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AUTHOR Lee, Valerie
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ABSTRACT

Characteristics of Blacks, four Hispanic groups, and low/high socioeconomic status Whites are examined with attention to their access to higher education. The data source is the first followup of 1980 high school seniors from the "High School and Beyond" (HS&B) survey. The four Hispanic groups are Mexican Americans, Cubans, Puerto Ricans, and other Latins. Profiles of each group are presented initially, after which attention is directed to: sex differences, within subgroupings, for high school and college activities; a comparison of two- and four-year students; students who attended college but transferred or withdrew; high-ability students as measured by 1980 HS&B achievement test; and sex differences among Black students. Students who indicated that they had applied to college in their senior year of high school but were not enrolled 2 years later are compared to students who did not apply to college, and to students who were attending college 2 years after high school. Data are included on: percentages of 1980 high school seniors who took more than 1 year of college courses, by subject area and sex; percentages majoring in technical fields in college; differences between groups in social class in regard to high school achievement; years of high school mathematics and science; and high school and college grade point average. (SW)

ACCESS TO HIGHER EDUCATION: THE EXPERIENCE OF BLACKS, HISPANICS AND LOW SOCIO-ECONOMIC STATUS WHITES

Valerie Lee
Harvard Graduate School of Education

American Council on Education
Division of Policy Analysis and Research
One Dupont Circle
Washington, DC 20036-1193

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Division of Policy Analysis and Research
American Council on Education
One Dupont Circle N.W.
Washington, D.C. 20036-1193

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Robert H. Atwell, President

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Valerie Lee
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FOREWORD

Improved access to higher education has been a fundamental objective of American society over the past few decades. It continues to be a central theme today and, as the data presented in this report suggest, is likely to be the focus of much attention in the future as well.

This report describes the college-going experience of 1980 high school seniors. It focuses especially on black, Hispanic, and low socio-economic status white youth; notably, four Hispanic subgroups -- Mexican Americans, Cubans, Puerto Ricans, and others -- are given direct attention. Based on data from the continuing national survey called High School and Beyond, the report shows that minorities and low-income youth continue to be underrepresented in rates of college attendance. Important differences appear among the groups studied, however, and pose questions for public policy.

The report provides useful perspective also in comparing students attending two-year versus four-year colleges and in describing the experiences of students who withdrew from college.

We are grateful to [illegible]ie Lee -- who has just completed Ph.D. studies at the Ha[illegible] Graduate School of Education -- for preparing the analysis a[illegible]ort. Cecilia Ottinger ably coordinated the editing [illegible]nal preparation, with the capable and patient assistance c[illegible]i[illegible] Baker.

Elaine El-Khawas
Vice-President for
Policy Analysis and Research

HIGHLIGHTS

College Attendance Patterns

The decision to attend college continues to be influenced by a student's socioeconomic circumstances.

- Slightly more than half of the students who never attended college are in the study's lowest SES quartile.

- Almost half of low-SES whites among 1980 seniors never attended college.

- A significant proportion of black 1980 seniors (31 percent) applied to college but were not attending two years later. The overall figure for all 1980 seniors was 23 percent.

- Overall, 40 percent of 1980 seniors enrolled in college and were still in attendance two years later.

  --- The overwhelming majority of these students (65 percent) were in the highest SES quartile.

  --- The least represented groups for college attendance were Mexican-Americans and low-SES whites; among these groups, 23 percent and 25 percent, respectively, were attending college two years later.

  --- In contrast, 53 percent of Cuban-Americans and 56 percent of high-SES whites were still in attendance two years later.

- Thirty-seven percent of 1980 seniors who entered college after graduation were not in attendance two years later.

  --- Minorities and low-SES whites were twice as likely to be in this group than high-SES whites.

Two-Year and Four-Year College Attendees

- Of those 1980 seniors enrolled in college 58 percent attended four-year institutions and 44 percent attended two-year colleges.

- Students attending four-year colleges had scored somewhat higher on the senior-year achievement tests than their two-year counterparts.

- The majority of black and high-SES whites attended four-year institutions (60 percent and 65 percent, respectively).

  --- In contrast, 54 percent of low-SES whites and 61 percent of Hispanics attended two-year colleges.

- The distribution of Hispanics enrolled in two-year institutions by nationality are:

  --- Mexicans-Americans 65 percent
  --- Cubans 56 percent
  --- Puerto Ricans 48 percent and
  --- Other Latins 57 percent.

- The average scholarship amount for students attending four-year institutions was twice the amount of those attending two-year colleges.

- Twenty-two percent of students at four-year institutions majored in technical fields as did 19 percent at two-year institutions.

Students Who Withdrew From College

- Overall, men were more likely to withdraw from college than women.

  --- Fifty-three percent of men withdrew from college compared to 47 percent of women.

  --- Among low-SES whites women withdrew from college more so than their male counterparts.

- Women tended to withdraw for financial reasons. Sixty percent of women indicated they withdrew for financial reasons compared to 40 percent of men.

Characteristics of Students by Achievement Levels

- Seventy-one percent of 1980 seniors of "high ability" were attending college two years later.
- Students of "high ability" were twice as likely to major in the technical fields than those of "average ability".
- Women were less likely to be in the "high ability" group than men.
- Blacks and Hispanics were the least represented 1980 seniors in the "high ability" group.
- More than three quarters of 1980 seniors in the average ability groups were not attending college two years later.

Sex Differences Among Black Students

- More than half of black women (59 percent) were enrolled in college two years after high school graduation compared to 41 percent of black men.
- Black women withdrew from postsecondary education institutions more so than their male counterparts (58 percent vs. 42 percent, respectively).
- Fifty-six percent of black women "couldn't afford to continue" college compared to 44 percent of men.

Introduction

The purpose of this report is to examine several characteristics of racial/ethnic and social class groups and analyze how these characteristics may relate to their access to higher education. The first follow-up of 1980 high school seniors (i.e. two years later) from the High School and Beyond survey (HS&B) is the source of information for this analysis.

The High School and Beyond (HS&B) study is a nationally representative sample of 1980 high school sophomores and seniors. The purpose of the HS&B study is to observe the activities of young people as they go through the educational system.

In the first section of this paper each of four groups will be described in terms of socio-economic and other factors relating to their high school and college experiences. The groups include: blacks, Hispanics, low-SES whites and high-SES whites. The second section will present data on:

(1) The sex differences, within subgroupings, for various high school and college activities.

(2) Students in two-year institutions compared to those in four-year institutions.

(3) Students who have interrupted their postsecondary education, either by transferring or withdrawing.

(4) Students who might be considered high-ability students.

Part I: Profiles of Each Group

Blacks

Blacks comprised 11 percent of the sample (See Appendix A). They reported an average family income of $16,374 and more than half (53 percent) indicated that they were from single parent families (See Appendix B). Of all the subgroups, blacks were the most likely to come from this family type. On average their parents had 12.4 years of education. More than half (52 percent) of the blacks in the sample were in the lowest SES quartile and 11 percent were in the highest quartile.

While in high school, blacks took an average of approximately two years of mathematics courses and approximately one year of laboratory science (See Table 2A). In addition, black students spent about 4 hours per week on homework and watched television for approximately 4 hours per weekday in their senior year of high school (See Appendix B). On a senior-year achievement test composite, 56 percent scored in the lowest quartile.

Black students appear to be college-oriented. As far back as the eighth grade, 49 percent expected to go to college. In comparison, 41 percent of Hispanics and 34 percent of low-SES whites expressed this idea in eighth grade. In high school, 52 percent were in the college preparatory track, much higher than either Hispanics or low-SES whites. A correspondingly lower percentage (25 percent) were in the vocational track.

Two years after high school graduation 37 percent of blacks were in college (See Appendix B-1). Approximately 46 percent of blacks in higher education were attending either doctoral granting or comprehensive universities and 36 percent were in two-year institutions (See Appendix B-2). Fewer blacks were in two-year institutions than either Hispanics (53 percent) or low-SES whites (47 percent). The average tuition blacks reported paying in academic year 1980-81 was $1,605.

Hispanics

This section will describe Hispanics as a whole and a later section will describe the characteristics of the subgroups. Hispanics were 10 percent of the sample (See Appendix A).

The average family income reported for Hispanics was $18,882; 35 percent were from single parent homes (See Appendix B). Almost half (48 percent) of Hispanic students are in the lowest social class quartile. Their parents had an average

of 12.1 years of education.

While in high school, 37 percent of Hispanics were enrolled in the college preparatory track, 34.1 percent were in the general track. Hispanics were more likely to be in the general track than blacks (34 percent vs. 24 percent, respectively). High school coursework for Hispanics included an average of approximately 2 years of math and one year's work in the lab sciences. These students tended to spend an average of 3.5 hours on homework and spent 3.2 hours per weekday watching television. Slightly more than half (51 percent) of Hispanics scored in the lowest achievement quartile on the senior-year test composite.

In 1982, only 30 percent of the original sample of Hispanic high school seniors were enrolled in postsecondary education (See Appendix B-1). College attendance for Hispanics was lower than for blacks (30 percent vs. 37 percent, respectively). As a matter of fact, 60 percent of Hispanics were working for pay two years after high school. Less than half (49 percent) of those going on for postsecondary education had applied to college directly from high school. Of those Hispanics who attended college over half (53 percent) were enrolled in community colleges and about one-third (31 percent) were enrolled in doctoral or comprehensive universities (See Appendix B-2). The average tuition and fees paid for the first year of education after high school was the lowest reported for the four groups--$1,276. As far back as the eighth grade, 41 percent planned to attend college (See Appendix B). Hispanics who are in postsecondary education are rather evenly distributed throughout the United States except for the relative high percentage (45 percent) attending college in the Pacific region (See Appendix B-2). Perhaps, this reflects the higher number of two-year colleges in that area. Notably, the college enrollment of all four groups is higher in that region.

Low-SES Whites

Whites in the HS&B sample were divided into two groups--low-SES whites and high SES-whites -- based on a composite measure of a family's socio-economic status. Low SES-whites were used as a disadvantaged comparison group for the two racial/ethnic groups.

Average family income of low-SES whites ($16,566) was slightly higher than that of the black subsample, and somewhat lower than the Hispanic group (see Appendix B). This amount represents nearly 50 percent of the average family income of high-SES whites. Overall, the SES level of this group is only slightly below the two racial and ethnic minority groups, but the average parental education (11.4 years) is about one year below that of blacks and Hispanics of low-SES. In all, the social class background of this group parallels that of the two racial and ethnic groups, except that, by definition, there are

no upper-class students within this group.

In terms of high school achievement, this group falls almost midway between the two minority groups and the high-SES whites. Course enrollment in high school is quite similar to the minority groups. Vocational enrollments are quite similar to that of Hispanics (both 29 percent), with considerably less college preparatory enrollment than found with blacks (36 percent vs. 52 percent). College expectations in the eighth grade were the lowest of the three disadvantaged groups (34 percent).

Reflecting their low position on college expectations, and in defiance of their overall achievement level, only 28 percent of this sample was in college two years out of high school. Slightly less than half of these students applied to college directly from high school (49 percent), and we find that 63 percent were working for pay in 1982 - the highest percentage of the four groups. Eighteen percent were married, paralleling the Hispanics (16 percent), but much higher than either the blacks or high-SES whites (both 7 percent).

For those 28 percent of the low-SES whites who were actually in college, fewer are in doctoral and research universities (12 percent) and more in comprehensive universities (23 percent) (see Appendix B-2). Almost half (47 percent) are in two-year colleges. Average tuition levels ($1,494) are between the level for blacks and Hispanics, but considerably below that of high-SES whites. These tuition levels seem likely to be a reflection of the numbers who are in community colleges, where the average tuition is low. Course enrollments in math, science, foreign language, and social science are below the other disadvantaged groups. The proportion of low-SES whites in college is quite evenly distributed regionally, much more so than for the racial and ethnic minority groups.

High-SES Whites

This group was meant to serve as a comparison for the three disadvantaged groups. The hypothesis was that the characteristics, performance, and college enrollment of this group would differ substantially from the other three groups. Further, if those characteristics were similar across the three disadvantaged groups, this would suggest that these differences were due to social class, rather than to racial or ethnic differences. In fact, this seems to be the case. The average family income for this group ($30,778) is 60 percent more than the next highest group, the Hispanics (See Appendix B). The average parental education is over two years more than the highest of the three other groups (14.8 years). Only 18 percent of these students come from single-parent families, about half that for the average of the other groups and, one-third that for blacks.

High school achievement is almost 20 percent higher than that of the minority groups, 10 percent above low-SES whites. All four groups of students seem to average about 20 hours per week in paid work during high school, but by the time these students are two years out of high school, only 51 percent of this group was working, compared to 63 percent of low-SES whites (See Appendix B-1). These students did more homework in high school (4.5 hours/week), watched less television per weekday (2.7 hours), and took considerably more academic courses in high school, averaging a year more of math and twice as much science (See Appendix B).

Sixty-five percent of this group took a college preparatory program in high school, and only 14 percent were in the vocational program, figures that are double those of the low-SES white group for college preparatory enrollment, and half that for vocational enrollment. Twice as many of these students (15 percent) went to private high schools. College expectations expressed in the eighth grade were about double those of the low-SES whites (63 percent vs. 34 percent).

The 60 percent of this sample who are in college reflect a much higher percentage who applied directly from high school (75 percent) (See Appendix B-1). Over half of these students (52 percent) are in doctoral-granting or comprehensive universities, only a small proportion more than for blacks, but considerably more than for Hispanics or for low-SES whites (See Appendix B-2). Surprisingly, there is a considerable proportion of these students enrolled in two-year colleges (33 percent). Average tuition paid ($2,203) is about 50 percent higher than the mean tuition paid by the other three groups. College course enrollment in math, science, and social science is higher than for the other groups. Regional distribution in college for this group is roughly even, with the lowest proportion (51 percent) in the East South Central region, and the highest enrollment (64 percent) in the West North Central area. Regional differences for college enrollment are not so diverse for the two white groups as for the two racial and ethnic minority groups.

Hispanic Subgroups

Mexicans

The average family income of Mexicans was $18,036 (See Appendix C). The parental education is the lowest of the four Hispanic groups (9.7 years). High school achievement ranks equal to that of Puerto Ricans, and lowest of all the groups. Mexicans appear to have done less homework (3.2 hours/week) and took fewer academic courses in high school than other groups. The Mexicans in this sample were more likely to have taken vocational courses in high school (31 percent) and less likely to have taken college preparatory coursework (34 percent). Forty percent of Mexican students had college ambitions in the

eighth grade.

A smaller proportion of Mexican students actually enrolled in college (24 percent) than any other group in this sample. They also have the highest proportion (64 percent) working for pay of all Hispanic groups. Seventeen percent of the Mexican American students in the sample were married two years out of high school. For those in college, 57 percent are in two-year colleges, and the average tuition paid in 1980-81 was $902 (See Appendix C-1).

Cubans

Cubans had higher family income ($19,598), higher parental education (12.8 years), and a lower percentage came from singleparent households (24 percent) than any other Hispanic subgroup (See Appendix C). Fully 66 percent had ambitions to go to college in the eighth grade. They did more homework (4.9 hours/week) and took more academic courses (almost a full year more of math than the other Hispanic subgroups, and more science as well). Over 60 percent were in the college preparatory track, with 18 percent in the vocational track. These distributions roughly resemble those of the high-SES white students. Fifty-six percent of the Cuban subsample is in college two years out of high school, almost double the average of the three other Hispanic groups. A large proportion (70 percent) applied to college from high school. Cuban students were found mostly in two-year colleges (50 percent) and another 26 percent attended doctoral/research universities. Cuban students were located primarily in either the South-Atlantic (59 percent) or in the Mid-Atlantic (18 percent) census region.

Puerto Ricans

This group has the lowest social class characteristics of all groups in the sample--$14,285 for average family income, 46 percent in single parent families, with the parents' educational level less than a high school degree (11.6 years) (See Appendix C). They also have the lowest average for high school achievement, roughly comparable but a little below that of Mexicans.

In high school, they worked fewer hours per week (16.5 hours) than any other group. However, their enrollment in the college preparatory track was higher than Mexicans or other Latinos, and the proportion with college ambitions in the eighth grade (49 percent) was also higher than those two groups. Thirty-three percent were currently enrolled in some form of higher education, higher than for low-SES whites and for Mexicans. Fifty-nine percent applied to college directly from high school.

Very few Puerto Ricans are in doctoral-granting universities (3 percent), but a relatively large proportion of

those in college are in comprehensive universities (35 percent) or in two-year colleges (38 percent) (see Appendix C-1). These students seem to enroll in slightly more foreign language courses than any other group in the sample. Regionally, the Puerto Rican students come from the Mid-Atlantic or East North Central regions.

Other Latins

This group has the highest average family income among the Hispanic subgroups ($20,197), and a mean parental education level equivalent to that of the Cuban subgroup (12.6 years) (see Appendix C). Thirty-eight percent of these students come from single parent families.

Their high school achievement averages were between Cubans and the other two groups and they averaged 4.1 hours of homework per week. They approach the Puerto Rican group in vocational and academic track enrollment. Eleven percent had attended non-public high schools.

Thirty-four percent are currently in college, close to the 41 percent who expressed college ambitions in eighth grade. Seventeen percent of the sample were married by the time they were two years out of high school. More of these students were enrolled in two-year colleges (48 percent) (See Appendix C-1). The average tuition paid in 1980-81 was $1,613. These students seem to be about evenly distributed in all regions of the country except New England and the South Central areas.

In brief, the Hispanic subgroups seemed to have characteristics which distinguished one from another almost as much as the Hispanic group as a whole is distinguished from the other subgroups. Cubans approached whites in terms of achievement, college enrollment, and educational ambition. Their social class measures, although below the mean for the overall sample, were considerably above the other Hispanic groups. Mexican Americans were the least represented group in college enrollment, even though their social class measures (except parental education) were above that of Puerto Ricans. Puerto Ricans were lowest in terms of family income and high school achievement, but were equal to other Latins in terms of college enrollment. They were as likely to be found in comprehensive universities as in two-year colleges, which is quite a different pattern from the other Hispanic subgroups. These groups were not evenly distributed around the nation. Mexicans were found in the Southwest and the West Coast, Cubans were found in the Atlantic area, Puerto Ricans were found mostly in the Mid-Atlantic and east North Central areas. Other Latins had a more diverse regional distribution.

Part II: Further Comparisons Among Subgroups

This section of the report examines the same sub-groupings that have been profiled. It offers more specific analyses, meant to shed further light on access to higher education, directed to the following categories:

(1) Sex differences within sub-groupings on several high school and college variables;

(2) A detailed look at students who indicated that they had applied to college in their senior year of high school, but were not enrolled two years later. This group is compared to students who did not apply to college, and to those who were attending college two years out of high school;

(3) A comparison of students in two-year as compared to four-year institutions;

(4) A detailed look at students who have interrupted post-secondary schooling, either by transferring or withdrawing.

(5) A closer look at those students who might be considered high-ability students, as measured by the 1980 HS&B composite achievement test, administered at the end of high school; and

(6) A search for sex differences within the black subsample.

Discussion will refer to tables found at the end of the report.

Sex Differences in High School and College

The Entire Sample

Slightly more than half the sample is female (52 percent); they tend to come from a slightly lower social class background than the males (See Table 1A). The black sample and the low-SES white sample contain about 10 percent more females than males, whereas the high-SES white sample contains a slight male majority (52 percent vs. 48 percent) Among Hispanics, there is a female majority in only the Puerto Rican sample (62 percent). The proportion of the sample in college two years out of high school is also more than 50 percent female (See Table 5).

In previous research on sex differences in math achievement and plans to major in science (based on HS&B data and a sample of students of above average ability), it was found that 40 percent of college men, but only 14 percent of college women, planned to major in technical fields (Lee and Ware, 1984). This report looks to sex differences within racial/ethnic/SES groupings in the areas of mathematics and science. Investigation of high school course enrollment and achievement involves the entire sample of almost 12,000 cases; in contrast, analysis of college variables is drawn from about half of the sample.

Of the three achievement areas measured at the end of high school, the largest sex difference was found in math achievement. A slight male advantage was observed in the other two achievement areas, however. Males took more math and science while in high school. Other research has shown, and this research has confirmed, that girls get better grades than boys. This was markedly true in high school, moderately so in college.

For those students in college, there were larger sex differences in course enrollment in these areas. Ten percent fewer women took more than one year of college math, and slightly fewer took more than a year of science (See Table 1B). On the other hand, women took more foreign language and social science courses than men.

Among the entire HS&B sample in college two years out of high school, 22 percent more men than women have indicated that they declared, or plan, to declare, majors in technical fields (i.e., computer science, engineering, math, biology, and the physical sciences) (See Table 1B). The strongest sex difference was in engineering (19 percent vs. 3 percent), and the smallest was in biology (3 percent vs. 2 percent). These comparisons across the entire sample serve as a backdrop for analysis of the racial/ethnic/SES groupings. Although, there was a slight male advantage in terms of math achievement and math/science course enrollment in high school, the differences become magnified when these same students' college behaviors are considered.

Race, Ethnicity, and SES Groupings

Since there is known to be a general relationship between social class and enrollment in academic courses in high school, and in math and science courses in particular, the large social class differences in the four racial/ethnic/SES groups being examined probably affect the group differences in course enrollment. However, there are only slight differences in social class between the sexes within each group, so this probably does not explain any sex differences found within groups. There appear to be more females in the low-SES white group who have attended private high school (9 percent vs. 5 percent), but no differences within the other groups (See Table 2A). College access is approximately equal between the sexes for all groups, showing a very slight female advantage among the high-SES whites.

High school achievement patterns show some sex differences between groups. In math achievement, there is less sex difference among blacks and high-SES whites, and more among Hispanics and low-SES whites, all in favor of males (See Table 2B). The patterns in reading and vocabulary achievement are much less marked. For blacks and Hispanics, there is a very slight advantage for males in both areas, and for both white groups, there is a tiny advantage

for females. The biggest achievement differences are in the math area, and they are consistently in favor of males. Although access to college seems to be based more on social class than racial classification, achievement means measured at the end of high school are lower for the minority groups than for the low-SES whites. For sex differences in math achievement, blacks show less discrepancy than Hispanics, high-SES whites less than their low-SES counterparts.

Enrollment in math and science courses in high school also shows fewer sex differences for blacks than for the other three groups. However, the high-SES whites take considerably more math courses, and almost twice as much science, as the other three groups, for both sexes. As noted earlier, other researchers have found that this is probably due more to SES than to race, a conclusion confirmed by the present analysis. It is ironic to note that, despite the achievement deficiencies shown by females in course enrollment in these areas, girls get better grades, across groupings. The present analysis is not able to examine students' high school grades by academic area, but another HS&B report (Owings and Fetters, 1984) shows that while 18.3 percent of 1980 sophomore girls had gotten A's in their high school math courses, only 14.9 percent of their male counterparts had done so, and this generalized to GPA. The same pattern is true in science grades. Thus, girls appear to have taken fewer math and science courses in high school despite their probably superior achievement in the courses they did take. This pattern is broken for blacks.

Once these same students are in college, the difference between the proportion of males and females who took more than one year of mathematics was also much lower for blacks (a 4 percent difference) than for the other three groups (which average a 10-12 percent difference). For science courses, the difference in favor of males averaged about 3 percent. Low-SES whites had a lower proportion of students who took more than one year of math than the other three racial/ethnic/SES groups, and blacks had the largest proportion of women in this category. Social class differences did not appear to be as strong in mathematics (for whites) as they were in science.

There were large differences within all groupings in the proportion of men and women who plan to major in technical fields: almost 50 percent fewer women than men have such plans in all groups (See Table 2C). Although black women appear to have been taking more math courses in college than their female counterparts in other groups, they apparently do not use these courses in their choice of majors. Consistently, as in high school, females have higher GPA's than men in college; however, the female advantage in GPA is reduced.

Hispanic Sub-Groupings

More Cuban girls than boys attended private high school, whereas, for Puerto Ricans, the reverse was true (See Table 2C). However, 16 percent fewer Cuban females than males were in college. In the other Hispanic groups, the proportion of males and females in some form of postsecondary education were approximately equal.

While in high school, Cuban students took considerably more math and science courses than other Hispanics, but the sex differences in favor of males is strong (See Table 2D). In fact, Cuban males took more math courses than the mean of non-Hispanic males, but for Cuban females, this was not true. Mexican males had the lowest scores in math achievement of the male Hispanic groups, but Puerto Rican females scored lowest despite the fact that they averaged more math courses than the female Mexican group. Reading achievement showed few sex differences among Hispanic sub-groups, with the exception that the Puerto Rican females were below their male counterparts. The same patterns occurred in vocabulary achievement.

Thus, among Hispanics, there were strong across-group sex differences in favor of males in math and science course enrollment in college, and very strong differences in favor of males choosing technical majors in college (See Table 2C). An exception to that is blacks: the proportion who took more than one year of math since high school was higher than either with Hispanics or low-SES whites, and the difference between the sexes was slight. However, the pattern did not persist for black males and females' choice of technical major. Blacks also showed smaller sex differences in math and science course enrollment in high school and in math achievement at the end of high school (See Table 2B). However, as a group, blacks showed the lowest average math achievement.

Among Hispanics, Cuban males took more math and science courses in high school than the average of the non-Hispanic sub-groups, but Cuban females did not. When they got to college, however, fewer Cubans of either sex chose to major in technical fields. Mexican and Puerto Rican males were far more likely to chose technical majors: 37 percent and 39 percent respectively did so, compared to 34 percent of the sample as a whole. However, the females in these same Hispanic sub-groups showed particularly low proportions choosing non-traditional fields of study, especially those in the sciences.

Students Who Applied to College from High School, But Did Not Attend

A large proportion of students (about 23 percent) reported that they had applied to college while in high school, but two years later they were not in college (See Table 3A). With the HS&B datafile, as presently constituted, there is no way to ascertain whether these students began college and subsequently dropped out or whether they simply never enrolled. Whether they were not in college for financial reasons, for academic reasons, or for other reasons also has not been determined. However, by examining the social class and senior year achievement scores as well as the the racial and ethnic makeup of these students, one can gain some insight into why these students have not followed through on their original educational plans.

Differences between the four categories--(1) did not apply to college and not attending college two years after graduation; (2) applied but not attending (our group of interest); (3) did not apply but now attending (a tiny group); and (4) those who applied and are now attending--are presented in Table 3.

Socioeconomic factors appear to be one of the reasons for not attending college. Over half of the students who never applied to college are in the lowest SES quartile (See Table 3). In comparison, 65 percent of students currently attending college are in the highest SES quartile. Students who applied but subsequently were not attending fall into a middle position, with 26 percent in the lowest SES quartile and 17 percent in the highest quartile. On the HS&B composite measure of achievement at the senior year of high school, students in the group of interest are below the overall mean. Put differently, approximately 17 percent of those in the highest achievement quartile applied but did not attend. These two measures -- lower than average SES ranking and below average achievement -- suggest that both financial and academic reasons influence students who have applied to college but do not attend.

What are the characteristics of the students in this group? Blacks are more likely to be in the group (31 percent) as are Hispanics (26 percent). The representation of low-SES whites (24 percent) is not significantly different from the overall mean, and high-SES whites are less likely to be represented (19 percent). Among Hispanics, the least likely are Cuban (17 percent) and the most likely are Puerto Ricans (27 percent).

Young women are also more likely to be in the group of students who apply to college from high school and are not enrolled two years later (See Table 4). Four percent more females than males are in this group, but recall that females were of a slightly lower SES rating. Among minority groups, black and Hispanic females are more likely to have applied and not attended (a 5 percent and 7 percent female difference, respectively). This trend is also evident for low-SES whites. High-SES whites show no sex difference in the "apply but not attend" group. Within Hispanic groups, it is striking that, for Puerto Ricans, females are 26 percent more likely to apply and attend than their male counterparts. Recall that for Cubans, 16 percent more males than females were in college two years out of high school (64 percent vs. 48 percent), so the sex differences in college access for that Hispanic sub-group are significant in any case (See Table 2C).

If we look only at those students who stated that they had applied to college while still in high school (See Table 5), a striking 37 percent are not in college two years later. However, for minorities those proportions are even greater: 48 percent of those blacks and 50 percent of those Hispanics are no longer in school. Within the population of whites who applied to college from high school, almost twice as many low-SES as high-SES whites are in not college (48 percent vs. 26 percent, respectively), which would indicate that there are socio-economic reasons for the difference. Within Hispanic groups, Mexicans are the most likely (53 percent) to be in this group, and Cubans the least likely (25 percent).

Students in Two-Year and Four-Year Colleges

The questions to be addressed in this section of the report center around the characteristics of students enrolled in two-year and four-year colleges. Proprietary colleges are excluded from this analysis. The sample contains only those students in college, about 5,200 cases (See Table 6).

Of students in college two years out of high school, almost half (44 percent) are in two-year colleges (See Table 6A). There are moderately strong social class and achievement differences in favor of students in four-year colleges; their self-concept and locus of control are somewhat higher as well. Blacks are less likely than the general population to be found in two-year colleges, and Hispanics are more likely. For both minority groups, females are more likely to be in two-year colleges and, correspondingly, less likely to be found in four-year colleges (See Table 6D). There are no sex differences, but strong social class differences, in the white sample's likelihood of attending each college type. Within the Hispanic sample, Mexicans are the most likely and Puerto Ricans the least likely to be found in two-year colleges.

Total institutional costs, which are estimated by the respondents, average about 50 percent lower in two-year than in four-year colleges for school year 1981-82, with tuition comprising the bulk of those costs (See Table 6B). Financial aid information is given by students on their first choice schools; these are probably, but not necessarily, the same schools in which they are enrolled.

About 14 percent of those students currently in two-year colleges were offered loans, and about the same proportion were offered scholarships, which averaged about $1,100 and $700, respectively (See Table 6B). For those students currently in four-year colleges, the proportions are substantially higher: 25 percent were offered loans and 28 percent were offered scholarships, each averaging about $1,200.

There is a strong contrast in the types of courses in which students enroll in the two-year colleges. Students in two-year colleges are less likely to major in technical fields (See Table 6C). The most striking differences are found in the areas of physical sciences, biology, and math; no differences exist in either computer science or engineering.

Less than half of the students in two-year colleges plan to graduate from college, compared to 72 percent of those in four-year colleges. The differences in educational aspirations for advanced degrees are even more marked. Only 66 percent of two-year college students, compared to 82 percent of four-year college students feel they have the ability to complete college. However, over 70 percent of them plan to hold white-collar jobs by the age of 30, compared to 83 percent of those in four-year colleges (See Table 6D).

In summary, students in two-year colleges are less likely to have been continuously in school since high school and, on average, are lower in both social status and achievement measures. They are less educationally ambitious, and less sure of both their academic abilities and their overall self-image. They were less likely to have been offered financial aid. If aid has been offered, it is considerably less, although representing about the same proportion of total costs. Students in two-year colleges have taken considerably fewer college-level academic courses in all areas, and are somewhat less likely to choose technical areas as possible majors. Blacks are somewhat less likely and Hispanics more likely to be in two-year than four-year colleges but, for both minority groups, females are over-represented in the two-year level. There is less difference in occupational than in

educational ambitions for the two groups, which indicates a possible mismatch or lack of information for the two-year college sample.

Students Who Have Interrupted Their Schooling Since High School

This analysis examines students who have been in some form of post-secondary education sometime since high school, but have indicated that they have either "withdrawn from any school since high school" (25 percent) or "transferred from one school to another between high school graduation and February, 1982" (18 percent).

Transfer Students

Among more affluent students, females are slightly more likely than males to transfer to other schools (23 percent vs. 21 percent, respectively), but low-SES students show no sex difference in the probability of transferring (See Table 7). In fact, transferring seems to be positively related to social class. Achievement does not appear to be related to transfer--in fact, those in the middle ranges are more likely than either extreme of the achievement distribution to have transferred. Within minority groups, both black and Hispanic males are more likely to transfer than their female counterparts. This trend is particularly strong for Cubans, and goes in the opposite direction for Puerto Ricans.

Students Who Have Withdrawn

Because of ambiquity in the questionnaire, this group probably includes both those students who have left college at the end of their second year out of high school, and those who have transferred to another school. Comparing these students with those in college who have remained in their original schools (See Table 8), we see that the withdrawal group is lower on measures of social class, high school achievement, and self-image. We could infer that students choose to withdraw for both economic and academic reasons. Students who withdrew were less satisfied with almost every aspect of life in the last school in which they had been enrolled.

The biggest satisfaction differences involve personal intellectual growth and the development of work skills. Students are generally less satisfied with the counseling and job placement aspects of their schools, and more satisfied with aspects of teaching. Readers should be cautioned about drawing any conclusions from students' reports about school dissatisfactions, in view of the fact that personal differences, both economic and intellectual, were related to withdrawal as well.

There appear to be some sex differences among the group of students who have withdrawn from school. Overall, females are 6 percent more likely than men to have withdrawn (47 percent vs. 53 percent--see Table 9). This is most pronounced among the least able students and among low-SES white students. It is also true among the Mexican, Puerto Rican, and Cuban Hispanic subgroups. Of those who state they had withdrawn from some school since high school graduation, 32 percent indicate that they withdrew for financial reasons (See Table 9B). Of the group who "could not afford to continue," both the low-quartile SES and the low-quartile achievement groups are over-represented (See Table 9B). More males than females in these last two groups withdrew for

economic reasons. Blacks, Hispanics, and low-SES whites are all more likely than high-SES whites to have withdrawn for financial reasons, and all three of these groups show males more likely than females to withdraw for lack of the financial means to continue.

In summary, students withdraw from postsecondary educational institutions for a number of reasons: economic, intellectual, and dissatisfaction with their schools. Minority status is related to withdrawal, but it is difficult to say whether this is due to social class or racial differences. Although transfer is positively related to social class, withdrawal is negatively related: both relationships are moderate. The differences among college satisfaction ratings for those students who withdrew vs. those who did not are not surprising; what seems most noteworthy is the fact that such a large proportion of college students have withdrawn from some college by the end of their second year out of high school (25 percent) and that withdrawal is more likely for males than for females throughout most minority subsamples, but not among high-achieving and high-SES whites (See Table 9A).

Higher Achieving Students

The entire sample was divided in order to compare the characteristics of lower-achieving and higher-achieving students. The more achieving group consists of students scoring at least 55 on the composite achievement test. This higher achieving group encompasses slightly over 30 percent of the sample (See Table 10A). Minority groups are largely underrepresented in this sample, much more so than their lower social class mean would explain. Less than 10 percent of both the black and Hispanic subgroups are in the higher ability group; however, 24 percent of the low-SES whites are so designated (and almost half of the high-SES white sample). Within the Hispanic sample, Mexicans are the least represented (7 percent) and Cubans are the most represented (17 percent).

Of the higher achievement group, 71 percent are in college two years out of high school, and 75 percent are working for pay (See Table 10B). Clearly, these two groups overlap. Of the entire sample in college, 56 percent of the higher achieving group are in four-year colleges and only 28 percent in two-year colleges, contrasting with 44 percent in four-year and 72 percent in two-year colleges for the remainder of the in-college group.

Clearly achievement and enrollment in four-year colleges are highly related. Also, students of high achievement are much more likely to be in doctoral and research universities, and somewhat more likely to be in comprehensive and liberal arts institutions. The high-achieving students are likely to choose majors in technical areas, particularly in the physical sciences, mathematics, and engineering (See Table 10C).

The educational aspirations of the higher-achieving students are considerably higher than the remainder of the sample. For the students who indicate their educational aspirations two years out of high school (30 percent of the entire sample did not answer this question), 77 percent of the more achieving group indicate that they plan at least to complete a BA, and 35 percent plan on pursuing advanced degrees. Comparable figures for the average ability students are 36 percent and 12 percent. Over 80 percent of the more achieving students believe they definitely have the ability to

complete college, whereas slightly more than half of the remaining sample share that self-assessment of ability.

Clearly, social class and measured achievement are highly related in this sample, with 41 percent of the upper quartile of the SES distribution falling in the higher ability group, and only 10 percent of the lowest SES quartile so designated (See Table 10A). Students in the higher achievement group have taken more math and science courses in high school, 80 percent took three or more years of math, and 38 percent took two or more years of physical science (See Table 10D).

High school academic track placement is also highly related to subsequent measured achievement, with over 80 percent of these higher ability students having been in the college prepartory program and only 8 percent in the vocational program. Corresponding figures for the remainder of the sample are quite different: 38 percent in the college preparatory program and 28 percent in the vocational program. Perhaps some further analysis of the 8 percent of students from the vocational program who scored in the top 30 percent on high school achievement might be warranted. Track placement, high school course enrollment, and measured ability are very highly related.

Recall that females comprise 52 percent of the entire sample whereas they make up only 49 percent of the higher achievement sample. Table 10D also includes some information on the gender distribution between the two achievement groups, by race, ethnicity and SES. Although only 8 percent of blacks fall in the higher-achievement group, 12 percent of black males and only 7 percent of black females are so represented. Sex differences among Hispanics are slightly less (9 percent male and 7 percent female), with the biggest sex difference in probability of being in the higher achievement group found among Cubans and Puerto Ricans. Although females in these two sub-groups are of slightly lower social class than their male counterparts, the differences are not enough to account for this difference. High school academic course enrollment is uniformly lower for Hispanic females.

Thus, 30 percent of the sample falling in the group designated higher achievement for this report are more likely to be of a somewhat higher social class, white, and are much more likely to have taken more academic courses in high school. Course enrollment is highly related to high school academic track placement, and both are highly related to achievement measured at the end of high school. Within minority groups, black males are substantially more likely to be in the more able group than black females, and the same is true for the Puerto Rican and Cuban Hispanic sub-groups.

Sex Differences Among Black Students[1]

Black females are slightly more likely than black males to be in college, but the two sexes are equally likely to be working for pay, two years after graduating from high school (See Table 11).

For those blacks who enrolled in some sort of postsecondary education after high school, females were more likely to have withdrawn, and are even more likely to have done so for lack of funds. Females were more likely to have applied to college while in high school, but not be in school two years later. More than 50 percent of black females were in the lowest 25 percent

of the SES distribution, with less than 10 percent in the highest quartile. The same pattern was true for high-school achievement, with only 6 percent of black females falling in the top 25 percent of the distribution.

Despite the disadvantage for black females in terms of achievement, they appeared to be more educationally ambitious than their male counterparts, especially in the proportions interested in advanced degrees. Also, despite their lower measured achievement, more black females consider they have the ability to complete college. It should be noted that the black sample as a whole is low on this measure. Other research finds that females generally have less confidence than males in their educational abilities. Therefore, the pattern observed within the black sample is particularly striking, since the self-assessment of ability is made after students have amassed a considerable amount of evidence as to their academic performance patterns. Thus we see another example of sex differences within the black sample running somewhat counter to patterns observed in the sample as a whole.

FOOTNOTES

[1]Blacks comprise 11.3 percent of this sample (after weighting). However, the original HS&B sampling plan included heavy oversampling of minority students. That means that real cases--students who are black--comprise 24.7 percent of the sample, or almost 3,000 cases. Therefore, estimates of distributions for several variables should be quite stable, even if weighted proportions are rather small.

References

Bryk, Anthony S., Holland, Peter B., Lee, Valerie E., and Carrido, Ruben A. (1984) Effective Catholic Schools: An Exploration. Executive Summary. Washington, DC: National Catholic Education Association.

Hinkle, Dennis E., Wiersma, William, and Jurs, Stephen G. (1979) Applied Statistics for the Behavioral Sciences. Chicago: Rand McNally College Publishing Company.

Lee, Valerie and Ware, Norma. (1984) Factors Predicting College Science Major Choice. Manuscript submitted for presentation at the 1985 Annual Meeting of the American Educational Research Association, Chicago.

Owings, Jeffrey A. and Fetters, William B. (1984) High School and Beyond Tabulation: Course Grades and Credits Earned by 1980 High School Sophomores Who Graduated in 1982. Washington, DC: National Center for Education Statistics, LSB 84-6-15.

Rosenthal, Robert and Rosnow, Ralph L. (1884) Essentials of Behavioral Research: Methods and Data Analysis. New York: McGraw-Hill Book Company.

Table 1A

Characteristics of the Sample: Sex, Race, Ethnicity and Socio-economic Status

	Percent of Males	Percent of Females
	(N=5,738)	(N=6,138)
Total Sample	48.2%	51.8%
Blacks	45.7	54.3
Hispanics	49.1	50.9
Low-SES Whites	43.8	56.2
High-SES Whites	52.2	47.8
Non-Hispanics	48.4	51.6
Hispanics		
Mexicans	48.4	51.6
Cubans	49.6	50.4
Puerto Ricans	37.7	62.3
Other Latinos	48.0	52.0

Table 1B

Percentages of 1980 High School Seniors in College Who Took More Than One Year of Courses in Higher Education, by Subject Area and Sex

	Percent of Males	Percent of Females
Math	25.5%	15.6%
Foreign Language	4.2	6.0
History, Social Science	23.8	24.8
Science	25.6	21.5

Percentages of 1980 High School Seniors Majoring in Technical Fields in College

Computer Science	6.4%	4.9%
Engineering	19.2	3.2
Mathematics	1.5	0.8
Physical Science	3.9	1.1
Biology	3.2	2.1
Total Majoring in Technical Fields	34.2%	12.1%

Table 1C

Mean Differences Between Groups

Grouping Variable	Males	Females
Family Social Class (X=0)	.033	-.085
High School Achievement:		
Math ($\bar{X}$=50)	53.06	50.82
Reading (s.d.=10)	52.32	50.82
Vocabulary	52.47	52.38
Coursework in High School:		
Years of Mathematics	2.30	2.13
Years of Science	0.68	0.53
High School Grade Point Average	2.74	2.99
College Grade Point Average	2.73	2.92

Table 2A

Sex Differences Within Subgroups For Selected Background and Colleges Variables

RACE\ETHNICITY\SES\GROUPINGS

Variables	Blacks		Hispanics		Low-SES Whites		High-SES Whites	
	M	F	M	F	M	F	M	F
Mean Family Social Class	-.42	-.54	-.37	-.50	-.53	-.55	.59	.58
% From Private High School	4.4	4.2	8.4	9.1	4.5	8.7	14.2	14.8
% In College Two Years Out of H.S.	33.4	39.7	28.5	30.5	27.2	27.9	57.3	62.7
In College:								
% Taken> 1 yr. of Math Since H.S.	28.7	24.9	27.0	15.2	20.5	10.2	26.6	17.1
% Taken> 1 yr. of Sci. Since H.S.	17.9	15.3	18.5	15.3	20.6	16.7	29.8	26.7
% Majoring in Tech. Fields	28.0	13.5	21.5	10.2	32.1	13.7	35.8	11.3
College GPA	2.44	2.56	2.63	2.72	2.76	2.84	2.78	2.88

Table 2B

Sex Differences Within Subgroups for Selected High School Variables

High School Performance
hole Sample)

Variable	Blacks		Hispanics		Low-SES Whites		High-SES Whites	
	M	F	M	F	M	F	M	F
Yrs. of Math	1.76	1.71	1.67	1.46	1.86	1.73	2.83	2.75
Yrs. of Sci.	.55	.47	.45	.36	.47	.39	.90	.71
Math Achievement (X=50)	45.65	44.12	47.02	44.78	52.38	49.78	56.48	55.12
Reading Achievement (s.d. =10)	47.10	45.94	46.69	46.52	51.56	52.14	55.23	55.76
Vocabulary Achievement	45.79	45.40	47.09	46.75	50.82	51.53	56.25	56.40
H. S. GPA	2.52	2.74	2.50	2.68	2.67	2.98	2.89	3.14

Table 2C

Sex Differences Within Hispanics Subgroups For Selected Background and College Variables

HISPANIC SUBGROUP[1]

Variable	Non-Hispanics		Mexicans		Cubans		Puerto Ricans		Other Latins	
	M	F	M	F	M	F	M	F	M	F
Mean Family Social Class (X=0, s.d=7)	.07	-.04	-.53	-.64	-.23	-.43	-.70	-.78	-.21	-.30
% From Private H.S.	9.5%	10.7%	8.9%	6.9%	21.7%	23.4%	12.8%	5.7%	8.4%	13.3%
% In College 2 Years Out of H. S.	43.4	44.8	28.1	26.6	64.0	47.9	33.9	31.8	30.1	37.5
If In College:										
% Taken> 1 yr. Math Since H.S.	25.2%	15.6%	32.4%	19.9%	16.2%	18.2%	33.0%	16.4%	24.6%	12.1%
% Taken> 1 yr. Sci. Since H.S.	26.0	21.9	19.1	11.1	24.9	18.0	21.6	25.5	18.2	17.9
% Majoring in Tech. Field	34.4	12.3	37.4	9.5	21.3	13.5	39.0	10.0	27.3	13.0
College GPA	2.74	2.83	2.68	2.70	2.71	2.86	2.46	2.66	2.55	2.75

[1]The original sample sizes for the Hispanics subgroups are large enough to make group mean estimates stable, due to heavy oversampling of minority students in the second-wave HS&B study of 1980 seniors. However, weighted sample sizes are quite small. Therefore, estimates of group means for this analysis, which divides the Hispanic subgroups by sex, should be interpreted with some caution.

Table 2D

Sex Differences Within Hispanic Subgroups for Selected High School Variables

Variables	Non-Hispanics		Mexicans		Cubans		Puerto Ricans		Other Latins	
	M	F	M	F	M	F	M	F	M	F
Yrs. of Math	2.34	2.18	1.71	1.36	2.72	1.81	1.91	1.52	1.77	1.69
Yrs. of Sci.	.70	.54	.47	.28	.79	.57	.72	.60	.43	.40
Math Achievement (X=50)	51.51	51.37	46.56	44.03	54.22	48.97	48.04	42.83	49.27	46.46
Reading Achievement (s.d. = 10)	52.77	52.87	46.63	45.23	50.77	50.08	47.23	44.52	48.70	49.20
Vocabulary Achievement	52.91	52.88	47.02	46.44	53.44	50.64	47.82	44.86	48.02	17.93
H. S. GPA	2.76	3.01	2.49	2.64	2.72	2.74	2.64	2.69	2.52	2.76

Table 3

Comparison Between 1980 High School Seniors Who Applied to College and Seniors Who Did Not Apply to College

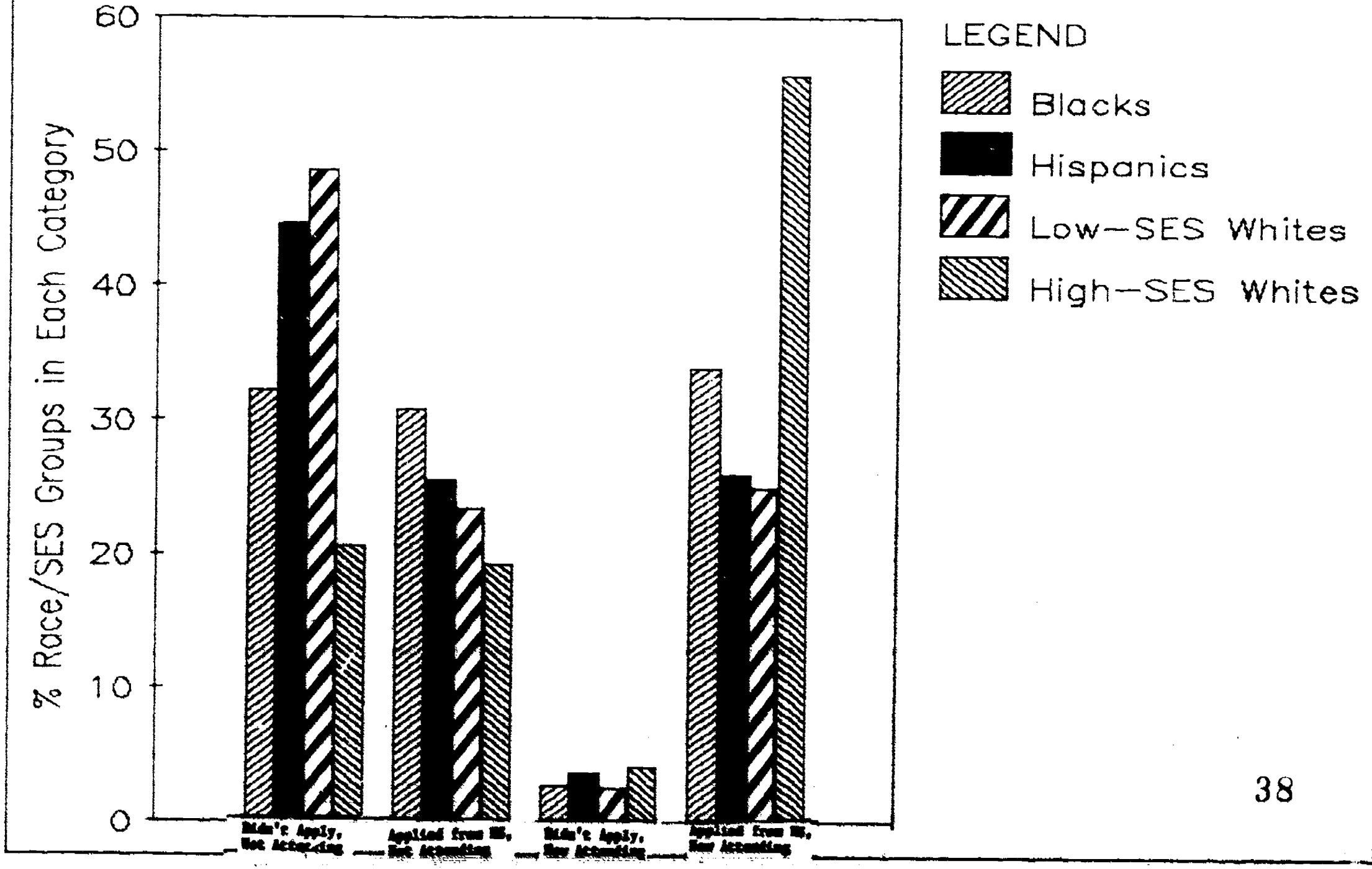
Variable	Did Not Apply, Not Attending	Applied, Not Attending	Did Not Apply, Now Attending	Applied, Attending
Percent of Total Sample	34.4%	22.7%	3.5%	39.4%
% in Lowest Quartile, SES	50.7	25.6	2.5	21.1
% in Highest Quartile, SES	13.0	17.3	5.1	64.7
% in Highest Quartile, Senior Year Achievement Test	9.6	17.1	3.0	44.1
Percent of Racial/Ethnic/SES Groups in Each Category				
Blacks	32.3%	30.9%	2.8%	34.0%
Hispanics	44.7	25.6	3.8	26.0
Low-SES Whites	48.9	23.5	2.6	25.1
High-SES Whites	20.1	19.3	4.2	55.8
Percent of Hispanic Subgroups in Each Category				
Mexicans	46.4%	26.0%	4.6%	23.0%
Cubans	26.4	17.6	3.4	52.5
Puerto Ricans	39.2	27.4	0.1	32.5
Other Latinos	39.8	26.2	2.9	31.1

Table 3A

Comparison of Students Who Applied to College From High School, Not in College Two Years Later With Other Groups on Selected Variables

Variable	Did Not Apply, Not Attending	Applied, Not Attending	Did Not Apply, Now Attending	Applied, Now Attending
Percent of Total Sample	34.4%	22.7%	3.5%	39.4%
Family Social Class	-.328	-.139	.158	.283
Senior Year Achievement Composite (X=50)	45.46	48.80	50.01	54.80
% In Lowest Quartile, SES	50.7%	25.6%	2.5%	21.1%
% In Highest Quartile, SES	13.0	17.3	5.1	64.7
% In Highest Quartile, Senior Year Achievement Test	9.6	17.1	3.0	44.1
Percent of Racial/Ethnic/SES Groups in Each Category				
Blacks	32.3%	30.9%	2.8%	34.0%
Hispanics	44.7	25.6	3.8	26.0
Low-SES Whites	48.7	23.5	2.6	25.1
High-SES Whites	20.7	19.3	4.2	55.8
Percent of Hispanic Sub-Groups in Each Categor				
Mexicans	46.4%	26.0%	4.6%	23.0%
Cubans	26.4	17.6	3.4	52.5
Puerto Ricans	39.2	27.4	0.1	32.5
Other Latins	39.8	26.2	2.9	31.1

Racial/Ethnic/SES Groups on Application to College From High School and Subsequent Attendance Patterns



Hispanic Subgroups on Application to College From High School and Subsequent Attendance Patterns

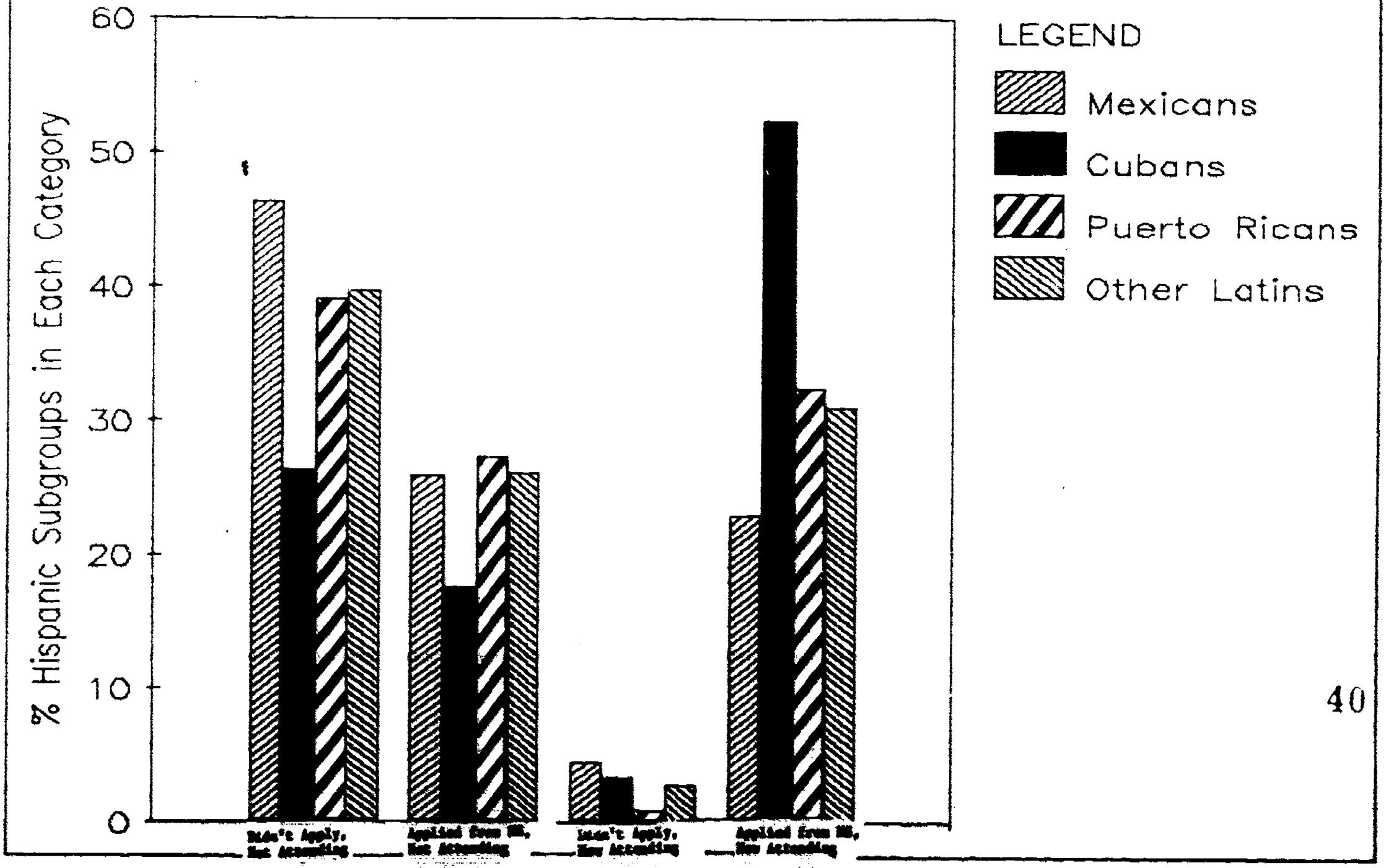


Table 4

Sex Differences Among Four Apply/Attend College Groups
By Race, Ethnicity, and SES

	Did not Apply Not Attending		Applied, Not Attending		Did not Apply Now Attending		Applied, Now Attending	
	M	F	M	F	M	F	M	F
Percent of Total Sample	36.8%	31.8%	20.6%	24.6%	3.7%	3.2%	38.9%	40.4%
Percent of Racial/Ethnic/SES Groups in Each Category								
Blacks	38.7%	27.0%	28.0%	33.2%	2.8%	2.8%	30.6%	36.9%
Hispanics	48.9	40.7	22.2	28.8	3.8	3.7	25.0	26.8
Low-SES Whites	52.1	46.1	20.3	26.0	2.6	2.6	24.9	25.3
High-SES Whites	23.6	17.6	18.8	19.7	4.7	3.7	52.9	59.0
Percent of Hispanic Sub-groups in Each Category								
Mexicans	48.1%	44.8%	23.4%	28.4%	4.7%	4.4%	23.4%	22.4%
Cubans	21.6	31.1	14.4	20.7	3.6	3.3	60.4	44.9
Puerto Ricans	51.9	31.5	13.1	35.9	0.2	1.5	34.8	31.1
Other Latins	45.0	35.1	24.5	27.7	2.5	3.3	28.0	34.0

Table 5

1980 Seniors Who Are Enrolled in College Two Years Later vs. Students Not in College

Variable	Not in College	In College
Entire Sub-sample	36.6%	63.4%
% Female	38.0	62.0
Percent of Racial/Ethnic/SES Groups in Each Category		
Blacks	47.6%	52.4%
Hispanics	49.7	50.3
Low SES-Whites	48.4	51.6
High SES-Whites	25.7	74.3
Proportion of Hispanic Sub-groups in Each Category		
Mexicans	53.1%	46.9%
Cubans	25.1	74.9
Puerto Ricans	45.7	54.3
Other Latins	45.7	54.3
% Highest Quartile SES	21.1	78.9
% Highest Quartile Senior Year Achievement	19.5	80.5

Technical Note: This sample contains only those students who indicated they had applied to college while in high school. This is 7,395 students, or 62.1% of the total sample.

Table 6A

1980 High School Seniors Enrolled in Two Year and Four Year Colleges: Selected Characteristics

Variables	Two-Year College	Four-Year College
% College Sample	43.7%	57.3%
Social Class ($\bar{X}$=0)	.022	.302
Senior-Year Achievement (X=50)	50.05	55.48
Self-Concept ($\bar{X}$=0)	.016	.079
Locus of Control ($\bar{X}$=0)	.086	.195
% Blacks	40.4%	59.6%
% Low-SES Whites	53.7	46.3
% High-SES Whites	35.5	64.5
% Hispanics	60.5	39.5
% Mexicans	64.5	35.5
% Cubans	55.5	44.5
% Puerto Ricans	47.5	52.5
% Other Latins	56.5	43.5
% Who Had Transferred Between HS Graduation and February 1982	43.5	56.5

Table 6B

High School Seniors Enrolled in Two-Year and Four-Year Colleges: Selected Financial and Course Enrollment Information

Financial Information Concerning Current School

	Two-Year College	Four-Year College
Total School Cost 1981-82	$1,772	$3,388
Tuition 1981-82	$1,335	$2,888
Amount of Loan (if any) 1/	$1,105	$1,224
Amount of Scholarship (if any) 1/	$ 675	$1,150
% Students Getting Loans 1/	13.8%	24.7%
% Students Getting Scholarships 1/	15.2	27.6

Course Enrollment Information

% Taken > 1 Year Math	14.9%	24.2%
% Taken > 1 Year English	20.4	29.1
% Taken > 1 Year Foreign Language	1.6	8.6
% Taken > 1 Year Social Studies History	17.2	33.2
% Taken > 1 Year Science	16.6	30.1

1/ For these measures, students are reporting on the school that was their first choice, and not necessarily the school in which they are presently enrolled. Unfortunately, this is the way HS&B presents financial aid information.

Table 6C

1980 High School Seniors Enrolled in Two-Year and Four-Year Colleges: Major Field and Educational Aspirations

Percent Majoring In Technical Field	Two-Year College	Four-Year College
Biology	2.0%	3.1%
Computer Science	5.6	5.4
Engineering	9.3	9.6
Mathematics	0.8	1.3
Physical Sciences	1.2	3.0
Total Percent in Technical Major Fields	18.9%	22.4%
% Students Who Had Completed 1 Year College by October 1981	50.3%	76.2%
Educational Aspirations		
% Planning At Least B.A.	46.5%	72.0%
% Planning At Least M.A.	15.8	36.6
% Planning Ph.D	5.3	13.4
% Considering They Have the Ability to Complete College	66.1	81.7

Table 6D

High School Seniors Enrolled in Two-Year and Four-Year Colleges: Occupational Plans by Race, Ethnicity, SES and Sex

Occupational Plans at Age 30 (White Collar Jobs Only)

Occupations	Two-Year College	Four-Year College
Manager	11.6%	12.7%
Technical	13.3	7.9
Teacher	4.4	7.8
Professional 1	28.1	37.0
Professional 2	8.1	17.5
Total Planning, White Collar Occupations	70.5	82.9

Proportion of Racial/Ethnic/SES Groups in Each Type of College

	Two-Year College		Four-Year College	
	Males	Females	Males	Females
Blacks	37.8%	47.3%	62.4%	57.7%
Hispanics	54.8	65.4	45.2	34.6
Low-SES Whites	53.6	53.7	46.5	46.3
High-SES Whites	35.4	35.6	64.6	64.4

Table 7

Percentage of College Entrants Who Transferred, by Selected Characteristics

Variable	Males	Females
% High Quartile, SES	21.3%	22.8%
% Low Quartile, SES	13.8	13.5
% High Quartile, Achievement	16.8	18.2
% Low Quartile, Achievement	17.8	13.1
% Blacks	19.0	16.5
% Low-SES Whites	15.6	15.0
% High-SES Whites	18.3	20.5
% Hispanics	18.1	14.8
% Mexicans	19.1	10.1
% Cubans	26.6	14.6
% Puerto Ricans	13.9	30.9
% Other Latins	15.2	16.4

Technical Note: All students in this analysis are those who indicated that they transferred from one institution to another during their first two years out of high school -- 17.8 percent of the sample.

Table 8

Characteristics of College Entrants Who Withdrew vs. Those Who Presisted

Variable	Have Not Withdrawn	Have Withdrawn
Social Class (X=0)	.071	.019
Self-Concept (X=0)	.148	.051
Locus of Control (X=0)	.184	.036
Senior-Year Achievement (X=50)	53.25	51.12

Satisfaction With Various Aspects of Last School In Which Student Was Enrolled (Coding: 1=highly dissatisfied, 2=moderately dissatisfied,...5=highly satisfied)

			Difference, Standard Deviation Units
Ability of Teachers	4.11	3.91	.21
Social Life	3.86	3.70	.15
Development of Work Skills	4.01	3.66	.37
Intellectual Growth	4.23	3.85	.44
Counseling, Job Placement	3.30	3.14	.15
Intellectual Life of School	3.75	3.49	.27
Course Curriculum	4.01	3.72	.29
Quality of Instruction	4.01	3.79	.23
Prestige of School	3.91	3.62	.28

Table 9A

Characteristics of College Entrants Who Withdrew, by Sex

Variable	Males	Females
% "Withdrawn"	53.3%	46.7%
% Low Quartile, SES	29.7	31.9
% High Quartile, SES	21.7	20.5
% Low Quartile, Achievement	32.5	34.0
% High Quartile, Achievement	19.7	19.5
% Blacks	31.2	29.1
% Low-SES Whites	23.8	32.3
% High-SES Whites	21.0	22.8
% Hispanics	30.5	30.8
% Mexicans	31.3	34.0
% Cubans	24.6	30.3
% Puerto Ricans	23.4	35.4
% Other Latins	32.6	26.4

Technical Note: All students in this analysis are those who indicated that they had withdrawn from some institution of higher education between high school graduation and two years out of high school -- 25.4 percent of the sample.

Table 9B

Characteristics of College Entrants Who Withdrew for Financial Reasons, by Sex

	Males	Females
% "Couldn't Afford	39.9%	60.1%
% Low Quartile, SES	44.6	35.7
% High Quartile, SES	20.8	17.6
% Low Quartile, Achievement	41.4	33.6
% High Quartile, Achievement	31.5	27.4
% Blacks	39.4	37.4
% Hispanics	36.6	30.6
% Low-SES Whites	36.3	32.3
% High-SES Whites	24.1	21.5

NOTE: Students who could not afford to continue were 32.3 percent of the withdrawn sample.

Table 10A

Percent Distribution of 1980 High School Seniors of High and Average Ability, by Race, Ethnicity and Socio-Economic Status

Variable	High Ability	Average Ability
Total Sample	30.7%	69.3%
% Female	48.6	54.3
% Low Quartile, SES	10.3	31.9
% High Quartile, SES	41.3	16.3
Race/Ethnicity/SES Categories:		
% Blacks	8.2%	90.8%
% Low-SES Whites	23.9	76.1
% High-SES Whites	46.4	53.6
% Hispanics	8.0	92.0
% Mexicans	7.3	92.7
% Cubans	16.9	83.1
% Puerto Ricans	10.6	89.4
% Other Latins	9.0	91.0

Technical Note: "High ability" students are those who scored at least .5 standard deviation units above the mean on high school achievement. (X=50, s.d. =10)

Table 108

Selected Behaviors of 1980 High School Seniors of High and Average Ability Two Years After High School Graduation

Behavior Two Years After High School Graduation	High Ability	Average Ability
% In College, February 1982	70.8%	31.3%
% Working For Pay, February 1982	74.5	25.5
% Applied to College From HS, Not Currently Attending	23.7	76.3
Carnegie College Categories:		
% Doctoral, Research University	66.3%	33.7%
% Comprehensive University	50.1	49.9
% Liberal Arts Colleges	58.2	41.8
% 2-Year Colleges	27.8	72.2
% Proprietary Schools	54.3	45.7

Technical Note: "High Ability" students are those who scored at least .5 standard deviation units above the mean on high school achievement (X=50, s.d.=10).

Table 10C

1980 High School Seniors of High and Average Ability: Educational Plans

Variable	High Ability	Average Ability
Probable Major Choice		
Biology	3.7%	1.4%
Computer Science	5.7	6.5
Engineering	15.4	6.2
Mathematics	1.6	0.7
Physical Sciences	3.8	1.0
Total Technical Majors	29.7%	15.8%
Educational Aspirations[1]		
% B.A. or Above	77.0%	35.6%
% M.A. or Above	34.7	11.5
% Ph.D or M.D.	13.2	3.1
% Believing They Definitely Have the Ability to Complete College	83.3	52.9%

[1]Thirty percent of the sample did not respond

Table 10D

1980 High School Seniors of High and Average Ability
by Race/Ethnicity/SES and High School Behaviors

High School Variables	High Ability		Average Ability	
% Group Taken 3 or More Yrs. Math	80.1%		27.4%	
% Group Taken 2 or More Yrs. Science	37.9		6.9	
% College Preparatory Track	81.3		37.5	
% General Track	11.1		34.8	
% Vocational Track	7.6		27.6	
Sex Differences	**M**	**F**	**M**	**F**
Total Sample	33.2%	28.4%	66.8%	71.6%
% Blacks	11.9	7.0	88.1	93.0
% Low-SES Whites	25.6	22.6	74.4	77.4
% High-SES Whites	48.1	44.6	51.9	55.4
% Hispanics	8.7	7.3	91.3	92.7
% Mexicans	8.6	6.1	91.4	93.9
% Cubans	20.6	13.1	79.4	86.9
% Puerto Ricans	18.9	8.3	81.1	93.7
% Other Latins	9.3	8.8	90.7	91.2

Table 11

Characteristics of Black 1980 High School Seniors, by Sex

Variable	Males	Females
% Total	45.6%	54.4%
In college, 2 yrs. from HS graduation	41.3	58.7
Working for pay, 1982	48.1	51.9
Transferred school, postsecondary	44.4	55.6
Withdrew from postsecondary school	42.4	57.6
"Couldn't Afford to Continue"	43.7	56.3
Applied to college from HS, currently not enrolled	41.2	58.8
% Low Quartile, SES	46.1	55.3
% High Quartile, SES	11.9	9.4
% Low Quartile, Achievement	54.5	57.6
% High Quartile, Achievement	9.5	5.6
Educational Aspirations[1/]		
B.A. or Above	49.4%	49.1%
M.A. or Above	17.7	20.8
Ph.D, M.D.	4.0	8.4
% Considering Themselves to Definitely Have the Ability to Complete College	29.1	33.0

Technical Note: Weighted sample size is 1,342, or 11.1 percent of the total sample. Before weighting, since minorities were heavily oversampled, blacks comprise 24.7 percent of the sample.

1/ Sixteen percent did not respond.

APPENDICES

APPENDIX A

Sample Sizes for Weighted vs. Unweighted File

Variable	Unweighted		Weighted	
Total N	10,815		11,995	
Blacks	2,676	(24.7%)	1,342	(11.1%)
Hispanics	2,721	(25.2%)	1,145	(9.5%)
Whites	5,418	(50.1%)	9,508	(79.3%)
Hispanic Subgroups				
Mexicans	1,373		490	
Cubans	243		51	
Puerto Ricans	211		80	
Other Latinos	493		332	
Base Year (1980) SES				
1st Quartile	3,940		2,924	
2nd Quartile	2,390		2,945	
3rd Quartile	2,168		2,926	
4th Quartile	1,988		2,898	
Base Year (1980) Achievement Battery				
1st Quartile	3,133		2,611	
2nd Quartile	2,216		2,650	
3rd Quartile	2,087		2,646	
4th Quartile	2,234		2,634	
Percent in College, February 1982	43.3%		42.8%	
High School Academic Track				
% in Vocational Program	20.6%		21.9%	
% in General Program	25.2		27.5	
% in College Prep. Program	53.0		50.6	
Percent of Students From Single-Parent Households	34.0%		24.0%	

Note on Sampling: The original (1980) High School and Beyond sample of 1015 schools was selected from a sampling frame defined as "the universe of high schools in the United States", which was obtained from a 1978 list of U.S. secondary schools supplied by the Curriculum Information Center. (HS&B Codebook for 1980, National Center for Education Statistics, p.8.) This Codebook does not indicate if any high schools were sampled from other than the continental United States. The census regions listed in Appendices B and C include all the sampled high schools, and so my best guess is that no non-continental high schools have been included. However, non-United States colleges in which the original sample students enrolled are included in this sample.

APPENDIX B

Characteristics of Students by Racial/Ethnic/SES Groups

Variable	Blacks	Hispanics	Low-SES Whites	High-SES Whites
Background				
Family Income	$16,374	$18,882	$16,566	$30,778
Social Class (X=0)	-.49	-.44	-.54	.58
Parental Education[a] (X=12.7 yrs)	12.4 yrs.	12.1 yrs.	11.4 yrs.	14.8 yrs.
% Single-Parent Families	53.0%	35.0%	29.0%	18.0%
High School (1980)				
Composite Achievement (X=50)	43.6	44.1	49.2	53.7
H. S. GPA	2.6	2.6	2.8	3.0
TV Watching (Hrs/day)	3.7	3.2	3.1	2.7
Paid Work (Hrs/week)	18.5	19.4	20.8	20.1
Homework (Hrs/week)	3.9	3.5	3.4	4.5
Math Courses (Yrs.)	1.7	1.6	1.8	2.9
Science Courses (Yrs.)	0.5	0.4	0.4	0.8
% in Vocational Track	24.5%	28.6%	28.6%	14.0%
% in General Track	23.8	34.1	35.0	20.8
% in College Prep. Track	51.7	37.3	36.3	65.3
% From Non-Public H.S.	4.0	8.0	7.0	15.0
% With College Expectations in Grade 8	49.0	41.0	34.0	63.0

APPENDIX B-1

Characteristics of 1980 High School Seniors by Race, Ethnicity, and Socio-economic Status

College or Other (1982)	Blacks	Hispanics	Low-SES Whites	High-SES Whites
% In College, Other Education	36.8%	29.5%	27.5%	59.9%
% Applied to College from High School	64.7	51.4	48.7	75.0
% Working for Pay 2/82	43.8	59.8	63.0	51.3
% Married, 2/82	7.0	16.0	18.0	7.0
Self-Concept (X=0)	.044	-.088	-.063	.067
Locus of Control (X=0)	-.258	-.205	-.047	.176

(a)Taken as the higher education level of the two parents, as described by the respondent.

APPENDIX B-2

Characteristics of 1980 High School Seniors Enrolled in College by Race/Ethnicity/SES

Variables	Blacks	Hispanics	Low-SES Whites	High-SES Whites
For Those in School, 2/82				
Doctoral, Research Univ.	13.6	14.2	12.4	25.8
Comprehensive Univ.	32.3	17.1	23.3	26.3
Liberal Arts College	6.7	2.9	4.4	7.8
Two-Year College	35.7	52.5	46.5	32.8
Trade, Proprietary School (b)	3.4	1.8	2.9	3.2
Unclassified School	8.6	11.5	10.5	4.3
Average Tuition, '80-81' (c)	$1605.00	$1276.00	$1494.00	$2203.00
Years of Coursework Since H. S.				
Mathematics	.90	.77	.62	.80
Science	.65	.60	.62	.78
Foreign Language	.24	.29	.13	.26
Social Science	.78	.73	.56	.93
College GPA	2.5	2.7	2.8	2.8
% In College by Census Region of High School Location				
New England	35%	29%	27%	63%
Mid-Atlantic	41	29	28	62
South Atlantic	33	26	26	63
East South Central	34	28	23	51
West South Central	33	27	22	58
East North Central	41	27	30	63
West North Central	33	20	28	64
Mountain	36	23	21	41
Pacific	52	45	33	57

(b) Institutions classified by the Carnegie Commission on Higher Education: A Classification of Institutions of Higher Education. Due to small numbers for some subgroups in the 18 Carnegie categories, these categories have been collapsed.

(c) Tuition and postsecondary course enrollment figures apply to all students who were in school (full-time or part-time) in either 1980-81, 1981-82, or both years, that is, figures apply to all students who supplied data on those variables.

APPENDIX C

Selected Characteristics of 1980 Hispanic High School Seniors by Nationality

Variable	Mexicans	Cubans	Puerto Ricans	Other Latins
Background (1980)				
Family Income	$18,036	$19,598	$14,285	$20,197
Social Class (X=0)	-.585	-.331	-.748	-.255
Parental Education[a] (X=12.7 yrs)	9.7 yrs.	12.8 yrs.	11.6 yrs.	12.6 yrs.
% Single-parent Families	30.0%	24.2%	46.3%	37.9%
High School (1980)				
Composite Achievement (X=50)	43.5	48.6	42.9	46.1
H.S. GPA	2.57	2.73	2.67	2.65
TV Watching (Hrs/day)	3.3	3.0	3.5	3.0
Paid Work (Hrs/week)	19.8	20.4	16.5	20.4
Homework (Hrs/week)	3.2	4.9	3.4	4.1
Math Courses (Yrs)	1.5	2.5	1.7	1.7
Sciences Courses (Yrs)	0.4	0.7	0.6	0.4
% in Vocational Track	30.7%	18.4%	28.6%	24.1%
% in General Track	35.0	19.4	25.9	33.5
% in College Prep. Track	34.3	62.3	45.6	42.4
% From Non-Public H.S.	8.0	23.0	8.0	11.0
% With College Expectations in Grade 8	40.0	66.0	49.0	41.0
College or Other (1982)				
% in College, Other Education	23.7%	55.8%	32.6%	33.9%
% Applied to College From High School	49.0	70.0	59.0	57.1
% Working for Pay, 2/82	64.1	53.0	57.5	56.5
% Married, 2/82	17.0	6.0	14.0	17.0
Self-Concept (X=0)	-.079	.139	-.439	-.031
Locus of Control (X=0)	-.287	.050	-.302	-.081

[a] Taken as the higher education level of the two parents, as described by the respondent.

APPENDIX C-1

1980 Hispanic High School Seniors Enrolled in College: Patterns of Enrollment

Variable	Mexicans	Cubans	Puerto Ricans	Other Latins
For Those in School, 2/82				
Doctoral, Research Univ.	12.3	26.4	2.9	18.3
Comprehensive Univ.	15.3	11.7	35.3	15.5
Liberal Arts College	3.5	2.9	2.9	2.8
Two-Year College	56.8	50.0	38.2	47.5
Trade, Proprietary School	0.8	.0	5.9	2.3
Unclassified School (b)	10.9	5.9	11.8	13.3
Average Tuition, '80-81' (c)	$902.00	$1975.00	$1768.00	$1613.00
Years of Coursework Since H. S.				
Mathematics	.84	.71	.82	.76
Science	.59	.76	.74	.63
Foreign Language	.30	.39	.45	.31
Social Science	.75	.97	.90	.69
College GPA	2.7	2.8	2.6	2.7
% In College by Census Region of High School Location				
New England	--%	7%	5%	5%
Mid-Atlantic	3	18	49	16
South Atlantic	2	59	17	21
East South Central	3	--	4	4
West South Central	31	2	1	8
East North Central	7	6	14	16
West North Central	3	2	4	6
Mountain	16	4	--	12
Pacific	29	3	4	12

(b) Institutions classified by the Carnegie Commission on Higher Education: A Classification of Institutions of Higher Education. Due to small numbers for some subgroups in the 18 Carnegie categories, these categories have been collapsed.

(c) Tuition and postsecondary course enrollment figures apply to all students who were in school (full-time or part-time) in either 1980-81, 1981-82, or both years, that is, figures apply to all students who supplied data on those variables.

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