

men. The sophomores were reacting to what happened to them in college, and evaluating their situation in that light.

#### Standard risk freshmen

Social comparison opportunities were related to their initial realism but not to their performance level. Like the high risk sophomores their satisfaction was positively related to their social comparison opportunities and was based upon feelings of being accepted. They expressed a relatively high acceptance of the academic orientation, and those with more friends in the college increased in this orientation. However, their overall decrease in satisfaction indicated that like the high risk freshmen they had entered with relatively high expectations and the reality of the situation was somewhat disappointing.

#### Standard risk sophomores

The most consistent trend for this group of sophomores was with the Activity question. Those who were very active were unrealistic in their grade expectations, poor in academic performance, and initially low in satisfaction; this latter based upon dissatisfaction with the academic aspect of the college. They were also the ones who did not increase in academic orientation. Surprisingly, most of these highly active sophomores expected to spend little time on campus, and this resulted in a positive relationship between Campus Hours and the dependent variables. The increase in number of friends over the course of the term appeared to shift the emphasis in their satisfaction to feelings of belonging, so that those who were high in friends at Time 2 were still low in academic performance but were high in satisfaction. It would seem that many of these students were unhappy with the academic aspect of the

school. One could speculate that this dissatisfaction led them to look to other students for alternate sources of satisfaction. Those who did so, and were therefore high in social comparison opportunities, decreased less in satisfaction than those who did not.

#### Social Comparison Opportunity questions

In addition to the distinctive patterns of the subject groups there were distinctive patterns to the four questions used to measure social comparison opportunities.

The Campus Hours question, which represented the opportunity for the most generalized kind of social comparisons, was also the most general in its relevancy to the different student groups. The results for the academic variables of realism and performance, where there was a positive relationship for all groups, suggest that in the academic area students utilize a wide range of other students for social comparison purposes. With regard to the attitudinal variables, these kinds of social comparisons were relevant to satisfaction for the high risk group only, and to academic orientation for the standard risk group only.

Participation in extra-curricular activities (Activity), which represented a somewhat narrower range of possible social comparisons, was more discriminative between the groups, enabling distinctions to be made within and between the subject groups. Since this was an important aspect for the high risk students, comparisons were made between those who were active in the Black and Puerto Rican club and those who were active in other, more general clubs. There were no significant differences between these two groups on any of the dependent variables, suggesting that the relationship of participation in

activities to the other variables was not specific to any particular type of activity.

The Friend For Activity question was the most ambiguous one, but listing more friends, and thereby indicating a wider range of social comparison opportunities, appeared to have a negative relationship with the academic variables and a positive relationship with the attitudinal variable of academic orientation.

The Friend question, which was conceptualized as the one representing the narrowest range of social comparison opportunities, was most relevant for the attitudinal variables.

Thus there were many referents for social comparison with regard to the academic aspects, while with regard to attitudinal aspects social comparisons were more likely to be confined to personal friends as referents.

Corollary III of social comparison theory states that "Given a range of possible persons for comparison, someone close to one's own ability or opinion will be chosen for comparison". (Festinger, 1954; p.121). The implications of the results of this study are that this statement may apply more in the case of opinions than in the case of abilities.

## CHAPTER IV

### DISCUSSION

The general focus of this research was the investigation of whether the college has a similar impact upon all students, regardless of their background. The assumption was that this impact would vary with the degree of continuity between the students' past school-related experiences and the college situation. Thus the college situation is more discontinuous for high risk than for standard risk students, and this discontinuity is greater for entering freshmen than for sophomores. This suggests an ordering with the high risk freshmen as the group for whom the situation is most discontinuous, and the standard risk sophomores as the group from whom it is most continuous. The high risk sophomores and the standard risk freshmen would be in the middle, with the order of discontinuity varying depending upon the aspect involved.

If we assess the degree of impact in terms of the amount of change exhibited over the course of the semester, we find that the results match this ordering. The high risk freshmen changed the most, and the standard risk sophomores changed the least. The high risk sophomores changed more than the standard risk freshmen on the more academic variables of realism of grade expectations and academic orientation; these being the areas of greater discontinuity for high risk students. The standard risk freshmen changed more than the high risk sophomores on the satisfaction variable, indicating that in this area the high risk sophomores had adapted to the college situation.

The assumption that standard risk students know what to expect when they enter college was validated by the overall, relatively high degree of realism in grade expectation which they manifested. The contrast between their realism and the large number of overestimations reported in the research of Pervin (1966) and others would appear to be a function of the differences between the types of colleges being studied. Those studies were all conducted in residential universities, where the student population is a very heterogeneous one drawn from all parts of the country and from widely varying school environments. Our sample, on the other hand, was attending a commuter college where the students are drawn from the same city and from the same high school system. They usually continue to live at home, and are likely to continue the same pattern of study that they adopted in high school. Relatively speaking, and particularly for the standard risk students, the college was an extension of their high school; larger and more advanced but quite familiar in terms of the character of the other students encountered. In terms of developing an independent identity, living at home and going to a nearby college may create conflicts for the student (Schuchman, 1966); but in terms of the ability to evaluate accurately the academic challenge of the college it appears to be an advantage.

The college experience presents a challenge to the student which to varying degrees confronts him with the necessity of adapting to different standards, values, and attitudes; and to new types of people. For the standard risk students this particular commuter college did not appear to represent a serious challenge, and therefore did not seem to necessitate a major adaptive effort. They were living at home, moving about in a familiar city, meeting students from similar backgrounds,

and participating in an academic setting not too discrepant from their high school experience.

The high risk students were presented with a more serious challenge because, although living at home and in a familiar city, they were coming into contact with students from backgrounds different from their own. The academic demands of the college were very different from the demands made upon them by their high school. However, the challenge presented to them by this commuter college appeared to be moderate relative to the challenge that a residential university would represent. Our data suggest that many of these high risk students have made satisfactory adaptations to the college. This adaptation was reflected in their becoming more realistic in their attitude toward their own abilities and toward the college; and in their involvement with other students in the college. Thus, one of the advantages of a commuter college is that the high risk student is not confronted with a challenge so severe that he cannot cope with it. Another advantage is that there are other minority group students in attendance, so that the students in the high risk program are part of a larger minority than might be the case in a residential university.

The results of the Hedegard and Brown (1969) study in such a residential university suggest that adaptation to that university was relatively difficult since it involved adaptation to both a new academic environment and a complex social environment. Their disadvantaged black students were less satisfied than the white students; while the high risk students in this study were more satisfied with the college than the standard risk students. The differences between these results may reflect differences both in the kind of college and in the special programs

provided for them.

One disadvantage for high risk students of attending a commuter college might be the problem of resisting the pull of family or neighborhood norms which reject or do not understand the delay-of-gratification aspect of seeking an education. An important, but difficult, area for future study is this conflict between the demands of their home-neighborhood environment and the demands of the college environment. To what extent does this conflict exist for students, and to what extent does it affect their adjustment to college? Is this conflict so critical a factor for the student that it would outweigh the advantages of a commuter college and make removal from the situation a preferable alternative?

This study was based upon the assumption that the impact of college is mediated by social comparison processes, and that such social comparisons will be more critical for high risk students because the situation requires a greater amount of adaptation for them. No direct measure of social comparison processes was obtained. Rather the focus was upon the opportunities that were available to the student for making such social comparisons through contact with or exposure to other students in the college.

It is possible to suggest alternative explanations for the nature of the mediating process for the impact of the college experience. One suggestion might be that amount of time spent on campus is the critical factor; but the lack of correlation between the Campus Hours and the other social comparison opportunity questions, and the different relationships obtained with the dependent variables suggests that the answer is more complex. Another possibility is that the mediating process is a modelling rather than a comparison one.

In addition, in light of Pettigrew's (1968) discussion of school integration, it may be advisable for some future research to ascertain whether or not the comparisons made by the high risk students are cross-racial ones; and, if so, whether the cross-racial aspect of their social comparison opportunities are the most important aspects in terms of their adaptation. It may be possible to conceptualize the social comparison opportunity questions as varying along a dimension of opportunity for cross-racial comparisons; but without more specific information this is highly speculative.

In comparing the groups a progression was found in terms of the relevancy of particular kinds of social comparison opportunities for particular variables. The high risk freshmen appeared to focus their concern on the academic aspect of the college, and positive adjustment in this area was associated with the more general kinds of social comparison opportunities. The high risk sophomores were similar to them with regard to the academic aspect, but also showed indications of associations of less general social comparison opportunities with the attitudinal variable of satisfaction with the college. The social comparison opportunities of the standard risk freshmen were mainly relevant for the attitudinal variables of satisfaction and academic orientation, suggesting that these are the areas which are more unstable for them, and in which they are therefore more in need of social comparisons. For standard risk sophomores there were greater distinctions between the kinds of social comparison opportunities, with each serving a different function. While participation in extra-curricular activities appeared to serve the other groups as a way of getting information and adapting to a new environment, for these sophomores it appeared to represent an alternative source of gratification for those not satisfied with the academic aspects

of the college. On the attitudinal variables these sophomores were at a relatively stable level so that social comparison opportunities were not that relevant.

Thus we found social comparison opportunities, or nonacademic aspects of the college, to be important factors in adaptation to college. The results suggest ways in which these opportunities may be facilitated. The strong showing of the Campus Hours question for both standard risk and high risk students stresses the importance of having sufficient space where students may congregate or pursue their own activities in close proximity to other students. Thus the need for adequate library, cafeteria, and lounge space to accommodate as many students as may wish to take advantage of the opportunities afforded by such facilities.

The strong positive relationship between participation in extra-curricular activities and relative academic success for the high risk students suggests that such participation should not be discouraged by the high risk program. So long as there is no overinvolvement such as that associated with low academic performance in the standard risk sophomore group, such participation appears to be a positive factor in the adaptation of the high risk students. The fact that there were no differences between those high risk students who belonged to the Black and Puerto Rican club and those who belonged to the more general, and presumably integrated, clubs suggests that once minority group students are within the kind of integrated middle class milieu stressed as important by Pettigrew (1968), the example of other blacks discussed by Lott and Lott (1963) may also be helpful to the students.

Friendships appear to become more of a factor for students who have been in the school for a while. There was no way to determine who

their friends were, and exactly how narrow the range of the social comparison opportunities represented by this question. Therefore, the meaning of the results of the friend questions could not be fully evaluated. Additional research is needed on this question of who the high risk students' friends are; whether integration occurs on this level; and what effect different types of friends have upon their adaptation.

The high risk program studied here was designed as a five year program. The finding that high risk sophomores were similar to standard risk freshmen in many respects implies that such an extension of the usual four year college program may be necessary and advantageous for these students in both academic and nonacademic terms.

The high risk students that were studied appear, on the whole, to have made an adequate adaptation to their college experience. Social comparison opportunities appear to be positively associated with this adaptation, but further research will be needed to ascertain whether social comparison is a causal factor in this process of adaptation.

APPENDIX A  
METROPOLITAN STUDENT ASSOCIATION

COLLEGE SURVEY

This is a general survey being conducted in colleges in the greater New York area. The questionnaires are related to your attitudes and feelings about various aspects of your college experience. Your answers will be kept completely confidential, and will not be seen by anyone at your college.

Please read the instructions carefully, and answer each questionnaire in the order in which it appears.

Be sure to answer every question

Name: \_\_\_\_\_

QUESTIONNAIRE I - General Background

1. What is your sex? Male \_\_\_\_\_ Female \_\_\_\_\_

2. What is your age? 17 or under \_\_\_\_\_  
18 or 19 \_\_\_\_\_  
20 or 21 \_\_\_\_\_  
22 or 23 \_\_\_\_\_  
24 or 25 \_\_\_\_\_  
26 or 27 \_\_\_\_\_  
28 or over \_\_\_\_\_

3. What is your current semester at your college?  
Lower Freshman \_\_\_\_\_  
Upper Freshman \_\_\_\_\_  
Lower Sophomore \_\_\_\_\_  
Upper Sophomore \_\_\_\_\_  
Lower Junior \_\_\_\_\_  
Upper Junior \_\_\_\_\_  
Lower Senior \_\_\_\_\_  
Upper Senior \_\_\_\_\_

4. What is your marital status?  
Single \_\_\_\_\_  
Married \_\_\_\_\_  
Divorced, separated  
or widowed \_\_\_\_\_

5. What do you expect your average for this term to be?  
Circle One:

A A- B+ B B- C+ C C- D+ D D- F

6. What average are you going to try for this term?  
Circle One:

A A- B+ B B- C+ C C- D+ D D- F





2. Do you think that group intelligence tests should be used more widely than at present to classify students?

/...../...../...../  
Should be used      Should be used      Should be used  
less widely      as at present      more widely

3. Would you be willing to stake your continuance in college on the outcome of a group intelligence test which has previously predicted success in a highly reliable fashion?

/...../...../...../  
Very willing      Uncertain      Not willing

4. If you know that you are going to take a group intelligence test, how do you feel beforehand?

/...../...../...../  
Feel very      Midpoint      Feel very  
unconfident           confident

5. After you have taken a group intelligence test, how confident do you feel that you have done your best?

/...../...../...../  
Feel very      Midpoint      Feel very  
unconfident           confident

6. When you are taking a group intelligence test, to what extent do your emotional feelings interfere with or lower performance?

/...../...../...../  
Do not interfere      Midpoint      Interfere a great deal  
at all

7. Before taking a group intelligence test, to what extent are you aware of an "uneasy feeling"?

/...../...../...../  
Am very much aware      Midpoint      Am not aware of it  
of it           at all

8. While taking a group intelligence test to what extent do you experience an accelerated heartbeat?

/...../...../...../  
Heartbeat does      Midpoint      Heartbeat noticeably  
not accelerate           accelerated  
at all

9. Before taking a group intelligence test to what extent do you experience an accelerated heartbeat?

/.....'.....'...../.....'.....'...../

Heartbeat does not accelerate at all	Midpoint	Heartbeat noticeably accelerated
---	----------	-------------------------------------

10. While taking a group intelligence test to what extent do you worry?

/.....'.....'...../.....'.....'...../

Worry a lot	Midpoint	Worry not at all
-------------	----------	------------------

11. Before taking a group intelligence test to what extent do you worry?

/.....'.....'...../.....'.....'...../

Worry a lot	Midpoint	Worry not at all
-------------	----------	------------------

12. While taking a group intelligence test to what extent do you perspire?

/.....'.....'...../.....'.....'...../

Perspire not at all	Midpoint	Perspire a lot
---------------------	----------	----------------

13. Before taking a group intelligence test to what extent do you perspire?

/.....'.....'...../.....'.....'...../

Perspire not at all	Midpoint	Perspire a lot
---------------------	----------	----------------

14. In comparison with other students how often do you think of ways of avoiding a group intelligence test?

/.....'.....'...../.....'.....'...../

Less often than other students	Midpoint	More often than other students
-----------------------------------	----------	-----------------------------------

15. To what extent do you feel that your performance on the College Entrance Test (or a similar test) was affected by your emotional feelings at the time?

/.....'.....'...../.....'.....'...../

Affected a great deal	Midpoint	Not affected at all
--------------------------	----------	------------------------

**QUESTIONNAIRE III - College Attitudes**

For the following 10 questions please circle the one point that best describes your position or feeling.

1. College should provide the kind of education that prepares you for getting a good job.

\_\_\_\_\_

Completely disagree Completely agree

2. Participation in school activities outside of classwork does not add anything to the education you receive.

\_\_\_\_\_

Completely disagree Completely agree

3. Knowledge for its own sake is what college students should be interested in.

\_\_\_\_\_

Completely disagree Completely agree

4. The notion that college should provide a basic general education and appreciation of ideas is a luxury that we cannot afford.

\_\_\_\_\_

Completely disagree Completely agree

5. Students should do more reading than just the amount necessary to pass the course.

\_\_\_\_\_

Completely disagree Completely agree

6. In terms of your own goals, how satisfied are you with the academic aspect of your college?

\_\_\_\_\_

Very satisfied Very dissatisfied

7. How satisfied are you with the non-academic aspects of your college?

\_\_\_\_\_

Very satisfied Very dissatisfied

8. How often do you feel that what you are doing at college is a waste of time?

\_\_\_\_\_

None of the time All of the time

9. How comfortable do you feel with most of the students at your college?

\_\_\_\_\_

Very uncomfortable Very comfortable

10. How often do you feel out of place at your college?

\_\_\_\_\_

Very often Never

11. Please list college activities (clubs, fraternities, sports, etc.) in which you have participated or are now participating. State offices held, if any.

ACTIVITY

OFFICE HELD

12. On the average, how many hours a week do you expect to spend on campus (other than in class)?

\_\_\_\_\_ hours

13. Does your college have hours set aside for club activities when no classes are held?

Yes \_\_\_\_\_ No \_\_\_\_\_ Don't know \_\_\_\_\_

If yes, when are these hours? \_\_\_\_\_

14. In your college cafeteria, do clubs and fraternities have certain tables that they set aside for their members?

Yes \_\_\_\_\_ No \_\_\_\_\_ Don't know \_\_\_\_\_

15. Following is a list of some activities that friends do together. Next to each activity please write the name of a friend with whom you would most like to do that activity. Whether or not you have actually done these things, indicate whom you would choose if you were to do them.

Write the names under the appropriate column depending on whether or not the friend also attends your school.

If I were doing this I would want to:

	College friend	Non-college friend
Be on a sports team with	_____	_____
Study with	_____	_____
Go to the moon with	_____	_____
Be in a 'sit-in' with	_____	_____
Do a class report with	_____	_____
Go to the movies with	_____	_____

	<u>College friend</u>	<u>Non-college friend</u>
Get high with	_____	_____
Double date with	_____	_____
Be in a dangerous situation	_____	_____
Discuss my problems with	_____	_____
Bum around with	_____	_____
Cut classes with	_____	_____

16. What are the names of your five best friends? Put an X next to any that also attend your college.

- 1.
- 2.
- 3.
- 4.
- 5.

17. How many hours a week do you work?

in school employment \_\_\_\_\_ hours

out of school employment \_\_\_\_\_ hours

## APPENDIX B

### SCORING METHOD FOR SOCIAL COMPARISON OPPORTUNITY QUESTIONS

The first such question (ACTIVITY) asked them to list the extra-curricular activities in which they had or were participating, and to state any offices held. Their score consisted of one point for each activity or office mentioned.

The second question (CAMPUS HOURS) dealt with the number of hours per week that they expected to spend on campus other than in class. The number of hours put down in response to the question was used as their score.

The third question (FRIEND FOR ACTIVITY) consisted of a list of twelve activities for each of which they were asked to name a friend, college or noncollege, with whom they would like to engage in this activity. One point was assigned for each different college friend named. Friends named for more than one activity were only scored once. There was a maximum possible score of twelve.

The fourth question (FRIEND) asked them to list their five best friends, and to indicate if these also attended the college. One point was assigned for each college friend named, and the maximum possible score was five.

APPENDIX C

TEST ANXIETY

In contrast to the results of other research there were no significant differences in test anxiety between the high risk and standard risk students, although there was a slight tendency for high risk students to be higher than standard risk students. There were, however, sex differences at Time 1 with females higher than males ( $t= 3.27, p <.01$ ).

Table 44 compares the test anxiety scores of our sample with those of the probation and nonprobation Princeton students of Smith and Winterbottom (1970). Our male sample was somewhat higher than the nonprobation sample, and there was a significant difference between the means of our male sample and the probation students ( $t= 3.04, p <.01$ ).

TABLE 44

TEST ANXIETY SCORES OF THIS SAMPLE AND A PRINCETON SAMPLE

	Sample		Princeton Sample	
	Females	Males	Probation	Nonprobation
$\bar{X}$	39.01	33.90	28.23	31.15
SD	9.62	6.83	7.77	6.17
N	129	40	26	27
Range	13-58	19-48	13-41	16-41

---

It would seem that the absence of risk level differences in test anxiety in our sample was a result of the standard risk students being higher in test anxiety than is usually found for such students. This may be a characteristic of students attending the particular college studied, where there is great emphasis put upon grades by the students.

There was a positive relationship for both male and female high risk students between test anxiety and grade point average. The correlation for males was .18 and for females .13. This contrasts strangely with the results of a study of black, Northern and Southern high school students conducted by Epps (1969). His obtained test anxiety scores were lower than ours, and the correlation between test anxiety and grades for his sample was a negative one. The correlation for all males was  $-.18$  and for females  $-.13$ . Smith and Winterbottom (1970) also found that the higher the test anxiety, the worse the academic standing of the probation student became.

For our standard risk sample there was no relationship between test anxiety and grade point average for females and a negative one  $-.20$  for males.

Apparently, for the high risk sample, test anxiety had a facilitative rather than a debilitating effect.

APPENDIX D

LEVELS OF SOCIAL COMPARISON OPPORTUNITIES

The cut-off points obtained by the median and below dichotomization were as follows:

CAMPUS HOURS:	Low= 0-6	High= 7-50
ACTIVITY:	Low= 0	High= 1-9
FRIEND FOR ACTIVITY:	Low= 0-3	High= 4-12
FRIEND:	Low= 0-1	High= 2-5

Table 45 presents the resultant number of subjects for each level. The totals for each group vary slightly across questions because of missing responses.

TABLE 45

NUMBER OF STUDENTS IN EACH LEVEL OF SOCIAL COMPARISON OPPORTUNITY

Social Comparison Opportunity Question		Subject Group			
		High risk		Standard risk	
		Freshmen	Sophomores	Freshmen	Sophomores
ACTIVITY Time 1	Low	45	21	26	16
	High	18	11	11	22
ACTIVITY Time 2	Low	39	21	21	15
	High	24	10	16	23
CAMPUS HOURS Time 1	Low	33	14	20	28
	High	30	17	16	10
CAMPUS HOURS Time 2	Low	29	15	20	21
	High	31	14	14	17
FRIEND FOR ACTIVITY Time 1	Low	36	19	28	20
	High	23	12	8	17
FRIEND FOR ACTIVITY Time 2	Low	35	15	20	19
	High	25	15	13	18
FRIEND Time 1	Low	39	14	21	17
	High	21	18	16	21
FRIEND Time 2	Low	25	15	19	16
	High	36	15	16	21

APPENDIX E

COVARIANCE ANALYSES OF SOCIAL COMPARISON OPPORTUNITY QUESTIONS

TABLE 46

COVARIANCE ANALYSES OF CAMPUS HOURS SCORES (TIME 1  
AND TIME 2) WITH AGE AS THE COVARIATE

Source	df	MS	F	P
<u>Time 1</u>				
Year	1	125.218	1.50	ns
Risk level	1	640.867	7.72	<.007
Year X Risk	1	61.023	< 1	ns
Error	165	82.940		
<u>Time 2</u>				
Year	1	1.421	< 1	ns
Risk level	1	442.316	5.94	<.016
Year X Risk	1	4.898	< 1	ns
Error	165	74.344		

---

TABLE 47

MULTIPLE COVARIANCE ANALYSIS OF TIME 2 CAMPUS HOURS SCORES  
WITH AGE AND TIME 1 SCORES AS COVARIATES

Source	df	MS	F	P
Year	1	21.168	< 1	ns
Risk level	1	59.226	1.13	ns
Year X Risk	1	3.390	< 1	ns
Error	164	52.257		

---

TABLE 48

COVARIANCE ANALYSES OF ACTIVITY SCORES (TIME 1  
AND TIME 2) WITH AGE AS THE COVARIATE

Source	df	MS	F	P
<u>Time 1</u>				
Year	1	11.108	10.94	<.002
Risk level	1	4.755	4.68	<.032
Year X Risk	1	4.902	4.82	<.03
Error	165	1.015		
<u>Time 2</u>				
Year	1	5.529	2.10	ns
Risk level	1	9.159	3.48	<.064
Year X Risk	1	1.716	0.65	ns
Error	165	2.630		

---

TABLE 49

MULTIPLE COVARIANCE ANALYSIS OF TIME 2 ACTIVITY SCORES  
WITH AGE AND TIME 1 SCORES AS COVARIATES

Source	df	MS	F	P
Year	1	2.606	2.24	ns
Risk level	1	0.153	< 1	ns
Year X Risk	1	1.795	1.54	ns
Error	164	1.161		

---

TABLE 50

COVARIANCE ANALYSES OF FRIEND FOR ACTIVITY SCORES  
(TIME 1 AND TIME 2) WITH AGE AS THE COVARIATE

Source	df	MS	F	P
<u>Time 1</u>				
Year	1	6.065	1.32	ns
Risk level	1	9.631	2.09	ns
Year X Risk	1	6.357	1.38	ns
Error	165	4.609		
<u>Time 2</u>				
Year	1	22.272	4.17	<.043
Risk level	1	1.795	<1	ns
Year X Risk	1	3.038	<1	ns
Error	165	5.340		

---

TABLE 51

MULTIPLE COVARIANCE ANALYSIS OF TIME 2 FRIEND FOR ACTIVITY  
SCORES WITH AGE AND TIME 1 SCORES AS COVARIATES

Source	df	MS	F	P
Year	1	9.093	2.86	<.093
Risk level	1	0.619	<1	ns
Year X Risk	1	0.001	<1	ns
Error	164	3.184		

---

TABLE 52

COVARIANCE ANALYSES OF FRIEND SCORES (TIME 1  
AND TIME 2 WITH AGE AS THE COVARIATE

Source	df	MS	F	P
<u>Time 1</u>				
Year	1	8.151	4.63	<.033
Risk level	1	1.927	1.09	ns
Year X Risk	1	0.035	< 1	ns
Error	165	1.758		
<u>Time 2</u>				
Year	1	0.277	< 1	ns
Risk level	1	3.750	1.96	ns
Year X Risk	1	1.287	< 1	ns
Error	165	1.912		

---

TABLE 53

MULTIPLE COVARIANCE ANALYSIS OF TIME 2 FRIEND SCORES  
WITH AGE AND TIME 1 SCORES AS COVARIATES

Source	df	MS	F	P
Year	1	4.158	2.95	<.088
Risk level	1	1.399	< 1	ns
Year X Risk	1	1.527	1.08	ns
Error	164	1.409		

---

APPENDIX F

THREE FACTOR COVARIANCE ANALYSES OF DIFFERENCE SCORES

TABLE 54

COVARIANCE ANALYSES OF TIME 1 DIFFERENCE SCORES  
WITH CAMPUS HOURS LEVEL AS THE THIRD FACTOR

Source	df	MS	F	P
Year (A)	1	4.098	1.17	ns
Risk level (B)	1	60.428	17.31	<.0001
Campus Hours (C)	1	16.634	4.76	<.031
Time 1 level				
A X B	1	1.728	<1	ns
A X C	1	1.697	<1	ns
B X C	1	3.718	1.06	ns
A X B X C	1	0.048	<1	ns
Error	159	3.493		

---

Source	df	MS	F	P
Year (A)	1	7.226	2.03	ns
Risk level (B)	1	63.392	17.80	<.0001
Campus Hours (C)	1	4.419	1.24	ns
Time 2 levels				
A X B	1	0.009	<1	ns
A X C	1	0.021	<1	ns
B X C	1	4.473	1.25	ns
A X B X C	1	1.894	<1	ns
Error	152 <sup>a</sup>	3.559		

<sup>a</sup>

Total number of degrees of freedom varies because of missing data.

TABLE 55

COVARIANCE ANALYSES OF TIME 1 DIFFERENCE SCORES  
WITH ACTIVITY LEVEL AS THE THIRD FACTOR

Source	df	MS	F	P
Year (A)	1	2.681	<1	ns
Risk level (B)	1	66.595	19.07	<.0001
Activity (C)	1	9.178	2.62	ns
Time 1 levels				
A X B	1	0.564	<1	ns
A X C	1	10.921	3.12	<.079
B X C	1	5.137	1.47	ns
A X B X C	1	0.405	<1	ns
Error	161	3.490		

---

Source	df	MS	F	P
Year (A)	1	3.731	1.08	ns
Risk level (B)	1	67.844	19.66	<.0001
Activity	1	9.122	2.64	ns
Time 2 levels				
A X B	1	0.165	<1	ns
A X C	1	1.862	<1	<.061
B X C	1	12.278	3.55	ns
A X B X C	1	0.253	<1	
Error	160	3.449		

---

TABLE 56

COVARIANCE ANALYSES OF TIME 1 DIFFERENCE SCORES WITH  
FRIEND FOR ACTIVITY LEVEL AS THE THIRD FACTOR

Source	df	MS	F	P
Year (A)	1	1.982	<1	ns
Risk level (B)	1	59.804	16.55	<.0001
Friend for Activity (C)	1	1.218	<1	ns
Time 1 levels				
A X B	1	3.529	<1	ns
A X C	1	0.107	<1	ns
B X C	1	1.324	<1	ns
A X B X C	1	0.393	<1	ns
Error	154	3.613		

---

Source	df	MS	F	P
Year (A)	1	2.493	<1	ns
Risk level (B)	1	69.449	20.44	<.0001
Friend for Activity (C)	1	0.840	<1	ns
Time 2 levels				
A X B	1	0.374	<1	ns
A X C	1	15.134	4.45	<.037
B X C	1	0.958	<1	ns
A X B X C	1	3.602	1.06	ns
Error	151	3.398		

---

TABLE 57

COVARIANCE ANALYSES OF TIME 1 DIFFERENCE SCORES  
WITH FRIEND LEVEL AS THE THIRD FACTOR

Source	df	MS	F	P
Year (A)	1	2.660	< 1	ns
Risk level (B)	1	59.922	16.44	<.0001
Friend (C)	1	1.961	< 1	ns
Time 1 levels				
A X B	1	1.292	< 1	ns
A X C	1	1.154	< 1	ns
B X C	1	0.017	< 1	ns
A X B X C	1	1.272	< 1	ns
Error	158	3.643		

---

Source	df	MS	F	P
Year (A)	1	7.170	2.02	ns
Risk level (B)	1	60.327	16.99	<.0001
Friend (C)	1	5.101	1.43	ns
Time 2 levels				
A X B	1	0.005	< 1	ns
A X C	1	0.055	< 1	ns
B X C	1	1.307	< 1	ns
A X B X C	1	0.096	< 1	ns
Error	154	3.548		

TABLE 58  
 COVARIANCE ANALYSES OF TIME 2 DIFFERENCE SCORES  
 WITH CAMPUS HOURS LEVEL AS THE THIRD FACTOR

Source	df	MS	F	p
Year (A)	1	0.118	<1	ns
Risk level (B)	1	18.314	7.43	<.008
Campus Hours (C)	1	3.800	1.54	ns
Time 1 levels				
A X B	1	0.439	<1	ns
A X C	1	4.543	1.84	ns
B X C	1	0.000	<1	ns
A X B X C	1	0.076	<1	ns
Error	159	2.465		

---

Source	df	MS	F	p
Year (A)	1	0.488	<1	ns
Risk level (B)	1	19.505	7.91	<.006
Campus Hours (C)	1	0.024	<1	ns
Time 2 levels				
A X B	1	2.567	1.04	ns
A X C	1	1.758	<1	ns
B X C	1	0.347	<1	ns
A X B X C	1	3.746	1.51	ns
Error	152	2.465		

---

TABLE 59

COVARIANCE ANALYSES OF TIME 2 DIFFERENCE SCORES  
WITH ACTIVITY LEVEL AS THE THIRD FACTOR

Source	df	MS	F	P
Year (A)	1	0.002	< 1	ns
Risk level (B)	1	20.377	8.12	< .005
Activity (C)	1	2.108	< 1	ns
Time 1 levels				
A X B	1	0.507	1.09	ns
A X C	1	2.743	< 1	ns
B X C	1	0.037	< 1	ns
A X B X C	1	0.989	< 1	ns
Error	161	2.507		

---

Source	df	MS	F	P
Year (A)	1	0.088	< 1	ns
Risk level (B)	1	20.524	8.35	< .005
Activity (C)	1	1.153	< 1	ns
Time 2 levels				
A X B	1	0.935	< 1	ns
A X C	1	0.330	< 1	ns
B X C	1	3.655	1.48	ns
A X B X C	1	1.714	< 1	ns
Error	160	2.456		

TABLE 60

COVARIANCE ANALYSES OF TIME 2 DIFFERENCE SCORES WITH  
FRIEND FOR ACTIVITY LEVEL AS THE THIRD FACTOR

Source	df	MS	F	P
Year (A)	1	0.056	<1	ns
Risk level (B)	1	17.386	7.33	<.008
Friend For Activity (C)	1	3.573	1.51	ns
Time 1 levels				
A X B	1	0.087	<1	ns
A X C	1	2.796	1.18	ns
B X C	1	0.831	<1	ns
A X B X C	1	0.067	<1	ns
Error	154	2.372		

---

Source	df	MS	F	P
Year (A)	1	0.001	<1	ns
Risk level (B)	1	22.149	9.55	<.003
Friend for Activity (C)	1	1.102	<1	ns
Time 2 levels				
A X B	1	0.172	<1	ns
A X C	1	5.015	2.16	ns
B X C	1	4.583	1.98	ns
A X B X C	1	0.040	<1	ns
Error	151	2.319		

---

TABLE 61

COVARIANCE ANALYSES OF TIME 2 DIFFERENCE SCORES  
WITH FRIEND LEVEL AS THE THIRD FACTOR

Source	df	MS	F	P
Year (A)	1	0.139	< 1	ns
Risk level (B)	1	18.657	7.40	<.008
Friend (C)	1	0.430	< 1	ns
Time 1 levels				
A X B	1	0.658	< 1	ns
A X C	1	4.723	1.87	ns
B X C	1	0.018	< 1	ns
A X B X C	1	0.005	< 1	ns
Error	158	2.520		

---

Source	df	MS	F	P
Year (A)	1	0.673	< 1	ns
Risk level (B)	1	15.490	6.21	<.014
Friend (C)	1	0.315	< 1	ns
Time 2 levels				
A X B	1	0.744	< 1	ns
A X C	1	0.055	< 1	ns
B X C	1	1.494	< 1	ns
A X B X C	1	3.442	1.38	ns
Error	154	2.491		

APPENDIX G

THREE FACTOR COVARIANCE ANALYSES OF GRADE POINT AVERAGE SCORES

TABLE 62

COVARIANCE ANALYSES OF GRADE POINT AVERAGE SCORES  
WITH CAMPUS HOURS LEVEL AS THE THIRD FACTOR

Source	df	MS	F	P
Year (A)	1	0.082	< 1	ns
Risk level (B)	1	18.639	36.79	< .0001
Campus Hours (C)	1	2.425	4.78	< .031
Time 1 levels				
A X B	1	0.570	1.12	ns
A X C	1	0.102	< 1	ns
B X C	1	0.070	< 1	ns
A X B X C	1	0.033	< 1	ns
Error	159	0.506		

---

Source	df	MS	F	P
Year (A)	1	0.461	< 1	ns
Risk level (B)	1	18.600	37.01	< .0001
Campus Hours (C)	1	1.309	2.60	ns
Time 2 levels				
A X B	1	0.086	< 1	ns
A X C	1	0.018	< 1	ns
B X C	1	0.763	1.51	ns
A X B X C	1	0.232	< 1	ns
Error	152 <sup>a</sup>	0.502		

<sup>a</sup> Total number of degrees of freedom varies because of missing data.

TABLE 63

COVARIANCE ANALYSES OF GRADE POINT AVERAGE SCORES  
WITH ACTIVITY LEVEL AS THE THIRD FACTOR

Source	df	MS	F	P
Year (A)	1	0.017	< 1	ns
Risk level (B)	1	19.895	39.44	<.0001
Activity (C)	1	0.093	< 1	ns
Time 1 levels				
A X B	1	0.219	< 1	ns
A X C	1	0.557	1.10	ns
B X C	1	2.316	4.59	<.034
A X B X C	1	0.480	< 1	ns
Error	161	0.504		

---

Source	df	MS	F	P
Year (A)	1	0.046	< 1	ns
Risk level (B)	1	20.073	39.34	<.0001
Activity (C)	1	0.188	< 1	ns
Time 2 levels				
A X B	1	0.143	< 1	ns
A X C	1	0.172	< 1	ns
B X C	1	2.018	3.95	<.049
A X B X C	1	0.116	< 1	ns
Error	160	0.510		

---

TABLE 64

COVARIANCE ANALYSES OF GRADE POINT AVERAGE SCORES WITH  
FRIEND FOR ACTIVITY AS THE THIRD FACTOR

Source	df	MS	F	P
Year (A)	1	0.001	< 1	ns
Risk level (B)	1	18.429	35.88	<.0001
Friend for Activity (C)	1	0.191	< 1	ns
Time 1 levels				
A X B	1	0.239	< 1	ns
A X C	1	0.954	1.86	ns
B X C	1	0.061	< 1	ns
A X B X C	1	0.063	< 1	ns
Error	154	0.514		

---

Source	df	MS	F	P
Year (A)	1	0.035	< 1	ns
Risk level (B)	1	17.925	36.56	<.0001
Friend for Activity (C)	1	0.001	< 1	ns
Time 2 levels				
A X B	1	0.299	< 1	ns
A X C	1	0.662	1.35	ns
B X C	1	0.671	1.37	ns
A X B X C	1	1.477	3.01	< .085
Error	151	0.490		

---

TABLE 65

COVARIANCE ANALYSES OF GRADE POINT AVERAGE SCORES  
WITH FRIEND LEVEL AS THE THIRD FACTOR

Source	df	MS	F	P
Year (A)	1	0.016	<1	ns
Risk level (B)	1	18.731	36.09	<.0001
Friend (C)	1	0.014	<1	ns
Time 1 levels				
A X B	1	0.231	<1	ns
A X C	1	0.268	<1	ns
A X B X C	1	0.007	<1	ns
Error	158	0.518		

---

Source	df	MS	F	P
Year (A)	1	0.281	<1	ns
Risk level (B)	1	18.987	37.73	<.0001
Friend (C)	1	0.117	<1	ns
Time 2 levels				
A X B	1	0.097	<1	ns
A X C	1	0.677	<1	ns
B X C	1	2.586	5.14	<.025
A X B X C	1	0.001	<1	ns
Error	154	0.503		

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APPENDIX H

THREE FACTOR COVARIANCE ANALYSES OF SATISFACTION SCORES

TABLE 66

COVARIANCE ANALYSES OF TIME 1 SATISFACTION SCORES  
WITH CAMPUS HOURS LEVEL AS THE THIRD FACTOR

Source	df	MS	F	P
Year (A)	1	409.546	6.02	<.016
Risk level (B)	1	207.226	3.04	<.083
Campus Hours (C)	1	144.730	2.12	ns
Time 1 levels				
A X B	1	399.394	5.87	<.017
A X C	1	2.722	<1	ns
B X C	1	2.640	<1	ns
A X B X C	1	5.085	<1	ns
Error	159	68.009		

---

Source	df	MS	F	P
Year (A)	1	377.793	5.42	<.022
Risk level (B)	1	178.726	2.56	ns
Campus Hours (C)	1	171.476	2.46	ns
Time 2 levels				
A X B	1	276.964	3.97	<.048
A X C	1	0.121	<1	ns
B X C	1	200.894	2.88	<.092
A X B X C	1	16.808	<1	ns
Error	152 <sup>a</sup>	69.591		

<sup>a</sup>Total number of degrees of freedom varies because of missing data.

TABLE 67

COVARIANCE ANALYSES OF TIME 1 SATISFACTION SCORES  
WITH ACTIVITY LEVEL AS THE THIRD FACTOR

Source	df	MS	F	P
Year (A)	1	351.945	5.14	<.025
Risk level (B)	1	267.695	3.91	<.05
Activity (C)	1	47.234	<1	ns
Time 1 levels				
A X B	1	250.726	3.66	<.058
A X C	1	15.160	<1	ns
B X C	1	17.851	<1	ns
A X B X C	1	201.722	2.94	<.088
Error	161	68.449		

---

Source	df	MS	F	P
Year (A)	1	340.058	4.99	<.027
Risk level (B)	1	289.132	4.24	<.041
Activity (C)	1	22.574	<1	ns
Time 2 levels				
A X B	1	286.238	4.20	<.042
A X C	1	3.871	<1	ns
B X C	1	29.925	<1	ns
A X B X C	1	314.441	4.62	<.034
Error	160	68.038		

---

TABLE 68

COVARIANCE ANALYSES OF TIME 1 SATISFACTION SCORES WITH  
FRIEND FOR ACTIVITY LEVEL AS THE THIRD FACTOR

Source	df	MS	F	P
Year (A)	1	318.656	4.66	<.033
Risk level (B)	1	274.645	4.01	<.047
Friend For Activity (C)	1	19.371	<1	ns
Time 1 levels				
A X B	1	247.031	3.61	<.06
A X C	1	79.078	1.16	ns
B X C	1	14.141	<1	ns
A X B X C	1	62.305	<1	ns
Error	154	68.408		

---

Source	df	MS	F	P
Year (A)	1	505.711	8.03	<.006
Risk level (B)	1	170.426	2.71	ns
Friend For Activity (C)	1	140.102	2.22	ns
Time 2 levels				
A X B	1	157.742	2.50	ns
A X C	1	70.633	1.12	ns
B X C	1	17.246	<1	ns
A X B X C	1	141.012	2.24	ns
Error	151	62.989		

---

TABLE 69  
COVARIANCE ANALYSES OF TIME 1 SATISFACTION SCORES  
WITH FRIEND LEVEL AS THE THIRD FACTOR

Source	df	MS	F	P
Year (A)	1	435.468	6.53	<.012
Risk level (B)	1	213.593	3.20	<.076
Friend (C)	1	205.378	3.08	<.082
Time 1 levels A X B	1	351.335	5.27	<.023
A X C	1	29.875	<1	ns
B X C	1	17.050	<1	ns
A X B X C	1	267.335	4.01	<.047
Error	158	66.622		

---

Source	df	MS	F	P
Year (A)	1	366.687	5.79	<.018
Risk level (B)	1	220.867	3.49	<.064
Friend (C)	1	5.054	<1	ns
Time 2 levels A X B	1	237.464	3.75	<.055
A X C	1	131.839	2.08	ns
B X C	1	55.996	<1	ns
A X B X C	1	0.972	<1	ns
Error	154	63.265		

---

TABLE 70  
 COVARIANCE ANALYSES OF TIME 2 SATISFACTION SCORES  
 WITH CAMPUS HOURS LEVEL AS THE THIRD FACTOR

Source	df	MS	F	P
Year (A)	1	37.871	<1	ns
Risk level (B)	1	207.226	3.04	<.083
Campus Hours (C)	1	81.070	1.00	ns
Time 1 levels				
A X B	1	468.457	5.81	<.018
A X C	1	2.281	<1	ns
B X C	1	24.554	<1	ns
A X B X C	1	26.043	<1	ns
Error	159	80.557		

---

Source	df	MS	F	P
Year (A)	1	19.500	<1	ns
Risk level (B)	1	683.152	8.47	<.005
Campus Hours (C)	1	106.933	1.32	ns
Time 2 levels				
A X B	1	404.539	5.01	<.027
A X C	1	45.273	<1	ns
B X C	1	76.718	<1	ns
A X B X C	1	11.929	<1	ns
Error	152	80.640		

---

TABLE 71

COVARIANCE ANALYSES OF TIME 2 SATISFACTION SCORES  
WITH ACTIVITY LEVEL AS THE THIRD FACTOR

Source	df	MS	F	P
Year (A)	1	18.804	<1	ns
Risk level (B)	1	857.812	10.39	<.002
Activity (C)	1	38.543	<1	ns
Time 1 levels				
A X B	1	305.777	3.70	<.056
A X C	1	39.996	<1	ns
B X C	1	6.859	<1	ns
A X B X C	1	21.390	<1	ns
Error	161	82.488		

---

Source	df	MS	F	P
Year (A)	1	18.660	<1	ns
Risk level (B)	1	843.558	10.20	<.002
Activity (C)	1	84.546	1.02	ns
Time 2 levels				
A X B	1	282.742	3.42	<.067
A X C	1	7.125	<1	ns
B X C	1	2.230	<1	ns
A X B X C	1	71.628	<1	ns
Error	160	82.661		

TABLE 72

COVARIANCE ANALYSES OF TIME 2 SATISFACTION SCORES WITH  
FRIEND FOR ACTIVITY LEVEL AS THE THIRD FACTOR

Source	df	MS	F	P
Year (A)	1	3.652	<1	ns
Risk level (B)	1	932.000	11.68	<.0009
Friend For Activity (C)	1	28.766	<1	ns
Time 1 levels				
A X B	1	266.094	3.34	<.07
A X C	1	56.305	<1	ns
B X C	1	14.566	<1	ns
A X B X C	1	0.227	<1	ns
Error	154	79.764		

---

Source	df	MS	F	P
Year (A)	1	45.320	<1	ns
Risk level (B)	1	740.426	9.48	<.003
Friend For Activity (C)	1	140.102	2.22	ns
Time 2 levels				
A X B	1	146.199	1.87	ns
A X C	1	32.656	<1	ns
B X C	1	86.793	1.11	ns
A X B X C	1	3.648	<1	ns
Error	151	78.082		

---

TABLE 73

COVARIANCE ANALYSES OF TIME 2 SATISFACTION SCORES  
WITH FRIEND LEVEL AS THE THIRD FACTOR

Source	df	MS	F	P
Year (A)	1	27.023	<1	ns
Risk level (B)	1	862.882	10.67	<.002
Friend (C)	1	161.000	1.99	ns
Time 1 levels				
A X B	1	387.144	4.79	<.031
A X C	1	3.132	<1	ns
B X C	1	138.832	1.71	ns
A X B X C	1	93.507	1.15	ns
Error	158	80.808		

---

Source	df	MS	F	P
Year (A)	1	24.359	1	ns
Risk level (B)	1	777.203	9.50	<.003
Friend (C)	1	202.070	2.47	ns
Time 2 levels				
A X B	1	235.351	2.87	<.092
A X C	1	12.554	<1	ns
B X C	1	155.746	1.90	ns
A X B X C	1	15.757	<1	ns
Error	154	81.755		

APPENDIX I

THREE FACTOR MULTIPLE COVARIATE ANALYSES OF  
TIME 2 ACADEMIC ORIENTATION SCORES

TABLE 74

COVARIANCE ANALYSES OF TIME 2 ACADEMIC ORIENTATION SCORES WITH AGE AND  
TIME 1 SCORES AS COVARIATES AND CAMPUS HOURS LEVEL AS THIRD FACTOR

Source	df	MS	F	P
Year (A)	1	69.164	2.30	ns
Risk level (B)	1	295.273	9.85	<.003
Campus Hours (C)	1	23.294	<1	ns
Time 1 levels				
A X B	1	11.300	<1	ns
A X C	1	0.800	<1	ns
B X C	1	103.000	3.43	<.066
A X B X C	1	6.449	<1	ns
Error	158	29.973		

---

Source	df	MS	F	P
Year (A)	1	62.316	2.03	ns
Risk level (B)	1	281.691	9.20	<.003
Campus Hours (C)	1	0.109	<1	ns
Time 2 levels				
A X B	1	19.136	<1	ns
A X C	1	26.597	<1	ns
B X C	1	2.019	<1	ns
A X B X C	1	38.437	1.25	ns
Error	151	30.589		

TABLE 75

COVARIANCE ANALYSES OF TIME 2 ACADEMIC ORIENTATION SCORES WITH AGE AND TIME 1 SCORES AS COVARIATES AND ACTIVITY LEVEL AS THE THIRD FACTOR

Source	df	MS	F	P
Year (A)	1	71.085	2.46	ns
Risk level (B)	1	281.492	9.77	<.003
Activity (C)	1	289.582	10.05	<.002
Time 1 levels				
A X B	1	7.390	<1	ns
A X C	1	2.089	<1	ns
B X C	1	4.679	<1	ns
A X B X C	1	2.113	<1	ns
Error	160	28.797		

---

Source	df	MS	F	P
Year (A)	1	73.875	2.46	ns
Risk level (B)	1	286.839	9.57	<.003
Activity (C)	1	42.839	1.42	ns
Time 2 levels				
A X B	1	16.683	<1	ns
A X C	1	10.867	<1	ns
B X C	1	54.226	1.80	ns
A X B X C	1	18.207	<1	ns
Error	159	29.072		

---

TABLE 76

COVARIANCE ANALYSES OF TIME 2 ACADEMIC ORIENTATION SCORES  
WITH AGE AND TIME 1 SCORES AS COVARIATES AND  
FRIEND FOR ACTIVITY LEVEL AS THIRD FACTOR

Source	df	MS	F	P
Year (A)	1	82.668	2.83	<.095
Risk level (B)	1	275.410	9.42	<.003
Friend For Activity (C)	1	37.621	1.29	ns
Time 1 levels				
A X B	1	40.406	1.38	ns
A X C	1	15.055	<1	ns
B X C	1	5.328	<1	ns
A X B X C	1	145.129	4.97	<.028
Error	153	29.224		

Source	df	MS	F	P
Year (A)	1	71.973	2.35	ns
Risk level (B)	1	290.266	9.43	<.003
Friend For Activity (C)	1	7.141	<1	ns
Time 2 levels				
A X B	1	15.305	<1	ns
A X C	1	2.773	<1	ns
B X C	1	17.773	<1	ns
A X B X C	1	43.401	1.42	ns
Error	150	30.576		

TABLE 77

COVARIANCE ANALYSES OF TIME 2 ACADEMIC ORIENTATION SCORES WITH AGE AND TIME 1 SCORES AS COVARIATES AND FRIEND LEVEL AS THE THIRD FACTOR

Source	df	MS	F	P
Year (A)	1	53.175	1.74	ns
Risk level (B)	1	282.843	9.27	<.003
Friend (C)	1	30.746	1.00	ns
Time 1 levels				
A X B	1	15.023	<1	ns
A X C	1	0.003	<1	ns
B X C	1	3.062	<1	ns
A X B X C	1	24.472	<1	ns
Error	157	30.495		

---

Source	df	MS	F	P
Year (A)	1	87.617	2.96	<.088
Risk level (B)	1	275.257	9.31	<.003
Friend (C)	1	85.613	2.89	<.091
Time 2 levels				
A X B	1	41.187	1.39	ns
A X C	1	37.582	1.27	ns
B X C	1	29.867	1.01	ns
A X B X C	1	122.246	4.13	<.044
Error	153	29.545		

APPENDIX J

GROUP MEANS ON GRADE EXPECTATIONS

TABLE 78

OBSERVED MEANS FOR EACH SUBJECT GROUP  
ON GRADE EXPECTATION QUESTIONS  
(PART I 5,6,7)<sup>a</sup>

		High Risk		Standard Risk	
		Freshmen	Sophomores	Freshmen	Sophomores
Expected Average	$\bar{X}$				
		4.26	4.72	4.30	4.58
Time 1	SD	1.28	1.07	1.41	1.44
Time 2	$\bar{X}$	5.49	6.25	5.56	5.19
	SD	1.76	1.52	1.38	1.27
Average - trying for	$\bar{X}$				
		2.56	3.31	2.51	3.08
Time 1	SD	1.37	1.28	1.18	1.36
Time 2	$\bar{X}$	3.42	4.12	3.67	3.87
	SD	1.71	1.11	1.53	1.38
Lowest Average Satisfactory	$\bar{X}$				
		5.59	5.56	5.46	5.60
Time 1	SD	1.54	1.06	1.46	1.61
Time 2	$\bar{X}$	6.44	6.09	6.46	5.89
	SD	1.43	1.76	1.70	1.76

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<sup>a</sup> Means are expressed in terms of coded averages on a 12 point scale with 1 representing an A average and 12 representing an F.

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