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ABSTRACT A selected population of 2,430 white, native-born, college freshmen women (under 22 years old) who remained at one institution for four years were studied to determine the effects of institutional and other variables on their career aspirations. Variables selected included background, career plans and self-esteem (after one, four, and five years), and college characteristics (including aspects of prestige, size, public/private, sectarian/nonsectarian, coed/women's, percent of women enrolled, percent of women in faculty, percent of BA's awarded in student's area, career indecision among freshmen, academic competitiveness, and perceived concern of faculty for students). Among conclusions were that women who enter college with BA/MA plans and low achievement are most likely to raise their career plans if they attend highly selective women's colleges; women who enter college with high achievement and high self-esteem but BA/MA career plans are most likely to raise their career plans if they attend women's colleges, highly selective universities, and low selectivity nonsectarian coed colleges. Overall the effects on career plans and self-esteem are negative for large, public institutions with low selectivity, and positive for highly selective nonsectarian women's colleges. Tables with comparative statistics are appended. (Author/PER)

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Independent and Interaction Effects of Significant Institutional Variables on the Career Aspirations of College Women

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ABSTRACT

Data from the Cooperative Institutional Research Program at ACE/UCLA on a national sample of 2,430 women who first matriculated as college freshmen in 1966 were merged with followup data collected in 1967, 1970, and 1971. Analysis of Covariance and Regression Analysis are used to sort out the effects of college environment variables on women's career aspirations during the college years. Data are presented in the form of tables showing the probabilities of women raising their career aspirations or maintaining high career aspirations for each cell representing a significant main effect or higher order interaction effect.

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Independent and Interaction Effects of Significant Institutional
Variables on the Career Aspirations of College Women

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Theoretical Framework

Although there is a large body of literature on college students, only a small number of the reported studies have been based on longitudinal data collected before, during, and after the students are exposed to the college experience. In addition, few studies have been based on a national sample of college women; most studies have been limited to samples of men or samples of women on a single college campus. Recently, Alexander Astin completed a comprehensive study of college impact on students' personal, social, and vocational development (Astin, 1977). In particular, he described the effects of institutional characteristics on salaries and implementation of field and career choice for women entering college with specific career plans. My study uses the same data base as Astin's study, but looks specifically at career patterns over four time periods for women with six freshman profiles in twelve college environments.

In regression analyses on these data, I identified the college environment variables significantly associated with PhD/Prof career plans at college graduation when family background, individual attitudes and behaviors, and previous career plans are statistically controlled (Brown, 1978). PhD/Prof career plans is defined as degree plans of LLB or JD; PhD or EdD; MD, DDS, or DVM; or career plans of Minister-Priest, Lawyer, Researcher, College Teacher, or Doctor. Only a few college variables entered the regression equation although several others had significant partial correlations with the dependent variable when all background effects were controlled. For the total sample of women, women's colleges show a consistently significant positive effect, particularly for high achievement women in selective women's colleges. This variable is confounded, though, with the positive effects of percent of the faculty who are women and percent of students who are women. Women with PhD/Prof career plans at college entry are more likely to express PhD/Prof career plans five years later if they have high achievement and attend selective women's colleges. On the other hand,

women with initial aspirations for a BA or MA are likely to raise their aspirations to PhD/Prof career plans during college if they go to selective women's colleges. ~~Other college variables with significant partial correlations with PhD/Prof career plans for women are:~~ percent of students in the college uncertain about their career plans as freshmen; and average students' perceived concern of the faculty for the students.

Objectives of the Study

The results of regression analyses like these are difficult to interpret in terms of specific colleges. The analyses in this paper were suggested in a discussion of my study with Christopher Jencks last June. This study aims to sort out the regression effects and present them in simplified, yet meaningful, tables.

Data Source

In the fall of 1966, the American Council on Education, under the direction of Alexander Astin, surveyed 254,000 entering freshmen in 307 American colleges and universities. In the fall of 1967, 60,000 of these students in 246 "good data" institutions were followed up by mailed questionnaires; random selection was made in schools with entering classes greater than 300. These same 60,000 students were followed up again in the fall of 1970, four years after they matriculated, and in 1971, when most would have graduated and many would have been out of college for one year. For this study, I have merged data from all four points in time, as well as data on the institutions from NCES files. Merging the data reduced the file to about 12,000 cases. Further, I restricted the sample to traditional students--that is, students who were white, native-born, and less than 22 years old when they first matriculated as freshmen in 1966. I have also restricted the sample to students who did not transfer from one institution to another between 1966 and 1970. These restrictions reduce the final sample to 5,072 students in 149 institutions; 2,430 of these are women. This is a very restricted population; further research is needed on the populations of students which I have excluded.

The generalizability of this study is threatened by the confounding historical climate. These students were in college between 1966 and 1971 when they, and the rest of America, were confronted with the Viet Nam War and the Women's Movement; both of these events could moderate the effects of institutional climate on students' career plans. Generalizing from this study to college women today may be hazardous since overall career patterns of women have shifted in the last ten years.

Methodology and Variables

First, I extracted 40 personal and college variables significantly related to career choice in the previous regression analyses. The background variables include: Reared Catholic, Reared Jewish, Reared in South; No Religion in 1966, Liberal Politics in 1966; Achievement; Self-Esteem; and Career Plans in 1966. Outcomes include Career Plans and Self-Esteem at three points in time--1967 after one year, 1970 after four years, and 1971 after five years. College variables include Prestige (a combination of size and selectivity); Selectivity (High Selectivity is a combined SAT V+M equal 1100); Size (enrollment); Public/Private; Sectarian/Nonsectarian; Coed/Women's; Percent enrollment women; Percent faculty women; Percent of BA's awarded in student's area; and three college factors developed by Alexander Astin--Career indecision among freshmen; Academic competitiveness; Perceived concern of the faculty for students.¹

After studying the frequency distributions for the background variables, I decided to combine Career Plans, Achievement, and Self-Esteem into one discrete variable called Freshman Plans in 1966. Career Plans is coded PhD/Prof if degree plans are LLB or JD; PhD or EdD; MD, DDS, or DVM; or career plans are Minister-Priest; Lawyer; Researcher; College Teacher; or Doctor. Otherwise, Career Plans is coded BA/MA. Achievement is coded High if National Merit Scholarship Composite is greater than or equal to 120. Self-Esteem is coded High if the student indicated she was in the top 25

1. These factors are described in Astin, 1971.

percent on a composite of academic ability, mathematical ability, and intellectual self-esteem.²

The six background groups of Freshman Plans are:

- Group (1): BA/MA Career Plans, Low Achievement
- Group (2): BA/MA Career Plans, High Achievement, Low Self-Esteem
- Group (3): BA/MA Career Plans, High Achievement, High Self-Esteem
- Group (4): PhD/Prof Career Plans, Low Achievement
- Group (5): PhD/Prof Career Plans, High Achievement, Low Self-Esteem
- Group (6): PhD/Prof Career Plans, High Achievement, High Self-Esteem

I decided not to include marriage plans in the Freshman Plans variable since fewer than 20 percent of the freshman women planned not to marry, even among those with PhD/Prof career plans, and many of these women with PhD/Prof career plans were also Catholic women attending Catholic colleges. The interactions among the background variables are presented in Table I.

I also looked at the distributions for college characteristics. I decided to form a discrete variable called College Type based on four variables: Selectivity was coded High if the Average SAT V+M was greater than or equal to 1100; Public/Private; Coed/Women's; Sectarian/Nonsectarian. This variable also categorizes on Size, Percent of women faculty, and Percent of women students; Prestige and Academic competitiveness; and Perceived concern of the faculty for students. The interactions of these variables are presented in Table II.

The twelve categories of College Type are:

- (1) Low Selectivity, Public
- (2) Low Selectivity, Private Universities, Small--enrollment under 2000
- (3) Low Selectivity, Nonsectarian Coed, Small--enrollment under 5000
- (4) Low Selectivity, Sectarian Coed, Small--enrollment under 5000

2. See 1966 ACE Questionnaire in National Norms for 1966.

- (5) Low Selectivity, Nonsectarian Women's, Small--enrollment under 2000
- (6) Low Selectivity, Sectarian Women's, Small--enrollment under 2000
- (7) High Selectivity, Public, Large--enrollment over 5000
- (8) High Selectivity, Private Universities, Large--enrollment over 2000
- (9) High Selectivity, Nonsectarian Coed, Small--enrollment under 5000
- (10) High Selectivity, Sectarian Coed, Small--enrollment under 5000
- (11) High Selectivity, Nonsectarian Women's, Small--enrollment under 2000
- (12) High Selectivity, Sectarian Women's, Small--enrollment under 2000

Of course, categorizing the continuous variables results in loss of information, but the results are easier to interpret and may be more meaningful. I experimented with several factor scores among the college variables, but I found them equally difficult to interpret as the regression results. Therefore, I opted for simplicity.

Results

Table I shows the distributions of background characteristics for each of the Freshman Plans groups. Group (6): Freshmen women with PhD/Prof Career Plans and High Achievement and High Self-Esteem differs from the other groups. They are more likely to have been reared in the Catholic or Jewish religion, less likely to have been reared in the South; they are more likely to say as Freshmen that they have no religion and liberal politics; they are less likely to say there is a good chance they will marry within the next few years (although four and five years later, they are as likely to marry as other women with High Achievement).

Overall, 46 percent of the women were married by 1971, a little more than half the 81 percent who said in 1966 there was a good chance they would marry by one year after college. Previous results have shown a negative effect on women's career plans of planning to marry early (Bayer).

Career plans during and after college are highly related to freshman career plans and achievement. All of these women are college graduates; yet few of them express PhD/Prof career plans when they leave college.

Overall, the percent of women with PhD/Prof career plans rises slightly from 14 percent in 1966 to 18 percent in 1970, but by 1971, when most women had been out of college one year, and 42 percent were married, the percent with PhD/Prof career plans drops to 15 percent. And these changes were occurring during the same time period when the national percent of freshmen women planning PhD's or professional degrees rose from 9 percent in 1966 to 12.5 percent in 1971 (National Norms for Entering College Freshmen).

The patterns can be discussed for each group of women. When achievement is below average, very few women express PhD/Prof career plans at the end of college regardless of their earlier career plans. For Group (1): freshmen women with BA/MA career plans and low achievement, fewer than ten percent raise their career plans to the PhD/Prof level during college. Conversely, for Group (4): freshmen women with PhD/Prof career plans and relatively low achievement, 80 percent lower their career plans to the BA/MA level by the time they graduate from college.

Among the women who start college with high achievement, the results are only slightly better. For Groups (2) and (3): freshmen women with BA/MA career plans and high achievement, only 14 percent of those with low self-esteem and 21 percent of those with high self-esteem raise their career aspirations during college to the PhD/Prof level.

Finally, attrition is high among the small number of women in Groups (5) and (6) who start college with both high achievement and PhD/Prof plans: fewer than 50 percent of these women maintain their PhD/Prof career plans throughout college.

Table II shows the distribution of college characteristics for each college type. This table shows that the college variables are confounded; they cannot be separated into unique effects. Public institutions and private universities are large, with few women faculty, and with low perceived faculty concern for students. Large universities are perceived as academically competitive. Coed colleges and women's colleges are small and faculty concern for students is perceived as high. Highly selective large institutions and coed colleges are considered prestigious; small

selective sectarian and women's colleges are not considered prestigious. Selective institutions are perceived as academically competitive; small private colleges with low selectivity, with the exception of coed sectarian colleges, are perceived as not academically competitive. Women faculty are concentrated in the women's colleges, with moderate numbers in the small coed, low selectivity institutions; there are few women faculty in the prestigious institutions.

Table III summarizes the percent distribution across college type for each of the freshman plans groups. Women with low achievement concentrate in the large, relatively unselective, institutions, especially the public ones, and in the low selectivity, sectarian colleges.

Table IV shows the results of a two-way Analysis of Covariance. The two main variables are Freshman Plans in 1966 and College Type. The covariates are Reared Catholic, Reared Jewish, Reared in the South, No Religion in 1966 and Liberal Politics in 1966. The table shows the effects for each college type when no adjustment is made for the covariates or freshman plans and when adjustment is made for both the covariates and freshman plans. Effects are measured as deviations from the grand mean for each outcome. These can be interpreted as the net difference between the particular college type and the total sample in the percent of women with PhD/Prof plans or high self-esteem.

Women are most likely to have PhD/Prof career plans in 1967 relative to what would be expected from their freshman plans and their backgrounds if they go to large, low selectivity private universities or highly selective nonsectarian coed colleges. In 1970 and 1971, women are most likely to express PhD/Prof career plans relative to their freshman plans and backgrounds if they attend highly selective nonsectarian women's colleges.

The college types with consistently positive effects on women's self-esteem in 1967 and 1970 are the same college types as those with positive effects on women's early career plans in 1967--large private

universities with low selectivity and highly selective nonsectarian coed colleges.

Table V shows the effects of each college type on women's career plans and self-esteem during the college years. Each column presents the results of a one-way Analysis of Variance among college types for a particular outcome. A separate table is presented for each of the six freshman plans groups.

Table V.1 compares the effects of college types on outcomes for Group (1): women with BA/MA freshman plans and low achievement. The only significant college effects are for career plans in 1967, not for 1971 after the women are out of college. These women are more likely to raise their career plans in high selectivity women's colleges (16 to 38 percent) and in other highly selective institutions. They are less likely to raise their aspirations in small low selectivity private colleges (less than 10 percent). Overall, 9 percent of these women raise their career aspirations to PhD/Prof and 15 percent have high self-esteem five years later.

Table V.2 shows the results of college type on outcomes for Group (2): women who start college with BA/MA career plans and high achievement and relatively low self-esteem. The effects of college type are significant for career plans in 1970 and 1971. These women are most likely to raise their career plans if they attend highly selective nonsectarian women's colleges (over 35 percent). Overall, of these high achievement women, only 14 percent raise their career plans to the PhD/Prof level and 28 percent raise their self-esteem.

Table V.3 shows the results for Group (3): women who start college with BA/MA career plans, high achievement and high self-esteem. The effects of college type are significant only for career plans in 1970. These women are least likely to raise their career plans in large, low selectivity institutions (less than 10 percent) and in highly selective, coed colleges. Overall, of these high achievement, high self-esteem women, only 21 percent raise their career plans to the PhD/Prof level.

Table V.4 shows the results for Group (4): women with PhD/Prof career plans at college entry but low achievement. The only significant college effects are for self-esteem in 1970. These women are least likely (less than 10 percent) to raise their self-esteem in low selectivity coed nonsectarian colleges and high selectivity coed colleges. They are most likely (44 percent) to raise their self-esteem in low selectivity, large universities and high selectivity women's colleges (50 percent).

Table V.5 shows the results for the small number of women in Group (5) with PhD/Prof career plans and high achievement but low self-esteem. There are no significant college effects on career plans for these women. Overall, 40 percent of them maintain their PhD/Prof career plans, and one-third of them raise their self-esteem.

Table V.6 provides the results for Group (6): women who enter college with PhD/Prof career plans, high achievement, and high self-esteem. By the end of five years, fewer than 50 percent of these women still plan a PhD/Prof career, but three-fourths of them still consider themselves in the top 25 percent intellectually. Seventy-three percent of those in highly selective women's colleges and 59 percent in the high selectivity, large, public and private universities still have high career plans five years later. The only significant effects of college type are for self-esteem in 1967.

Conclusions

- Women who enter college with BA/MA plans and low achievement are most likely to raise their career plans if they attend highly selective women's colleges.
- Women who enter college with high achievement but BA/MA plans and low self-esteem are most likely to raise their career plans if they attend highly selective nonsectarian women's colleges, and least likely to raise their career plans if they attend unselective, public institutions and highly selective sectarian coed colleges.
- Women who enter college with high achievement and high self-esteem but

BA/MA career plans are most likely to raise their career plans if they attend women's colleges, highly selective universities, and low selectivity, nonsectarian coed colleges.

--Women who enter college with PhD/Prof plans but low achievement are most likely to raise their self-esteem in large, less selective universities, and in highly selective women's colleges.

--Women who enter college with high achievement, high self-esteem and PhD/Prof career plans are least likely to maintain their high self-esteem during the first year of college if they attend relatively unselective large, public institutions.

Overall, the effects on career plans and self-esteem are negative for large, public institutions with low selectivity. Overall, the effects are positive for highly selective nonsectarian women's colleges. Highly selective universities, and relatively unselective nonsectarian coed colleges also have positive effects on women's career plans.

What are the characteristics of these colleges that affect women's career plans, and can these be replicated in other college environments? Small colleges or programs such as Honors colleges and Women's colleges and special interest colleges within larger universities may prove effective. Faculty-student contact, especially between women faculty and women students, and flexibility in choosing a career may also be beneficial to women's career development.

These results show the overall effects of twelve existing college types on women's career patterns and self-esteem in the late 1960's. Are the effects of college types on women's career plans and self-esteem the same today as they were ten years ago? We don't know. Women's career patterns have changed in the last ten years. Twenty-two percent of freshmen women entering four-year colleges and universities in 1976 planned to get PhD's or professional degrees compared to 9 percent in 1966. Fifty-six percent of those women in 1976 had high intellectual self-esteem, compared to 44 percent in 1966.

References

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4. Bayer, Alan E. "Life Plans and Marriage Age: An Application of Path Analysis," Journal of Marriage and the Family, August, 1969.
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Table I

Interactions Between Characteristics Related to Changes in Career Plans
and Freshman Plans in 1966 (Column Percentages)

| | Freshman Plans in 1966 | | | | | | Total N = 2430 |
|--|-------------------------------------|--|---|--|---|---|-------------------|
| | (1) BA/MA Low Ach N = 1281 | (2) BA/MA Hi Ach Low S-E N = 488 | (3) BA/MA Hi Ach Hi S-E N = 324 | (4) PhD/Prof. Low Ach N = 119 | (5) PhD/Prof. Hi Ach Low S-E N = 72 | (6) PhD/Prof. Hi Ach Hi S-E N = 146 | |
| <u>Background Characteristics</u> | | | | | | | |
| Reared Catholic | 36.5 | 36.3 | 35.8 | 35.3 | 38.9 | 43.8 | 36.8 |
| Reared Jewish | 4.2 | 10.7 | 5.6 | 6.7 | 6.9 | 9.6 | 6.2 |
| Reared in South | 18.7 | 16.0 | 16.4 | 16.0 | 16.7 | 10.3 | 17.1 |
| <u>Freshman Characteristics</u> | | | | | | | |
| Religion--None | 2.0 | 5.1 | 4.0 | 0.8 | 6.9 | 11.0 | 3.5 |
| Politics--Liberal | 26.5 | 33.2 | 33.3 | 31.9 | 40.3 | 42.5 | 30.4 |
| Chances marry in college-- Good or very good | 45.4 | 35.9 | 33.0 | 32.8 | 30.6 | 27.4 | 39.7 |
| Chances marry 1 year after college--Good or very good | 84.9 | 81.6 | 83.0 | 65.5 | 70.8 | 60.3 | 81.2 |
| <u>Outcomes in 1967</u> | | | | | | | |
| GPA--3.0 or higher | 49.6 | 68.9 | 83.0 | 49.6 | 62.5 | 84.9 | 60.5 |
| Career Plans--PhD/Prof | 3.9 | 8.8 | 9.9 | 46.2 | 47.2 | 74.7 | 13.3 |
| Self-Esteem--High | 11.0 | 22.8 | 70.4 | 21.9 | 43.1 | 74.7 | 26.6 |
| <u>Outcomes in 1970</u> | | | | | | | |
| Career Plans--PhD/Prof | 8.4 | 17.0 | 21.9 | 38.7 | 56.9 | 60.3 | 17.9 |
| Self-Esteem--High | 14.8 | 27.5 | 67.6 | 20.2 | 33.3 | 77.4 | 28.9 |
| Married | 29.7 | 24.2 | 29.9 | 27.7 | 29.2 | 26.7 | 28.3 |
| <u>Outcomes in 1971</u> | | | | | | | |
| Career Plans--PhD/Prof | 8.7 | 13.7 | 21.0 | 18.5 | 40.3 | 45.9 | 15.0 |
| Married | 49.0 | 41.2 | 44.8 | 38.7 | 41.7 | 41.8 | 45.7 |

Table II

Interactions Between College Characteristics Related to
Changes in Career Plans and College Type

College Characteristics

| College Type | Prestigious | Perceived Academically Competitive | Women Students Greater than 55 Percent | Women Faculty Greater than 25 Percent | BA's Awarded in Same Field Greater than 25 Percent | Perceived Faculty Concern For Students | Freshmen Uncertain of Career Plans |
|--|-------------|--|--|---|---|--|--|
| Lo Selectivity Large Public | | | | | | | |
| Lo Selectivity Large Private University | | High | | | | | |
| Lo Selectivity Small Coed College Nonsectarian | | | | Moderate | Moderate | High | |
| Lo Selectivity Small Coed College Sectarian | | High | | Moderate | Moderate | High | |
| Lo Selectivity Women's College Nonsectarian | | | High | High | High | High | |
| Lo Selectivity Women's College Sectarian | | Moderate | High | High | High | High | Moderate |
| Hi Selectivity Large Public | High | High | | | | | |
| Hi Selectivity Large Private University | High | High | Moderate | | | | |
| Hi Selectivity Small Coed College Nonsectarian | High | High | | | High | High | |
| Hi Selectivity Small Coed College Sectarian | | High | | | | High | |
| Hi Selectivity Women's College Nonsectarian | | Moderate | High | High | High | High | |
| Hi Selectivity Women's College Sectarian | | High | High | High | Moderate | High | |

Table III

Interactions Between College Type and
Freshman Plans in 1966 (Column Percentages and N's)

| College Type | Freshman Plans in 1966 | | | | | | Total N = 2430 |
|--|-------------------------------------|--|---|---------------------------------------|--|--|-------------------|
| | (1) BA/MA Low Ach N = 1281 | (2) BA/MA Hi Ach Low S-E N = 488 | (3) BA/MA Hi Ach Hi S-E N = 224 | (4) PhD/Prof Low Ach N = 119 | (5) PhD/Prof Hi Ach Low S-E N = 72 | (6) PhD/Prof Hi Ach Hi S-E N = 146 | |
| Lo Selectivity Large Public | 30.5 (391) | 17.0 (83) | 18.2 (59) | 27.7 (33) | 11.1 (8) | 9.6 (14) | 24.2 (588) |
| Lo Selectivity Large University | 5.5 (70) | 3.7 (18) | 3.7 (12) | 7.6 (9) | 1.4 (1) | 5.5 (8) | 4.9 (118) |
| Lo Selectivity Coed Nonsectarian | 11.4 (146) | 5.7 (28) | 5.2 (17) | 10.1 (12) | 2.8 (2) | 4.1 (6) | 8.7 (211) |
| Lo Selectivity Coed Sectarian | 19.0 (243) | 12.1 (59) | 17.9 (58) | 17.6 (21) | 6.9 (5) | 11.6 (17) | 16.6 (403) |
| Lo Selectivity Women's Nonsectarian | 3.3 (42) | 5.7 (28) | 1.5 (5) | 0.8 (1) | 1.4 (1) | 2.7 (4) | 3.3 (81) |
| Lo Selectivity Women's Sectarian | 18.6 (238) | 21.5 (105) | 16.4 (53) | 16.0 (19) | 19.4 (14) | 20.5 (30) | 18.9 (459) |
| Hi Selectivity Large Public | 4.5 (58) | 5.9 (29) | 4.3 (14) | 7.6 (9) | 6.9 (5) | 4.8 (7) | 5.0 (122) |
| Hi Selectivity Large University | 1.3 (17) | 8.4 (41) | 13.6 (44) | 2.5 (3) | 20.8 (15) | 15.1 (22) | 5.8 (142) |
| Hi Selectivity Coed Nonsectarian | 0.3 (4) | 4.5 (22) | 5.9 (19) | 0.0 (0) | 9.7 (7) | 13.0 (19) | 2.9 (71) |
| Hi Selectivity Coed Sectarian | 2.6 (33) | 2.3 (11) | 3.7 (12) | 1.7 (2) | 2.8 (2) | 5.5 (8) | 2.8 (68) |
| Hi Selectivity Women's Nonsectarian | 2.4 (31) | 9.2 (45) | 6.8 (22) | 5.9 (7) | 15.3 (11) | 5.5 (8) | 5.1 (124) |
| Hi Selectivity Women's Sectarian | 0.6 (8) | 3.9 (19) | 2.8 (9) | 2.5 (3) | 1.4 (1) | 2.1 (3) | 1.8 (43) |

Table IV

Effects of College Type on Outcomes--Unadjusted and Adjusted for Freshmen Plans in 1966
and Covariates: Reared Catholic, Reared Jewish, Reared in South, No Religion in 1966, Liberal Politics in 1966
Two-Way Analysis of Covariance

| College Type | Outcomes | | | | | | | | | | |
|--|-------------------------------------|-------|-------------------------------------|-------|-------------------------------------|-------|--------------------------------|-------|--------------------------------|-------|-------|
| | Career Plans in 1967 PhD/Prof | | Career Plans in 1970 PhD/Prof | | Career Plans in 1971 PhD/Prof | | Self-Esteem in 1967 High | | Self-Esteem in 1970 High | | |
| | Effects Adjusted | | Effects Adjusted | | Effects Adjusted | | Effects Adjusted | | Effects Adjusted | | |
| | N | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes |
| Lo Selectivity Large Public | 549 | -0.06 | -0.02 | -0.07 | -0.03 | -0.04 | -0.01 | -0.07 | -0.01 | -0.04 | 0.01 |
| Lo Selectivity Large University | 118 | 0.05 | 0.05 | 0.02 | 0.03 | -0.01 | -0.00 | 0.05 | 0.07 | 0.02 | 0.05 |
| Lo Selectivity Coed Nonsectarian | 195 | -0.04 | -0.00 | -0.06 | -0.03 | -0.05 | -0.03 | -0.07 | -0.00 | -0.11 | -0.06 |
| Lo Selectivity Coed Sectarian | 326 | -0.04 | -0.01 | -0.03 | 0.02 | -0.04 | -0.01 | -0.05 | -0.01 | -0.05 | -0.02 |
| Lo Selectivity Women's Nonsectarian | 81 | -0.05 | -0.02 | -0.09 | -0.07 | -0.04 | -0.03 | -0.12 | -0.07 | 0.01 | 0.02 |
| Lo Selectivity Women's Sectarian | 339 | -0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -0.00 | 0.02 | 0.02 | -0.02 | -0.03 |
| Hi Selectivity Large Public | 161 | 0.02 | 0.01 | 0.01 | -0.01 | 0.02 | 0.01 | -0.03 | -0.03 | -0.00 | 0.00 |
| Hi Selectivity Large University | 142 | 0.10 | -0.01 | 0.12 | -0.01 | 0.12 | 0.02 | 0.22 | 0.03 | 0.20 | 0.02 |
| Hi Selectivity Coed Nonsectarian | 87 | 0.20 | 0.06 | 0.12 | -0.00 | 0.08 | -0.00 | 0.25 | 0.07 | 0.25 | 0.09 |
| Hi Selectivity Coed Sectarian | 145 | 0.03 | 0.00 | -0.02 | -0.03 | -0.07 | -0.07 | 0.06 | 0.01 | 0.06 | 0.02 |
| Hi Selectivity Women's Nonsectarian | 124 | 0.06 | 0.02 | 0.18 | 0.12 | 0.20 | 0.16 | 0.11 | 0.05 | 0.10 | 0.05 |
| Hi Selectivity Women's Sectarian | 163 | 0.03 | 0.01 | 0.10 | 0.07 | 0.05 | 0.03 | -0.03 | -0.06 | -0.03 | -0.06 |
| Grand Mean | 1281 | 0.13 | 0.13 | 0.18 | 0.18 | 0.15 | 0.15 | 0.27 | 0.27 | 0.29 | 0.29 |
| Eta | | 0.18 | 0.06 | 0.19 | 0.11 | 0.19 | 0.12 | 0.21 | 0.08 | 0.19 | 0.08 |
| F Significance* | | 0.249 | 0.001 | 0.001 | 0.001 | 0.001 | 0.005 | 0.068 | 0.027 | 0.092 | 0.130 |

19 *For main effect of College Type; interaction between College Type and Freshman Plans in 1966.

Table V.1

Percent with Outcomes--PhD/Prof Career Plans and High Self-Esteem by College Type
 For Group (1): Freshman Plans in 1966--BA/MA and Low Achievement

| College Type | Outcomes | | | | | | |
|---|-------------------------------------|---------|-------------------------------------|---------|-------------------------------------|--------------------------------|--------------------------------|
| | Career Plans in 1967 PhD/Prof | | Career Plans in 1970 PhD/Prof | | Career Plans in 1971 PhD/Prof | Self-Esteem in 1967 High | Self-Esteem in 1970 High |
| | N | Percent | Percent | Percent | Percent | Percent | |
| (1) Lo Selectivity Large Public | 391 | 1.8 | 8.2 | 10.2 | 10.0 | 15.4 | |
| (2) Lo Selectivity Large University | 70 | 8.6 | 8.6 | 8.6 | 12.9 | 18.6 | |
| (3) Lo Selectivity Coed Nonsectarian | 146 | 2.7 | 5.5 | 8.2 | 11.0 | 13.7 | |
| (4) Lo Selectivity Coed Sectarian | 243 | 3.7 | 6.2 | 6.6 | 10.7 | 11.9 | |
| (5) Lo Selectivity Women's Nonsectarian | 42 | 4.8 | 4.8 | 2.4 | 9.5 | 14.3 | |
| (6) Lo Selectivity Women's Sectarian | 238 | 4.2 | 9.7 | 9.2 | 11.8 | 14.3 | |
| (7) Hi Selectivity Large Public | 58 | 8.6 | 10.3 | 12.1 | 10.3 | 15.5 | |
| (8) Hi Selectivity Large University | 17 | 5.9 | 17.7 | 5.9 | 23.5 | 29.4 | |
| (9,10) Hi Selectivity Coed Nonsectarian | 37 | 0.0 | 10.8 | 0.0 | 13.5 | 13.5 | |
| (11) Hi Selectivity Women's Nonsectarian | 31 | 16.1 | 16.1 | 16.1 | 12.9 | 22.6 | |
| (12) Hi Selectivity Women's Sectarian | 8 | 12.5 | 37.5 | 25.0 | 0.0 | 12.5 | |
| Total | 1281 | 3.9 | 8.4 | 8.7 | 11.0 | 14.8 | |
| F Ratio | | 2.89 | 1.83 | 1.41 | 0.50 | 0.71 | |
| F Probability | | 0.0015 | 0.0518 | 0.1709 | 0.8912 | 0.7127 | |

Table V.2

Percent With Outcomes--PhD/Prof Career Plans and High Self-Esteem by College Type
For Group (2): Freshman Plans in 1966--BA/MA, High Achievement and Low Self-Esteem

| College Type | Outcomes | | | | | |
|---|----------|-------------------------|-------------------------|-------------------------|------------------------|------------------------|
| | | Career Plans in 1967 | Career Plans in 1970 | Career Plans in 1971 | Self-Esteem in 1967 | Self-Esteem in 1970 |
| | N | PhD/Prof Percent | PhD/Prof Percent | PhD/Prof Percent | High Percent | High Percent |
| (1) Lo Selectivity Large Public | 83 | 7.2 | 4.8 | 8.4 | 26.5 | 37.4 |
| (2) Lo Selectivity Large University | 18 | 22.2 | 22.2 | 11.1 | 44.4 | 38.9 |
| (3) Lo Selectivity Coed Nonsectarian | 28 | 10.7 | 7.1 | 14.3 | 10.7 | 10.7 |
| (4) Lo Selectivity Coed Sectarian | 59 | 8.5 | 17.0 | 5.1 | 23.7 | 25.4 |
| (5) Lo Selectivity Women's Nonsectarian | 28 | 0.0 | 10.7 | 14.3 | 10.7 | 39.3 |
| (6) Lo Selectivity Women's Sectarian | 105 | 8.6 | 20.0 | 15.2 | 21.0 | 20.0 |
| (7) Hi Selectivity Large Public | 29 | 6.9 | 17.2 | 13.8 | 20.7 | 24.1 |
| (8) Hi Selectivity Large University | 41 | 4.9 | 19.5 | 14.6 | 29.3 | 36.6 |
| (9) Hi Selectivity Coed Nonsectarian | 22 | 22.7 | 22.7 | 0.0 | 22.7 | 36.4 |
| (10) Hi Selectivity Coed Sectarian | 11 | 9.1 | 9.1 | 9.1 | 0.0 | 27.3 |
| (11) Hi Selectivity Women's Nonsectarian | 45 | 6.7 | 35.6 | 37.8 | 26.7 | 22.2 |
| (12) Hi Selectivity Women's Sectarian | 19 | 15.8 | 21.1 | 15.8 | 21.1 | 15.8 |
| Total | 488 | 8.8 | 17.0 | 13.7 | 22.8 | 27.5 |
| F Ratio | | 1.35 | 2.32 | 3.01 | 1.38 | 1.74 |
| F Probability | | 0.1934 | 0.0088 | 0.0007 | 0.1800 | 0.0617 |

Table V.3

Percent with Outcomes--PhD/Prof Career Plans and High Self-Esteem by College Type
For Group (3): Freshman Plans in 1966--BA/MA; High Achievement and High Self-Esteem

| College Type | Outcomes | | | | | | |
|---|-------------------------------------|---------|-------------------------------------|---------|-------------------------------------|--------------------------------|--------------------------------|
| | Career Plans in 1967 PhD/Prof | | Career Plans in 1970 PhD/Prof | | Career Plans in 1971 PhD/Prof | Self-Esteem in 1967 High | Self-Esteem in 1970 High |
| | N | Percent | Percent | Percent | Percent | Percent | |
| (1) Lo Selectivity Large Public | 59 | 5.1 | 8.5 | 10.2 | 66.1 | 69.5 | |
| (2) Lo Selectivity Large University | 12 | 0.0 | 8.3 | 16.7 | 83.3 | 58.3 | |
| (3) Lo Selectivity Coed Nonsectarian | 17 | 11.8 | 35.3 | 29.4 | 76.5 | 64.7 | |
| (4) Lo Selectivity Coed Sectarian | 58 | 10.3 | 19.0 | 19.0 | 70.7 | 65.5 | |
| (5, 6) Lo Selectivity Women's | 58 | 10.3 | 31.0 | 25.9 | 72.4 | 60.3 | |
| (7) Hi Selectivity Large Public | 14 | 21.4 | 50.0 | 35.7 | 35.7 | 57.1 | |
| (8) Hi Selectivity Large University | 44 | 13.6 | 22.7 | 25.0 | 61.4 | 63.6 | |
| (9) Hi Selectivity Coed Nonsectarian | 19 | 21.1 | 10.5 | 21.1 | 84.2 | 79.0 | |
| (10) Hi Selectivity Coed Sectarian | 12 | 8.3 | 8.3 | 0.0 | 91.7 | 91.7 | |
| (11) Hi Selectivity Women's Nonsectarian | 22 | 4.6 | 27.3 | 27.3 | 72.7 | 77.3 | |
| (12) Hi Selectivity Women's Sectarian | 9 | 0.0 | 44.4 | 33.3 | 88.9 | 88.9 | |
| Total | 324 | 9.9 | 21.9 | 21.0 | 70.4 | 67.6 | |
| F Ratio | | 1.01 | 2.58 | 1.29 | 1.80 | 1.02 | |
| F Probability | | 0.4355 | 0.0052 | 0.2366 | 0.0606 | 0.4243 | |

Table V.4

Percent with Outcomes--PhD/Prof Career Plans and High Self-Esteem by College Type
For Group (4): Freshman Plans in 1966--PhD/Prof and Low Achievement

| College Type | Outcomes | | | | | |
|---|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------------|--------------------------------|--------|
| | Career Plans in 1967 PhD/Prof | Career Plans in 1970 PhD/Prof | Career Plans in 1971 PhD/Prof | Self-Esteem in 1967 High | Self-Esteem in 1970 High | |
| | N | Percent | Percent | Percent | Percent | |
| (1) Lo Selectivity Large Public | 33 | 42.4 | 21.2 | 24.2 | 21.2 | 18.2 |
| (2) Lo Selectivity Large University | 9 | 55.6 | 66.7 | 22.2 | 44.4 | 44.4 |
| (3) Lo Selectivity Coed Nonsectarian | 12 | 58.3 | 33.3 | 8.3 | 16.7 | 0.0 |
| (4) Lo Selectivity Coed Sectarian | 21 | 42.9 | 47.6 | 4.8 | 14.3 | 19.1 |
| (5, 6) Lo Selectivity Women's | 20 | 40.0 | 35.0 | 15.0 | 30.0 | 20.0 |
| (7, 8) Hi Selectivity (9,10) Coed | 14 | 42.9 | 50.0 | 21.4 | 14.3 | 7.1 |
| (11,12) Hi Selectivity Women's | 10 | 60.0 | 50.0 | 40.0 | 20.0 | 50.0 |
| Total | 119 | 46.2 | 38.7 | 18.5 | 21.9 | 20.2 |
| F Ratio | | 0.39 | 1.62 | 1.27 | 0.79 | 2.37 |
| F Probability | | 0.8826 | 0.1491 | 0.2780 | 0.5761 | 0.0339 |

Table V.5

Percent with Outcomes--PhD/Prof Career Plans and High Self-Esteem by College Type
For Group (5): Freshman Plans in 1966--PhD/Prof, High Achievement and Low Self-Esteem

| College Type | Outcomes | | | | | |
|---|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------------|--------------------------------|--------|
| | Career Plans in 1967 PhD/Prof | Career Plans in 1970 PhD/Prof | Career Plans in 1971 PhD/Prof | Self-Esteem in 1967 High | Self-Esteem in 1970 High | |
| | N* | Percent | Percent | Percent | Percent | |
| (1) Lo Selectivity Large Public | 8 | 37.5 | 75.0 | 37.5 | 62.5 | 37.5 |
| (2,3,4) Lo Selectivity Coed Private | 8 | 50.0 | 87.5 | 50.0 | 50.0 | 50.0 |
| (5, 6) Lo Selectivity Women's | 15 | 46.7 | 53.3 | 40.0 | 20.0 | 26.7 |
| (7, 8) Hi Selectivity Public, University | 20 | 40.0 | 40.0 | 30.0 | 35.0 | 35.0 |
| (9,10) Hi Selectivity Small Coed Private | 9 | 66.7 | 55.6 | 44.4 | 55.6 | 22.2 |
| (11,12) Hi Selectivity Women's | 12 | 50.0 | 58.3 | 50.0 | 58.3 | 33.3 |
| Total | 72 | 47.2 | 56.9 | 40.3 | 43.1 | 33.3 |
| F Ratio | | 0.41 | 1.32 | 0.33 | 1.40 | 0.36 |
| F Probability | | 0.8426 | 0.2662 | 0.8932 | 0.2371 | 0.8770 |

Table V.6

Percent with Outcomes--PhD/Prof Career Plans and High Self-Esteem by College Type
 For Group (6): Freshman Plans in 1966--PhD/Prof, High Achievement and High Self-Esteem

| College Type | Outcomes | | | | | | | |
|---|-------------------------------------|---------|-------------------------------------|---------|-------------------------------------|---------|--------------------------------|--------------------------------|
| | Career Plans in 1967 PhD/Prof | | Career Plans in 1970 PhD/Prof | | Career Plans in 1971 PhD/Prof | | Self-Esteem in 1967 High | Self-Esteem in 1970 High |
| | N | Percent | Percent | Percent | Percent | Percent | Percent | |
| (1) Lo Selectivity Large Public | 14 | 85.7 | 64.3 | 28.6 | 50.0 | 64.3 | | |
| (2, 3) Lo Selectivity Coed Nonsectarian | 14 | 78.6 | 57.1 | 28.6 | 78.6 | 71.4 | | |
| (4) Lo Selectivity Coed Sectarian | 27 | 58.8 | 58.8 | 41.2 | 52.9 | 82.4 | | |
| (5, 6) Lo Selectivity Women's | 34 | 85.3 | 52.9 | 41.2 | 73.5 | 73.5 | | |
| (7, 8) Hi Selectivity Public, University | 29 | 69.0 | 58.6 | 58.6 | 89.7 | 75.9 | | |
| (9,10) Hi Selectivity Small Coed Private | 27 | 74.1 | 63.0 | 48.2 | 85.2 | 88.9 | | |
| (11,12) Hi Selectivity Women's | 11 | 63.6 | 81.8 | 72.7 | 72.7 | 81.8 | | |
| Total | 146 | 74.7 | 60.3 | 45.9 | 74.7 | 77.4 | | |
| F Ratio | | 1.08 | 0.52 | 1.52 | 2.44 | 0.72 | | |
| F Probability | | 0.3766 | 0.7960 | 0.1766 | 0.0282 | 0.6355 | | |